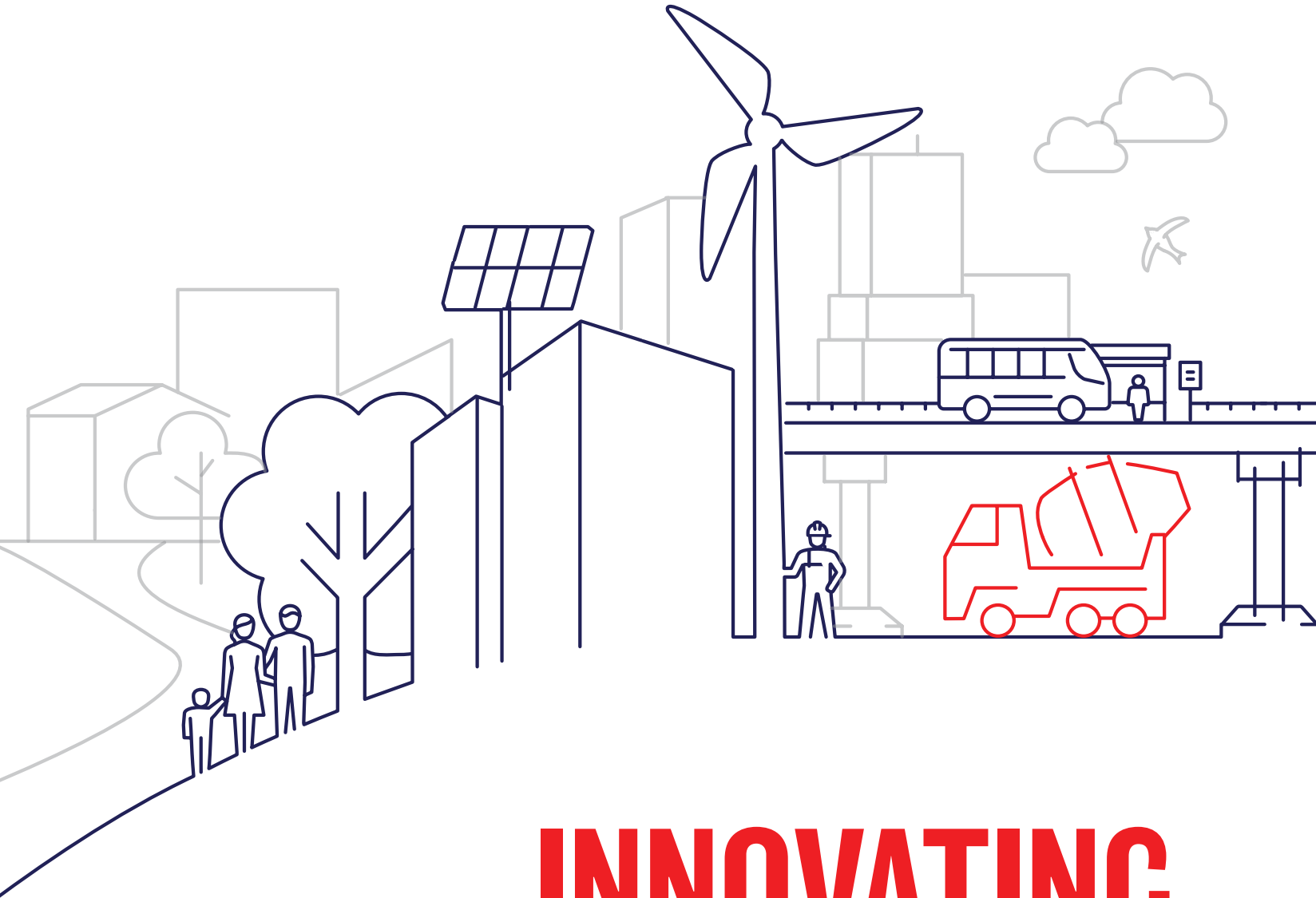




20-F REPORT 2019



INNOVATING
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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number 1-14946

CEMEX, S.A.B. de C.V.

(Exact name of Registrant as specified in its charter)

CEMEX PUBLICLY TRADED STOCK CORPORATION WITH VARIABLE CAPITAL
(Translation of Registrant's name into English)

United Mexican States
(Jurisdiction of incorporation or organization)

Avenida Ricardo Margáin Zozaya #325, Colonia Valle del Campestre, San Pedro Garza García,
Nuevo León, 66265, México
(Address of principal executive offices)

Roger Saldaña Madero,
+52 81 8888-8888, +52 81 8888-4399,
Avenida Ricardo Margáin Zozaya #325, Colonia Valle del Campestre, San Pedro Garza García,
Nuevo León, 66265, México
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary Participation Certificates (<i>Certificados de Participación Ordinarios</i>), or CPOs, each CPO representing two Series A shares and one Series B share, traded in the form of American Depositary Shares, or ADSs, each ADS representing ten CPOs.	CX	New York Stock Exchange

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None
(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

15,089,673,341 CPOs
 30,214,262,692 Series A shares (including Series A shares underlying CPOs)
 15,107,131,346 Series B shares (including Series B shares underlying CPOs)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
 Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13 (a) of the Exchange Act.

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow. Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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INTRODUCTION

CEMEX, S.A.B. de C.V. is incorporated as a publicly traded variable stock corporation (*sociedad anónima bursátil de capital variable*) organized under the laws of the United Mexican States (“Mexico”). Except as the context otherwise may require, references in this annual report to “CEMEX,” “we,” “us” or “our” refer to CEMEX, S.A.B. de C.V. and its consolidated entities. See note 1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

PRESENTATION OF FINANCIAL INFORMATION

Our consolidated financial statements included elsewhere in this annual report have been prepared in accordance with International Financial Reporting Standards (“IFRS”), as issued by the International Accounting Standards Board (“IASB”).

The regulations of the United States Securities and Exchange Commission (the “SEC”) do not require foreign private issuers that prepare their financial statements based on IFRS (as published by the IASB) to reconcile such financial statements to United States Generally Accepted Accounting Principles (“U.S. GAAP”).

References in this annual report to “\$” and “Dollars” are to United States Dollars, references to “€” are to Euros, references to “£,” “Pounds Sterling” and “Pounds” are to British Pounds, and, unless otherwise indicated, references to “Ps,” and “Pesos” are to Mexican Pesos. References to “billion” mean one thousand million. References in this annual report to “CPOs” are to CEMEX, S.A.B. de C.V.’s *Certificados de Participación Ordinarios* and each CPO represents two Series A shares and one Series B share of CEMEX, S.A.B. de C.V. References to “ADSs” are to American Depository Shares of CEMEX, S.A.B. de C.V. and each ADS represents ten CPOs of CEMEX, S.A.B. de C.V.

Beginning with the three-months period ended March 31, 2019, and for all subsequent and comparative periods, as permitted under International Accounting Standard 21, *The Effects of Changes in Foreign Exchange Rates* (“IAS 21”) under IFRS, we changed our presentation currency from the Mexican Peso to the Dollar, which we consider preferable for the reasons set forth below:

- for a consolidated group that comprises operations with a number of functional currencies, it is the decision of each entity to select its presentation currency under IAS 21, which may be the currency that management uses when controlling and monitoring the performance and financial position of such group. In our case, management uses the Dollar for these purposes;
- we believe that presenting our consolidated financial information using the Dollar will improve and facilitate the analysis to a broad range of users (rating agencies, analysts, investors and lenders, among others) of our consolidated financial statements; and
- the use of the Dollar as presentation currency will also improve the comparison of our consolidated financial statements with those of other global entities.

Our audited consolidated financial statements, including comparative amounts and the accompanying notes to the audited consolidated financial statements, are presented as if the new presentation currency had always been our presentation currency. All currency translation adjustments have been set to zero as of January 1, 2010, which was the date of our transition to IFRS. Translation adjustments and cumulative translation adjustments recognized in other comprehensive income have been presented as if we had used Dollars as the presentation currency from that date. Comparative financial statements and their related notes were re-presented for the change in presentation currency by applying the methodology set out in IAS 21, using the closing exchange rates for the consolidated statements of financial position and the closing exchange rates of each month within the respective periods for consolidated income statements, consolidated statements of comprehensive income and consolidated statements of cash flows. Historic equity transactions were translated at the foreign exchange rate on the date of the transactions and were subsequently carried at historical value.

The financial statements of foreign subsidiaries, as determined using their respective functional currency, are translated to Dollars at the year-end closing exchange rate for statement of financial position accounts and at the closing exchange rates of each month within the period for income statement accounts. The corresponding translation effect is included within “Other equity reserves” and is presented in the consolidated statement of comprehensive income (loss) for the period as part of the currency translation results of foreign subsidiaries adjustment until the disposal of the net investment in the foreign subsidiary.

Beginning January 1, 2019, IFRS 16, Leases (“IFRS 16”), superseded all existing guidance related to lease accounting including IAS 17, Leases, and introduced a single lessee accounting model that requires a lessee to recognize, for all leases, allowing exemptions in the case of leases with a term of less than 12 months or when the underlying asset is of low value, assets for the right-of-use of the underlying asset against a corresponding financial liability, representing the net present value of estimated lease

payments under the contract. Under this model, the lessee recognizes in the income statement depreciation of the asset for the right-of-use and interest on the lease liability. After concluding the inventory and measurement of our leases, we adopted IFRS 16 using the full retrospective approach by means of which we determined an opening cumulative effect in our statement of financial position as of January 1, 2017, that is at the beginning of the oldest comparative period and re-presented previously reported financial statements of comparative periods. Therefore, unless otherwise indicated, all comparative amounts from our comparative financial statements as of December 31, 2018 and for the years ended December 31, 2017 and 2018 have been re-presented to include the effects of adoption of IFRS 16. See note 2.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our adoption of IFRS 16.

References in this annual report to total debt plus other financial obligations (which include debt under the facilities agreement, dated as of July 19, 2017, as amended and/or restated from time to time, including as amended on April 2, 2019 and November 4, 2019 (the “2017 Facilities Agreement”)) do not include debt and other financial obligations of ours held by us. See notes 2.6 and 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our other financial obligations. Total debt plus other financial obligations differs from the calculation of debt under the 2017 Facilities Agreement.

As a result of the April 2019 Facilities Agreement Amendments (as defined under “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Our Indebtedness”), among other things, we extended \$1,062 million of maturities under the 2017 Facilities Agreement by three years and made certain adjustments to our consolidated financial leverage ratio, as described elsewhere in this annual report, in connection with the implementation of IFRS 16 and to compensate for any potential effect from such adoption. In addition, we delayed the scheduled tightening of the consolidated financial leverage ratio limit by one year. Moreover, as a result of the November 2019 Facilities Agreement Amendments (as defined under “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Our Indebtedness”), among other things, we negotiated: (a) an additional basket of up to \$500 million that can only be used for buy-backs of shares or securities that represent shares of CEMEX, S.A.B. de C.V.; (b) a new allowance for disposals of non-controlling interests in subsidiaries that are not obligors (as defined in the 2017 Facilities Agreement) under the 2017 Facilities Agreement of up to \$100 million per calendar year; (c) amendments relating to the implementation of our corporate reorganizations in Mexico, Europe and in the Trinidad Cement Group (as defined in the 2017 Facilities Agreement); and (d) modifications to the calculation and limits of the consolidated coverage ratio and the consolidated leverage ratio. See note 16.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our financial covenants. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information.

CERTAIN TECHNICAL TERMS

When used in this annual report, the terms set forth below mean the following:

- **Aggregates** are inert granular materials, such as stone, sand and gravel, which are mined from quarries. They give ready-mix concrete its necessary volume and add to its overall strength. Under normal circumstances, one cubic meter of fresh concrete contains two tons of gravel and sand.
 - **Clinker** is an intermediate cement product made by sintering limestone, clay, and iron oxide in a kiln at around 1,450 degrees Celsius. One ton of clinker is used to make approximately 1.1 tons of gray portland cement.
 - **Gray portland cement**, used for construction purposes, is a hydraulic binding agent with a composition by weight of at least approximately 95% clinker and up to 5% of a minor component (usually calcium sulfate) which, when mixed with sand, stone or other aggregates and water, produces either concrete or mortar.
 - **Petroleum coke (pet coke)** is a by-product of the oil refining coking process.
 - **Ready-mix concrete** is a mixture of cement, aggregates, and water.
 - **Tons** means metric tons. One metric ton equals 1.102 short tons.
 - **White cement** is a specialty cement used primarily for decorative purposes.
-

PART I

Item 1—Identity of Directors, Senior Management and Advisors

Not applicable.

Item 2—Offer Statistics and Expected Timetable

Not applicable.

Item 3—Key Information

COVID-19 Outbreak

As of the date of this annual report, the effects of the novel strain of the coronavirus identified in China in late 2019 (“COVID-19”) on, among other things, supply chains, global trade, mobility of persons, business continuity, demand for goods and services and oil prices have grown throughout the world, including Mexico, the United States and in other countries in Asia, the Middle East, South and Central America, the Caribbean and Europe. Governmental authorities around the world have implemented numerous measures attempting to contain and mitigate the effects of the COVID-19 pandemic. The degree to which these measures, and COVID-19 generally, affect our results and operations will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume. See “—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations,” “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement.”

Financial Evolution and Our “A Stronger CEMEX” Plan

As of December 31, 2008, we had \$18,784 million of total debt, not including \$3,020 million of Perpetual Debentures (as defined below). Most of our outstanding debt as of December 31, 2008 had been incurred to finance our acquisitions, including the acquisition of Rinker Group Limited (“Rinker”) in 2007, and our capital expenditure programs. The acquisition of Rinker substantially increased our exposure in the U.S., which experienced a sharp downturn in the housing and construction sectors caused by the 2007-2008 financial crisis. This downturn had adverse effects on our U.S. operations, making it more difficult for us to achieve our goal of decreasing our acquisition-related leverage and, given extremely tight credit markets during the height of the financial crisis, making it increasingly difficult for us to refinance our acquisition-related debt.

On August 14, 2009, we reached a comprehensive financing agreement with our major creditors (as subsequently amended, the “2009 Financing Agreement”). The 2009 Financing Agreement extended the maturities of approximately \$15 billion in syndicated and bilateral bank facilities and private placement obligations. As part of the 2009 Financing Agreement, we pledged or transferred to trustees under certain security trusts substantially all the shares of CEMEX México, S.A. de C.V. (“CEMEX México”), which as of the date of this annual report was merged with CEMEX, S.A.B. de C.V., Cemex Operaciones México, S.A. de C.V. (“Cemex Operaciones México”), CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.) (“CIH”), New Sunward Holding B.V. (“New Sunward”) and CEMEX España, S.A., a Spanish subsidiary in which we hold a 99.9% interest (“CEMEX España”), as collateral (together, the “Collateral”) and all proceeds of the Collateral, to secure our obligations under the 2009 Financing Agreement and under several other financing arrangements for the benefit of the creditors and holders of debt and other obligations that benefit from provisions in their agreements or instruments requiring that their obligations be equally and ratably secured. The subsidiaries whose shares are part of the Collateral collectively own, directly or indirectly, substantially all our operations worldwide. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of the mergers into CEMEX, S.A.B. de C.V. of CEMEX México and Empresas Tolteca de México, S.A. de C.V. (“Empresas Tolteca”). As a result of the mergers, the shares of CEMEX México are no longer part of the Collateral.

Since the signing of the 2009 Financing Agreement, we have completed a number of capital markets transactions, debt transactions and asset disposals, the majority of the proceeds of which have been used to reduce the amounts outstanding under the 2009 Financing Agreement, to pay other debt not subject to the 2009 Financing Agreement, to improve our liquidity position and for general corporate purposes.

As of December 31, 2019, we had \$11,790 million (principal amount \$11,864 million, excluding deferred issuance costs) of total debt plus other financial obligations in our statement of financial position, which does not include \$443 million of Perpetual Debentures. Of our total debt plus other financial obligations, 12% was short-term (including current maturities of long-term debt) and 88% was long-term. As of December 31, 2019, 67% of our total debt plus other financial obligations was Dollar-denominated, 23% was Euro-denominated, 5% was Pound Sterling-denominated, 2% was Philippine Peso-denominated and immaterial amounts were denominated in other currencies. See notes 16.1, 16.2 and 20.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

In 2018, we embarked on a strategic plan to build “A Stronger CEMEX.” This transformational plan is designed to fortify CEMEX’s position as a leading global heavy building materials company, accelerate our path to investment grade, enhance CEMEX, S.A.B. de C.V.’s total shareholder return and generate long-term value for all of our stakeholders. Specifically, we believe that through this strategic plan, we can rebalance and streamline our existing portfolio in order to better position ourselves to deliver higher growth and greater stakeholder value over the mid-to-long-term by divesting between \$1.5 billion and \$2 billion in assets by the end of 2020; achieve recurring operational improvements of \$230 million by 2020; accelerate our path to investment grade by further deleveraging CEMEX by reducing our debt by \$3.5 billion between the launch of the “A Stronger CEMEX” plan on July 1, 2018 and the end of 2020; and seek to return value to CEMEX, S.A.B. de C.V.’s shareholders. As of December 31, 2019, our asset sales, announced or closed, reached \$1.6 billion, including the announced divestment of certain assets in the United Kingdom to Breedon Group plc (“Breedon”) for a total consideration of \$235 million; we achieved operational improvements of \$170 million; we achieved a debt reduction of \$407 million; and we paid a cash dividend of \$150 million and repurchased 157.7 million CPOs. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on how COVID-19 has impacted our “A Stronger CEMEX” plan, and also see note 26 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a description about our ability to reach an agreement to amend the 2017 Credit Agreement which raises significant doubt about our ability to continue as a going concern.

Risk Factors

We are subject to various risks mainly resulting from changing economic, environmental, political, industry, business, regulatory, financial and climate conditions, as well as risks related to ongoing legal proceedings and investigations. The following risk factors are not the only risks we face, and any of the risk factors described below could significantly and adversely affect our business, liquidity, results of operations or financial condition, as well as, in certain instances, our reputation.

Risks Relating to Our Business

Economic conditions in some of the countries where we operate and in other regions or countries may adversely affect our business, financial condition, liquidity and results of operations.

The economic conditions in some of the countries where we operate have had and may continue to have a material adverse effect on our business, financial condition, liquidity and results of operations worldwide. Our results of operations are highly dependent on the results of our operating subsidiaries worldwide, including those in the U.S., Mexico, South America, Central America, the Caribbean (“SCA&C”), Europe, Asia, the Middle East and Africa.

As of December 31, 2019, our operations were mostly in Mexico, the U.S., certain countries in Europe, SCA&C, Asia, the Middle East and Africa (as described in “Item 4—Information on the Company—Business Overview”).

For a geographic breakdown of our revenues for the year ended December 31, 2019, see “Item 4—Information on the Company—Geographic Breakdown of Revenues for the Year Ended December 31, 2019.”

As of April 10, 2020, the main downside concern relates to the COVID-19 pandemic. The measures implemented by governmental authorities in an attempt to contain and mitigate the effects of COVID-19, including shutdowns of non-essential infrastructure businesses, stricter border controls, stringent quarantines and social distancing, have had a substantial negative impact on the world economy.

Although the pandemic has had a negative impact on both rich and poor countries, emerging markets and low-income nations, particularly across Africa, Latin America and Asia, are more vulnerable to its effects given their weaker health systems. These emerging markets and developing countries have densely populated cities and have been unable to implement social distancing measures. With fewer resources to begin with, they are dangerously exposed to the ongoing demand and supply shocks and drastic tightening in financial conditions, and some may face a high debt burden. The risk of portfolio outflows from emerging markets is very high. Commodity exporters are taking a double blow from the collapse in commodity prices and remittances are expected to dwindle.

Many governments have already undertaken fiscal stimulus measures, enacting substantial amounts of funds in fiscal measures as well as massive monetary measures. The speed and strength of the recovery will depend on large, timely and targeted fiscal and financial measures such as wage subsidies, tax deferrals, cash transfers, extensions of unemployment insurance and social assistance, temporary adjustment of loans terms and credit guarantees, and to reduce stress to the financial system and avoid contagion. These measures seek to prevent liquidity pressures from turning into solvency problems. As measures to stabilize the economy take hold and business starts to normalize, policymakers will need to move swiftly to boost demand.

The pandemic has already turned global economic growth sharply negative in the past few months, though the magnitude of the drop is still uncertain. Most forecasts assume that the pandemic will fade in the second half of 2020, permitting a gradual lifting of containment measures and the reopening of the economy. The degree to which COVID-19 affects our results and operations will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

As of December 31, 2019, according to the International Monetary Fund (the “IMF”), global growth was projected to rise from an estimated 2.9% in 2019 to 3.3% in 2020 and to 3.4% for 2021. This projection had been slightly lower than the IMF’s projections a few months earlier due to the sudden downturns in economic activity in a few emerging market economies, notably India, which led to a reassessment of growth prospects over the next two years. In a few cases, this reassessment also reflected the impact of increased social unrest. We believe, as of the date of this annual report, that in addition to the global spread of COVID-19 discussed above, the other possible main downside concerns include: an escalation of trade tensions (given that prospects for trade and technology tensions between the U.S. and China to be fully resolved remain elusive, despite sporadic favorable news regarding ongoing negotiations and, moreover, escalation of U.S.-Europe trade frictions could undermine the nascent bottoming out of global manufacturing and trade); potential renewed weakness in manufacturing that could eventually spread to services and lead to a broader slowdown; a sharper than expected slowdown in China (due to authorities unable to “manage” a soft landing in the context of high debt, corporate bond defaults and distress of small banks); rapid shifts in financial sentiment, portfolio reallocations toward so called “safe” assets, sharp market corrections and central banks running out of alternatives to stimulate economic activity, as well as a sudden reassessment of the outlook for monetary policy. A widespread tightening in financial conditions would expose the financial vulnerabilities built up over years from low interest rates and further curtail spending on machinery, equipment and household durables; a rapid increase in risk aversion could reduce investors’ risk appetite with regard to emerging markets or lead to capital flows from emerging markets (higher interest rates, exchange rate depreciations and risk of sudden stops). Concerns regarding fiscal challenges for highly indebted countries may reappear; intensifying social unrest across many countries (reflecting, in some cases, the erosion of trust in established institutions and a lack of representation in governance structures) could dampen economic growth and investment climate, as well as complicate future reform efforts; the risk of renewed uncertainty around Brexit (as defined below) (for more details, see “–Political and social events and possible changes in governmental policies in some of the countries where we operate could have a material adverse effect on our business, financial condition, liquidity and results of operations”); rising geopolitical tensions, particularly between the U.S. and Iran, that could disrupt global oil supply, hurt sentiment, and weaken already tentative business investment; uncertainty from the upcoming U.S. presidential elections that could pose a risk for both the U.S. and the global economy amidst trade and geopolitical tensions which are affecting foreign policy; and increased frequency and intensity of weather-related disasters as a result of climate change that endangers human health and the global economy beyond the directly affected regions. The materialization of any of these concerns may have a material adverse effect on our business, financial condition, liquidity and results of operations. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the IMF’s revised economic global growth outlook and other important information.

The U.S. was in an extended expansion in its current business cycle. Even though the probability of recession in the forecast horizon had diminished, it should not be fully dismissed, in particular in light of the COVID-19 pandemic. Accordingly, the likelihood of what could be viewed as a U.S. Federal Reserve “policy mistake” such as raising rates too soon, while not likely, is still possible. Given the political uncertainty as a result of an electoral year, the likelihood of finalizing a multi-year highway bill prior to the Fixing America’s Surface Transportation Act’s expiration in 2020 is low, forcing state and local governments to work under short-term funding extensions. The lack of long-term funding frameworks does not support the highway planning and spending process. Together, these uncertainties could have a material adverse impact not only on our financial condition, business and results of operations in the U.S., but also on our consolidated financial conditions, business and results of operations. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information regarding the impact of COVID-19 on our industry in the U.S.

In China, tensions with the U.S. and the slowdown in demand have added pressure to an economy already in the midst of a structural slowdown and in need of regulatory strengthening to rein in high dependence on debt. If trade tensions fail to ease, economic activity may fall short of expectations. Furthermore, excessive stimulus to support near-term growth through a loosening of credit standards or a resurgence of shadow banking activity and off-budget infrastructure spending could heighten financial vulnerabilities, reduce the availability of monetary policy tools in the future and increase downside risk to medium-term growth. In addition, measures taken to limit the spread of COVID-19 will have a negative impact on short-term growth. If COVID-19 continues to spread globally or supply chain disruption persists, the economic damage could be greater. Together, these uncertainties, as well as weaker economic performance and increased policy uncertainty in China, could affect our financial condition, business, liquidity and results of operations. For more information, see “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations.”

Many emerging market economies have experienced periods of high economic volatility over the past few years. Some large commodity exporters and stressed economies also experienced substantial exchange rate movement. Many of these countries remain vulnerable to sudden shifts in global market sentiment. The risk of new episodes of market volatility, increased risk aversion and capital outflows from emerging markets continues, which could cause emerging markets’ currencies to further depreciate. The high level of Dollar-denominated corporate indebtedness in emerging markets provides an additional source of instability. Also, emerging markets would face higher global risk premiums and substantial capital outflows, putting particular pressure on economies with domestic debt imbalances. The risk of a contagion effect across emerging markets could be significant and have an adverse effect on our business and on our financial condition, liquidity and results of operations.

As a result of a general election in Mexico in 2018, a new federal government and Mexican National Congress led by the new president’s political party have taken office. The Mexican economy slowed down in the fiscal year 2019, and this slowdown is expected to continue in 2020. As is the case with most changes in administration, there still is uncertainty regarding the long-term impact of this new government’s economic and public policies and the impact any policies could have on the economy of Mexico, including on interest rates and exchange rates, in attracting or maintaining foreign investment in Mexico and in the regulatory and institutional framework of the country, which could affect our financial condition, business, liquidity and results of operations, particularly in Mexico.

The Mexican economy was largely held back by falling private investment, mainly caused by a decline in business confidence due to external and domestic uncertainties, stagnation of the manufacturing sector and a further slowdown of private consumption. In addition, the disbursement of the 2019 public budget was lower than expected resulting in low public investment, particularly in the construction sector.

The Mexican economy faces significant risks in the short-term including, but not limited to, aside from the impact of the COVID-19 pandemic: (i) further declines in oil production, which could affect the mining sector and tax revenues; (ii) the effects of the downgrade of Petróleos Mexicanos’s (“PEMEX”) debt rating or a requirement to restructure PEMEX, which could undermine fiscal stability and Mexico’s sovereign debt rating; (iii) failure to revive private investment due to uncertainty in government policies or controversial government decisions; (iv) private consumption faltering as a result of deteriorating labor market conditions and lower remittance inflows; (v) a further contraction of construction activity as a result of cuts in public investment or weak government spending and stagnation of private investment; (vi) further slowdown of U.S. manufacturing activity (which is strongly correlated with Mexico’s manufacturing sector); and (vii) aggressive tightening of monetary policy as a result of the renewal of inflationary pressures and/or high currency forex fluctuation. For more information, see “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations.”

The laws and regulations in Mexico to which we are subject, and interpretations thereof, may change, sometimes substantially, as a result of a variety of factors beyond our control, including political, economic, regulatory or social events. As a result of amendments in May 2019 to the Mexican Federal Labor Law (*Ley Federal del Trabajo*) and other related regulations, among other things, new labor authorities and courts were created, new bargaining procedures were implemented and provisions related to employees' freedom of association and organization, collective bargaining agreements, and rules against labor discrimination were issued or amended. We cannot assure you that these changes will not adversely affect our business, financial condition, results of operations and prospects, in particular in Mexico. Additionally, in August 2019, the new Mexican Law for the Termination of Ownership (*Ley Nacional de Extinción de Dominio*) was enacted. This new law grants the authority to the Mexican federal government to terminate the ownership of real estate property in Mexico if illicit activities are performed on such real estate properties. Therefore, if any illicit activities are performed on our real estate property (even without our knowledge or control), we could be deprived of our ownership rights and would not be compensated for such loss, which could have a material adverse impact on our business, financial condition, results of operations and prospects, in particular in Mexico.

In Colombia, prior to the impact of COVID-19, economic activity had continued to grow, supported by robust growth in fixed investment due to lower corporate taxes and healthy private consumption supported by a solid financial system, growing remittances and higher demand from Venezuelan migrants. However, increasing unemployment and social unrest could weigh on consumer and investor confidence. Public investment is expected to remain subdued. The fiscal deficit is being reduced at a slow pace and a new tax reform should be required in two years to achieve the fiscal deficit target (negative impact on growth). Furthermore, Colombia is vulnerable to large capital outflows and the current account deficit increased to above 4.0% of GDP in 2019. If these risks continue, they could have a material adverse effect on our business, financial condition, results of operations and prospects in Colombia.

In Nicaragua, persistent uncertainty arising from the ongoing political crisis will continue to weigh on the economy. The main risks include (i) a further deterioration of the political and social landscape; (ii) an escalation of punitive measures and specific regulations by the U.S. government on foreign investment in Nicaragua's businesses and other matters related to Nicaragua, such as the Nicaragua Human Rights and Anticorruption Act of 2018; and (iii) a further deterioration of fiscal and monetary imbalances which could result in a currency crisis. If these risks continue, they could have a material adverse effect on our business, financial condition, results of operations and prospects in Nicaragua.

The manufacturing recession and trade disputes have significantly affected the European economy, particularly the German economy, which is highly exposed to manufacturing activity and global trade. If trade tensions regain traction and/or the new carbon dioxide ("CO₂") related regulations further affect the car industry, it will be more difficult for the German economy to recover. With regard to the building industry, shortages (mostly in the labor market) continue to pose a risk for production, not only in Germany but also in other European countries such as Poland or the Czech Republic, as well as in developed countries such as the U.S. In Spain, the current government's weakness is a source of concern. Regulatory and economic policy uncertainty remains high and is one of the main sources of instability, particularly in the automotive and residential sectors, as well as other sectors most exposed to contracts linked to the minimum wage. In France, public investment was a main driver for growth in past quarters; however, our sector could suffer public investment disruptions in the aftermath of the local elections in March 2020. In Poland, infrastructure outlays may not recover, weighing down on the industry throughout 2020 (cost increases have led companies to renegotiate government contracts leading to a sudden halt in infrastructure outlays in the third quarter of 2019); further, the housing market could suffer a sharp downward adjustment from the high levels observed.

Additionally, Central European countries might experience a reduction in the proceeds they receive from the European Union's (the "EU") structural funds over the coming years, which could hinder infrastructure investment in such countries and adversely affect our financial condition, business, liquidity and results of operations, particularly with regard to our operations in Europe.

The Governing Council of the European Central Bank reduced the interest rate on its deposit facility by 10 basis points to -0.50% in September 2019 and, as of November 1, 2019, the Eurosystem restarted net purchases under its asset purchase program. The environment of negative deposit rates is distorting financial markets and creating uncertain consequences for the banking sector. There is a risk that negative rates may erode bank profitability and curb lending across Eurozone borders, creating other systemic risks to European economies.

All these factors, coupled with the impact of the COVID-19 pandemic, could impact market confidence and could limit the benefit of monetary policy stimulus for Europe and possibly worldwide, which in turn could adversely affect our results of operations, business, liquidity and financial position, particularly in Europe.

In Israel, the U.S.' recognition of Jerusalem as Israel's capital contributed to further tensions between Israelis and Palestinians. Also, the overall situation in Syria could worsen, which would impact Israel, and the region in general. The political uncertainty arising from a third legislative election with no clear result in a year in March 2020 could affect our sector, as many public construction projects could be delayed. The uncertainty around housing policy could also continue to weigh down the industry. The high public deficit will eventually require fiscal tightening measures. If these risks continue or materialize, they could adversely affect our financial condition, business, liquidity and results of operations, particularly in Israel. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on other impacts to our operations in relation to COVID-19.

In the Philippines, weather-related supply disruptions, higher than expected global oil price hikes, natural disasters, business slowdowns due to government policy changes, foreign policy shifts, and a potential resurgence of security concerns in the southern region, could adversely affect the Philippine economy. The effect of COVID-19 spreading in Southeast Asia could also impact different sectors of the country. These risks could jeopardize the country's infrastructure development plan, dampen investment and curb economic growth. If any of these risks materialize, they could adversely affect our financial condition, business, liquidity and results of operations, particularly in the Philippines.

In general, demand for our products and services is strongly related to construction levels and depends, in large part, on residential and commercial construction activity, as well as private and public infrastructure spending in almost all of the countries where we operate. Public and private infrastructure spending in countries dependent on revenue generated by the energy sector is exposed to decreases in energy prices. Therefore, decreases in energy prices could affect public and private infrastructure spending which, in turn, could affect the construction industry. This could ultimately affect our financial condition, business, liquidity and results of operations.

Declines in the construction industry are usually correlated with declines in general economic conditions. As a result, deterioration of economic conditions in the countries where we operate, in particular due to the COVID-19 pandemic, could have a material adverse effect on our business, financial condition, liquidity and results of operations. In addition, we cannot assure you that growth in the gross domestic product of the countries where we operate will translate into a correlated increase in demand for our products.

We are subject to the effects of general global economic and market conditions that are beyond our control. If these conditions remain challenging or deteriorate, our business, financial condition, liquidity and results of operations could be adversely affected. Possible consequences from macroeconomic global challenges could have an adverse impact on our business, financial condition, liquidity and results of operations.

The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations.

The impact of the novel strain of the coronavirus identified in China in late 2019 has grown throughout the world, including Mexico, the United States and in other countries in Asia, the Middle East, South and Central America, the Caribbean and Europe, and governmental authorities around the world have implemented numerous measures attempting to contain and mitigate the effects of the virus. These measures, and the effects of the COVID-19 pandemic, have generally resulted, or may result, in: (i) temporary restrictions on, or suspended access to, or shutdown, or suspension or the halt of, our manufacturing facilities, including our cement plants and grinding mills; (ii) staffing shortages, production slowdowns or stoppages and disruptions in our delivery systems; (iii) disruptions or delays in our supply chains, including shortages of materials, products and services on which we and our businesses depend; (iv) reduced availability of land and sea transport, including labor shortages, logistics constraints and increased border controls or closures; (v) increased cost of materials, products and services on which we and our businesses depend; (vi) reduced investor confidence and consumer spending in the regions where we operate, as well as globally; (vii) a general slowdown in economic activity, including construction, and a decrease in demand for our products and services and industry demand generally; (viii) constraints on the availability of financing in the financial markets, if available at all, including on access to credit lines and working capital facilities from financial institutions; (ix) not being able to satisfy any liquidity needs if our operating cash flow and funds received under our receivables and inventory financing facilities decrease, respectively, or if we are not able to obtain borrowings under credit facilities, proceeds of debt and equity offerings and proceeds from asset sales; (x) our inability to, if required, refinance our existing indebtedness on desired terms, if at all; or (xi) our inability to comply with, or receive waivers with respect to, restrictions and covenants under the agreements governing our existing indebtedness, including maintenance covenants under our 2017 Facilities Agreement.

These measures have adversely affected and may further adversely affect our workforce and operations and the operations of our customers, distributors, suppliers and contractors, and may adversely affect our financial condition and results of operations. There is significant uncertainty regarding such measures and potential future measures, and restrictions on our access to our manufacturing facilities, on our operations or on our workforce, or similar limitations for our distributors and suppliers, could limit customer demand and/or our capacity to meet customer demand, any of which could have a material adverse effect on our financial condition and results of operations. The degree to which COVID-19 affects our results and operations will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the outbreak, its severity, the actions to contain the virus or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" and "Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement" for more information on how COVID-19 has impacted our financial performance and results of operations and see note 26 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a description about further possible impacts to our business, financial condition, liquidity and results of operations.

Political and social events and possible changes in governmental policies in some of the countries where we operate could have a material adverse effect on our business, financial condition, liquidity and results of operations.

In recent years, some of the governments in the countries where we operate, such as the U.S. and Mexico, have implemented and may continue to implement significant changes in laws, public policy or regulations that could affect the political, economic and social conditions in the U.S. and Mexico, in the other countries where we operate, as well as in other countries. Any such changes may have a material adverse effect on our business, financial condition, liquidity and results of operations.

Further, presidential, legislative, state and local elections have taken place, or are scheduled to take place in 2020 in several of the countries where we operate, including Israel, the U.S., Poland, the Dominican Republic, Puerto Rico, Trinidad and Tobago, Croatia and Egypt. A change in federal government and the political party in control of the legislature in any of these countries could result in sharp changes to the countries' economic, political or social conditions, and in changes to laws, regulations and public policies, which may contribute to economic uncertainty and could also materially impact our business, financial condition, liquidity and results of operations. Similarly, if no political party wins a clear majority in the legislative bodies of these countries, legislative gridlock and political and economic uncertainty may result.

We cannot assure you that political or social developments in the countries where we operate or elsewhere, such as the election of new administrations, changes in laws, public policy or regulations, political disagreements, civil disturbances and the rise in violence and perception of violence, are not expected to have a material adverse effect on global financial markets, or on our business, financial condition, liquidity and results of operations.

The United Kingdom's withdrawal from the EU ("Brexit") and the future of the relationship between the United Kingdom and the EU could have a material adverse effect on our business, financial condition, liquidity and results of operations, particularly in the United Kingdom. The United Kingdom officially left the EU on January 31, 2020, after more than three years of controversial negotiations. Immediately after Brexit, the United Kingdom entered a transition period with the EU to define the terms of their future relationship, which is expected to extend until December 31, 2020. During this transition period, the United Kingdom will continue to fully abide by EU rules and its trading relationship with the EU will remain the same. The Conservative Party in the United Kingdom won a commanding majority in the British Parliament, diminishing the possibility of a "Hard-Brexit" scenario. Nonetheless, leaving the EU without a comprehensible trade agreement, renewed volatility and diminished confidence still pose major risks for the country and the global economy. The decline in our sector could be even higher if the commercial sector is affected. As a result, Brexit and the uncertainty surrounding the United Kingdom's future relationship with the EU will continue impacting the United Kingdom's economic activity and financial conditions, which may result in a decline in business investment, consumer confidence and economic growth, as well as in depreciation of the Pound Sterling. The overall economic impact of the process surrounding the United Kingdom's departure from the EU, including, if the United Kingdom leaves without a comprehensive deal, may also contribute to greater instability in global financial markets.

We have taken measures to look to continue to serve the United Kingdom market with minimal disruption to our operations. These measures include, but are not limited to, maintaining adequate inventory levels of raw materials, products and critical spare parts; engaging with suppliers and contractors to seek continuity in the products and services we contract from them; and assessing potential exposure to new import duties. As of the date of this annual report, we believe we are well prepared to mitigate any potential operational disruption caused by Brexit, however, the uncertainty surrounding the future relationship between the United Kingdom and the EU could result in decreased demand for our products and has the potential to have a material adverse effect on our financial condition, business, liquidity and results of operations, particularly in the United Kingdom.

Difficulties in relationships with local communities may adversely affect our business continuity, reputation, liquidity, and results of operations.

Although we make significant efforts to maintain good long-term relationships and continuous communication with local and neighboring communities where we operate, there can be no assurance that such communities may have or may develop interests or objectives which are different from or even in conflict with our objectives, which could result in legal or administrative proceedings, civil unrest, protests, negative media coverage, direct action or campaigns, including, but not limited to, requests for the government to revoke or deny our concessions, licenses or other permits to operate. Any such events could cause delays or disruptions in our operations or result in operational restrictions or higher costs, which could materially and adversely affect our business, reputation, liquidity and results of operations.

The 2017 Facilities Agreement contains several restrictions and covenants. Our failure to comply with such restrictions and covenants could have a material adverse effect on our business and financial conditions.

The 2017 Facilities Agreement requires us to comply with several financial ratios and tests, including (i) a minimum consolidated coverage ratio of Operating EBITDA to interest expense (including interest accrued on Perpetual Debentures) and (ii) a maximum consolidated leverage ratio of net debt (including Perpetual Debentures, guarantees and capitalized leases under IFRS 16, excluding convertible/exchangeable obligations, the principal amount of subordinated optional convertible securities and plus or minus the mark-to-market amount of derivative financial instruments, among other adjustments) to Operating EBITDA (in each case, as described in the 2017 Facilities Agreement). The calculation and formulation of Operating EBITDA, interest expense, net debt, the consolidated coverage ratio and the consolidated leverage ratio are set out in the 2017 Facilities Agreement and may differ from the calculation and/or formulation of analogous terms in this annual report. Our ability to comply with these ratios may be affected by our results of operations, economic conditions and volatility in foreign exchange rates, by overall conditions in the financial and capital markets and the construction sector, and by any monetary penalties or fines we may have to pay as a result of any administrative or legal proceedings to which we may be exposed to. See “Item 4—Information on the Company—Regulatory Matters and Legal Proceedings” for more information.

As a result of the April 2019 Facilities Agreement Amendments, among other things, we extended \$1,062 million of maturities by three years and made certain adjustments to our consolidated financial leverage ratio, in connection with the implementation of IFRS 16 and to compensate for any potential effect from such adoption. In addition, we delayed the scheduled tightening of the consolidated financial leverage ratio limit by one year. Moreover, as a result of the November 2019 Facilities Agreement Amendments, among other things, we negotiated: (a) an additional basket of up to \$500 million that can only be used for buy-backs of shares or securities that represent shares of CEMEX, S.A.B. de C.V.; (b) a new allowance for disposals of non-controlling interests in subsidiaries that are not obligors (as defined in the 2017 Facilities Agreement) under the 2017 Facilities Agreement of up to \$100 million per calendar year; (c) amendments relating to the implementation of corporate reorganizations in Mexico, Europe and in the Trinidad Cement Group (as defined in the 2017 Facilities Agreement); and (d) modifications to the calculation and limits of the consolidated coverage ratio and the consolidated leverage ratio. See note 16.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our financial covenants. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information.

The 2017 Facilities Agreement requires us to comply with a minimum consolidated coverage ratio of Operating EBITDA to interest expense (including interest accrued on Perpetual Debentures), for the following periods, measured quarterly, of not less than (i) 2.50:1 for each 12-month period ending on December 31, 2019 through September 30, 2022 and (ii) 2.75:1 for the 12-month period ending on December 31, 2022 and on each subsequent quarterly date. In addition, the 2017 Facilities Agreement requires us to comply with a maximum consolidated leverage ratio of net debt (including Perpetual Debentures, guarantees and capitalized leases under IFRS 16, excluding convertible/exchangeable obligations, the principal amount of subordinated optional convertible securities and plus or minus the fair value of derivative financial instruments, among others) to Operating EBITDA, plus other adjustments for the following periods, measured quarterly, not to exceed (i) 5.25:1 for each 12-month period ending December 31, 2019 up to and including the period ending on March 31, 2021; (ii) 5.00:1 for the 12-month periods ending June 30, 2021 and September 30, 2021; (iii) 4.75:1 for the 12-month period ending December 31, 2021 up to and including the period ending on September 30, 2022; (iv) 4.50:1 for the 12-month periods ending December 31, 2022 and March 31, 2023; and (v) 4.25:1 for the 12-month period ending June 30, 2023 and each subsequent Reference Period (as defined in the 2017 Facilities Agreement). For the period ended December 31, 2019, we reported to the lenders under the 2017 Facilities Agreement a consolidated coverage ratio of 3.86 and a consolidated leverage ratio of 4.17, each as calculated pursuant to the 2017 Facilities Agreement. See “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Our Indebtedness” and “Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for information regarding the proposed amendments to address any potential breach of the financial ratios in the 2017 Facilities Agreement.

Pursuant to the 2017 Facilities Agreement, we are restricted from making aggregate annual capital expenditures in excess of \$1.5 billion in any financial year (excluding certain capital expenditures, joint venture investments and acquisitions to be made by each of CEMEX Latam Holdings, S.A. (“CLH”) and/or CEMEX Holdings Philippines, Inc. (“CHP”) and their respective subsidiaries, and those funded by Relevant Proceeds (as defined in the 2017 Facilities Agreement)), which capital expenditures, joint venture investments and acquisitions at any time then incurred are subject to a separate aggregate limit of (i) \$500 million (or its equivalent) for CLH and its subsidiaries and (ii) \$500 million (or its equivalent) for CHP and its subsidiaries. In addition, in each case, the amounts which we and our subsidiaries are allowed to incur for permitted acquisitions and investments in joint ventures cannot exceed certain thresholds as set out in the 2017 Facilities Agreement. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on potential new restrictions to our capital expenditures.

We are also subject to a number of negative covenants under the 2017 Facilities Agreement that, among other things, restrict or limit (subject to certain exceptions) our ability and the ability of each obligor (as defined in the 2017 Facilities Agreement) to: (i) create liens; (ii) incur additional debt; (iii) change our business or the business of any obligor (as defined in the 2017 Facilities

Agreement, taken as a whole); (iv) enter into mergers; (v) enter into agreements that restrict our subsidiaries' ability to pay dividends or repay intercompany debt; (vi) acquire certain assets; (vii) enter into or invest in joint venture agreements; (viii) dispose of certain assets; (ix) grant additional guarantees or indemnities; (x) declare or pay cash dividends or make share redemptions; and (xi) enter into certain derivatives transactions. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement" for more information on potential restrictions on dividend payments and share redemptions.

The 2017 Facilities Agreement also contains a number of affirmative covenants that, among other things, require us to provide periodic financial information to our creditors. Pursuant to the 2017 Facilities Agreement, a number of covenants and restrictions will, if CEMEX so elects, cease to apply (including the capital expenditure limitations mentioned above) or become less restrictive if (i) our consolidated leverage ratio for the two most recently completed quarterly testing periods is 3.75:1 or less; or, for the three most recently completed quarterly testing periods, our consolidated leverage ratio for the first and third of those quarterly testing periods is 3.75:1 or less and in the second quarterly testing period would have been 3.75:1 or less but for the proceeds of certain permitted financial indebtedness being included in the calculation of debt; and (ii) no default under the 2017 Facilities Agreement is continuing. At that point, the existing consolidated coverage ratio and consolidated leverage ratio tests will be replaced by a requirement that the consolidated leverage ratio must not exceed 4.25:1 and the consolidated coverage ratio must not be less than 2.75:1. However, we cannot assure you that we will be able to meet the conditions for these restrictions to cease to apply prior to the final maturity date under the 2017 Facilities Agreement. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement" for more information.

The 2017 Facilities Agreement contains events of default, some of which may occur and are outside of our control. Such events of default include but are not limited to defaults (subject to certain exceptions) and grace periods, based on (i) non-payment; (ii) material inaccuracy of representations and warranties; (iii) breach of covenants; (iv) bankruptcy (*quiebra*) or insolvency (*concurso mercantil*) of CEMEX, S.A.B. de C.V., any other obligor under the 2017 Facilities Agreement or any other of our material subsidiaries (as defined in the 2017 Facilities Agreement); (v) inability to pay debts as they fall due or by reason of actual financial difficulties, suspension or threatened suspension of payments on debts exceeding \$50 million or commencement of negotiations to reschedule debt exceeding \$50 million; (vi) a cross-default in relation to financial indebtedness in excess of \$50 million; (vii) certain changes to the ownership of any of the obligors under the 2017 Facilities Agreement; (viii) enforcement of any security against an obligor or material subsidiary; (ix) any attachment, distress or execution affects any asset of an obligor or material subsidiary which is reasonably likely to cause a material adverse effect; (x) expropriation and sequestration of assets of certain of our subsidiaries that cause a material adverse effect; (xi) the imposition of restrictions not in effect on July 19, 2017 that limit the ability of obligors to transfer foreign exchange for purposes of performing material obligations under the 2017 Facilities Agreement; (xii) any material adverse change arising in the financial condition of CEMEX, which creditors representing two thirds or more of the total commitments under the 2017 Facilities Agreement determine would result in our failure, taken as a whole, to perform payment obligations under the 2017 Facilities Agreement; and (xiii) it becomes unlawful for us to comply with our obligations under the 2017 Facilities Agreement where non-performance is reasonably likely to cause a material adverse effect. If an event of default occurs and is continuing, upon the authorization of creditors representing two thirds or more of the total commitments under the 2017 Facilities Agreement, the 2017 Facilities Agreement's agent has the ability to accelerate all outstanding amounts due under the 2017 Facilities Agreement. Acceleration is automatic in the case of insolvency.

We cannot assure you that in the future we will be able to comply with the restrictive covenants and limitations contained in the 2017 Facilities Agreement or that we will be in compliance with other agreements which constitute financial indebtedness in excess of \$50 million in which any non-compliance would trigger a cross-default, such as, for example, the senior unsecured Philippine Peso term loan facility entered into by CHP with BDO Unibank, Inc. on February 1, 2017 for a loan of up to the Philippine Peso equivalent of, as of December 31, 2019, \$224 million, as amended or supplemented from time to time. Our failure to comply with such covenants and limitations could result in an event of default, which could materially and adversely affect our business, financial condition, liquidity and results of operations. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement" for more information.

Changes to, or replacement of, the LIBOR Benchmark Interest Rate, could adversely affect our business, financial condition, liquidity and results of operations.

In July 2017, the United Kingdom's Financial Conduct Authority ("FCA"), a regulator of financial services firms and financial markets in the United Kingdom, stated that they will plan for a phase out of regulatory oversight of the London InterBank Offered Rate ("LIBOR") interest rate indices. The FCA has indicated they will support the LIBOR indices through 2021 to allow for an orderly transition to an alternative reference rate. LIBOR indices, in particular the Dollar LIBOR, are commonly used as a benchmark for our financing agreements, financial obligations and derivatives, including our 2017 Facilities Agreement, which systematically catalogue relevant LIBOR provisions, including uniform trigger provisions intended to identify a test for when LIBOR no longer governs the agreement and/or uniform fallback provisions intended to identify an alternative reference rate, or there may be vast, or slight, differences in those provisions. It is uncertain at this time whether LIBOR will change or cease to exist or the extent to which those entering into financial agreements will transition to any other particular benchmark. Other benchmarks may perform differently than LIBOR or have other consequences that cannot currently be anticipated. As of December 31, 2019, 22% of our foreign currency-denominated long-term debt bears floating rates at a weighted average interest rate of LIBOR plus 285 basis points. A transition away from and/or changes to the LIBOR benchmark interest rate could adversely affect our business, financial condition, liquidity and results of operations.

We pledged the capital stock of some of our subsidiaries that represent substantially all of our business as collateral to secure our payment obligations under the 2017 Facilities Agreement, the indentures governing our outstanding Senior Secured Notes and other financing arrangements.

In connection with the 2017 Facilities Agreement, we pledged or transferred to trustees under certain security trusts the Collateral and all proceeds of the Collateral, to secure our obligations under the 2017 Facilities Agreement, our Senior Secured Notes and under a number of other financing arrangements for the benefit of the creditors and holders of debt and other obligations that benefit from provisions in their agreements or instruments requiring that their obligations be equally and ratably secured.

As of December 31, 2019, the Collateral and all proceeds of such Collateral secured were (i) \$8,910 million (principal amount \$8,984 million) aggregate principal amount of debt under the 2017 Facilities Agreement, our Senior Secured Notes and other financing arrangements and (ii) \$443 million aggregate principal amount of the dual-currency notes underlying our Perpetual Debentures. The subsidiaries whose shares are part of the Collateral collectively own, directly or indirectly, substantially all of our operations worldwide. Provided that no default has occurred which is continuing under the 2017 Facilities Agreement, the Collateral will be released automatically if we meet specified financial covenant targets in accordance with the terms of the Intercreditor Agreement (as defined under “Item 5— Operating and Financial Review and Prospects—Liquidity and Capital Resources—Our Indebtedness”). See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

We have a substantial amount of debt and other financial obligations maturing in the next several years. If we are unable to secure refinancing on favorable terms or at all, we may not be able to comply with our upcoming payment obligations. Our ability to comply with our principal maturities and financial covenants may depend on us implementing certain initiatives, which may include making asset sales, and there is no assurance that we will be able to implement any such initiatives or execute such sales, if needed, on terms favorable to us or at all.

As of December 31, 2019, our total debt plus other financial obligations were \$11,790 million (principal amount \$11,864 million), which does not include \$443 million, which represents the nominal amount of our Perpetual Debentures. Of such total debt plus other financial obligations, \$1,442 million (principal amount \$1,445 million) matures during 2020; \$895 million (principal amount \$895 million) matures during 2021; \$1,389 million (principal amount \$1,401 million) matures during 2022; \$780 million (principal amount \$780 million) matures during 2023; and \$7,284 million (principal amount \$7,343 million) matures after 2023. As a result of the April 2019 Facilities Agreement Amendments, \$531 million and \$531 million, payable under the 2017 Facilities Agreement in July 2020 and January 2021, respectively, will now mature in July 2023 and January 2024, respectively, and \$48 million and \$48 million remains payable under the 2017 Facilities Agreement in July 2020 and January 2021, respectively. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca de México, S.A. de C.V. have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

If we are unable to comply with our principal maturities under certain of our indebtedness, or refinance or extend maturities of certain of our indebtedness, substantially all of our debt could be accelerated. Acceleration of our debt would have a material adverse effect on our business, financial condition, liquidity and results of operations. As a result of the restrictions under the 2017 Facilities Agreement, the indentures that govern our outstanding Senior Secured Notes and other debt instruments, the current global economic environment and uncertain market conditions, we may not be able to, if we need to do so to repay our indebtedness, complete asset sales on terms that we find economically attractive or at all. Volatility in the credit and capital markets could significantly affect us due to its effect on the availability of funds to potential acquiring parties, including industry peers. In addition, high levels of consolidation in our industry in some jurisdictions may further limit potential assets sales to interested parties due to antitrust considerations. If we need to sell assets to repay our indebtedness but are unable to complete asset sales and our cash flow or capital resources prove inadequate, we could face liquidity problems and may not be able to comply with financial covenants and payment obligations under our indebtedness, which would have a material adverse effect on our business, financial condition, liquidity and results of operations.

In addition, our levels of debt, contractual restrictions and our need to deleverage may limit our planning flexibility and our ability to react to changes in our business and the industry and may place us at a competitive disadvantage compared to competitors who may have no need to deleverage or who may have lower leverage ratios and fewer contractual restrictions, or that have no restrictions at all. There can also be no assurance that, because of our leverage ratio and contractual restrictions, we will be able to improve or maintain our operating margins and deliver financial results comparable to the results obtained in the past under similar economic conditions, or that we will be able to execute the capital expenditures that are disclosed in this annual report. Also, there can be no assurance that we will be able to implement our business strategy and initiatives, and improve our results and revenues, which could affect our ability to comply with our payment obligations under our debt agreements and instruments. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on compliance with the 2017 Facilities Agreement and “—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how COVID-19 has impacted our debt and cash levels.

We may not be able to generate sufficient cash to service all of our indebtedness or satisfy our short-term liquidity needs, and we may be forced to take other actions to satisfy our obligations under our indebtedness and our short-term liquidity needs, which may not be successful.

Historically, we have addressed our liquidity needs, including funds required to make scheduled principal and interest payments, refinance debt, and fund working capital and planned capital expenditures, mostly with operating cash flow, borrowings under credit facilities and receivables and inventory financing facilities, proceeds of debt and equity offerings and proceeds from asset sales.

As of December 31, 2019, we had \$599 million funded under our securitization programs in Mexico, the U.S., France and the United Kingdom. We cannot assure you that, going forward, we will be able to, if needed, roll over or renew these programs, which could adversely affect our liquidity.

The weakness of the global economic environment and its adverse effects on our operating results may negatively affect our credit rating and the market value of CEMEX, S.A.B. de C.V.’s CPOs and ADSs, or that of our publicly listed subsidiaries, mainly CLH and CHP. If current economic pressures continue or worsen, we may be dependent on the issuance of equity as a source to repay our existing or future indebtedness. Although we have been able to raise debt, equity and equity-linked capital in the recent past, conditions in the capital markets could be such that traditional sources of capital may not be available to us on reasonable terms or at all. As a result, we cannot assure you that we will be able to successfully raise additional debt and/or equity capital on terms that are favorable to us or at all.

We have historically, when needed, sought and obtained waivers and amendments to several of our debt instruments relating to a number of financial ratios. Our ability to comply with these ratios could be affected by global economic conditions and volatility in foreign exchange rates and the financial and capital markets, among other factors. If necessary, we may need to seek waivers or amendments to one or more of our debt agreements or debt instruments in the future. However, we cannot assure you that any future waivers or amendments, if requested, will be obtained. If we are unable to comply with the provisions of our debt agreements or debt instruments, and are unable to obtain a waiver or amendment, the indebtedness outstanding under such debt agreements and/or instruments could be accelerated. Acceleration of these debt agreements and/or instruments would have a material adverse effect on our business, liquidity and financial condition.

If the global economic environment deteriorates and our operating results worsen significantly, if we are unable to complete debt or equity offerings or, if needed, any divestitures, and/or our cash flow or capital resources prove inadequate, we could face liquidity problems and may not be able to comply with our principal payments under our indebtedness or refinance our indebtedness. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19 on our liquidity.

The indentures governing our outstanding Senior Secured Notes and the terms of our other indebtedness impose significant operating and financial restrictions, which may prevent us from capitalizing on business opportunities and may impede our ability to refinance our debt and the debt of our subsidiaries.

As of December 31, 2019, there were \$4,461 million and €1,450 million aggregate principal amount of then-outstanding Senior Secured Notes under the indentures governing such notes. Mostly all of the indentures governing our outstanding Senior Secured Notes and the other instruments governing our consolidated indebtedness impose significant operating and financial restrictions on us. These restrictions will limit our ability, among other things, to: (i) incur debt, including restrictions on incurring debt at our subsidiaries, which are not parties to the indentures governing the Senior Secured Notes; (ii) pay dividends on stock; (iii) redeem stock or redeem subordinated debt; (iv) make investments; (v) sell assets, including capital stock of subsidiaries; (vi)

guarantee indebtedness; (vii) enter into agreements that restrict dividends or other distributions from restricted subsidiaries; (viii) enter into transactions with affiliates; (ix) create or assume liens; (x) engage in mergers or consolidations; and (xi) enter into a sale of all or substantially all of our assets.

These restrictions could limit our ability to seize attractive growth opportunities for our businesses that are currently unforeseeable, particularly if we are unable to incur financing or make investments to take advantage of these opportunities.

These restrictions may significantly impede our ability to develop and implement refinancing plans with respect to our debt.

Most of the covenants are subject to a number of important exceptions and qualifications. The breach of any of these covenants could result in a default under the indentures governing our outstanding Senior Secured Notes, as well as certain other existing debt obligations, as a result of the cross-default provisions contained in the instruments governing such debt obligations. In the event of a default under any of the indentures governing our outstanding Senior Secured Notes, holders of our outstanding Senior Secured Notes could seek to declare all amounts outstanding under such Senior Secured Notes, together with accrued and unpaid interest, if any, to be immediately due and payable. If the indebtedness under our outstanding Senior Secured Notes, or certain other existing debt obligations were to be accelerated, we cannot assure you that our assets would be sufficient to repay in full such accelerated indebtedness or our other indebtedness.

Furthermore, upon the occurrence of any event of default under the 2017 Facilities Agreement, the indentures governing our outstanding Senior Secured Notes or any of our other debt, the lenders could elect to declare all amounts outstanding thereunder, together with accrued interest, to be immediately due and payable. If the lenders accelerate payment of those amounts, we cannot assure you that our assets would be sufficient to repay those amounts in full or to satisfy our other liabilities. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on the impact of the COVID-19 pandemic on our business, including that CEMEX, S.A.B. de C.V. will not pay any dividends in 2020, and on the proposed amendments to the 2017 Facilities Agreement and the risk of an event of default under the 2017 Facilities Agreement.

In addition, in connection with the entry into new financings or amendments to existing financing arrangements while our debt rating remains below investment grade, our financial and operational flexibility may be further reduced as a result of more restrictive covenants, requirements for security and other terms that are often imposed on sub-investment grade entities.

CEMEX, S.A.B. de C.V.’s ability to repay debt and pay dividends depends on our subsidiaries’ ability to transfer income and dividends to us.

Aside from its significant operations in Mexico, CEMEX, S.A.B. de C.V. is a holding company that owns the stock of its direct subsidiaries and is the beneficial owner of the equity interests of its indirect subsidiaries and has holdings of cash and marketable securities. In general, CEMEX, S.A.B. de C.V.’s ability to repay debt and pay dividends, as well as to generally make other payments, partially depends on the continued transfer to it of dividends and other income and funds from its wholly-owned and non-wholly owned subsidiaries. Although our debt agreements and instruments restrict us from entering into any agreement or arrangement that limits the ability of any subsidiary of CEMEX, S.A.B. de C.V. to declare or pay dividends or repay or capitalize intercompany indebtedness, the ability of CEMEX, S.A.B. de C.V.’s subsidiaries to pay dividends and make other transfers to CEMEX, S.A.B. de C.V. is subject to various regulatory, contractual and legal constraints of the countries in which we operate, including the need to create legal reserves prior to transferring funds. The 2017 Facilities Agreement restricts CEMEX, S.A.B. de C.V.’s and its subsidiaries’ ability to declare or pay cash dividends above the permitted amounts (subject to certain exceptions). In addition, the indentures governing our outstanding Senior Secured Notes also limit CEMEX, S.A.B. de C.V.’s and its subsidiaries’ ability to pay dividends. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on the impact of the COVID-19 pandemic on our business, including that CEMEX, S.A.B. de C.V. will not pay any dividends in 2020, and on the proposed amendments to the 2017 Facilities Agreement.

The ability of CEMEX, S.A.B. de C.V.’s direct and indirect subsidiaries to pay dividends and make loans and other transfers to it is generally subject to various regulatory, legal and economic limitations. Depending on the jurisdiction of organization of the relevant subsidiary, such limitations may include solvency and legal reserve requirements, dividend payment restrictions based on interim financial results or minimum net worth and withholding taxes on loan interest payments. For example, our subsidiaries in Mexico are subject to Mexican legal requirements, which provide that a corporation may declare and pay dividends only out of the profits reflected in the year-end financial statements that are or have been approved by its stockholders. In addition, such payment can be approved by a subsidiary’s stockholders only after the creation of a required legal reserve (equal to one fifth of the relevant company’s capital) and compensation or absorption of losses, if any, incurred by such subsidiary in previous fiscal years.

CEMEX, S.A.B. de C.V. may also be subject to exchange controls on remittances by its subsidiaries from time to time in a number of jurisdictions. In addition, CEMEX, S.A.B. de C.V.’s ability to receive funds from these subsidiaries may be restricted by covenants in the debt instruments and other contractual obligations of those entities.

As of the date of this annual report, CEMEX, S.A.B. de C.V. does not expect that existing regulatory, legal and economic restrictions on its existing direct and indirect subsidiaries' ability to pay dividends and make loans and other transfers to it will negatively affect its ability to meet its cash obligations. However, the jurisdictions of organization of CEMEX, S.A.B. de C.V.'s current direct or indirect subsidiaries, or of any future subsidiary, may impose additional and more restrictive regulatory, legal and/or economic limitations. In addition, CEMEX, S.A.B. de C.V.'s subsidiaries may not be able to generate sufficient income to pay dividends or make loans or other transfers to it in the future, or may not have access to Dollars in their respective countries, which, as of the date of this annual report, would be the preferred currency to be received by CEMEX, S.A.B. de C.V. to service the majority of its debt payments. Also, because not all of CEMEX, S.A.B. de C.V.'s subsidiaries are wholly-owned, any decision to have any of CEMEX, S.A.B. de C.V.'s subsidiaries declare and pay dividends or make loans or other transfers to us is subject to any minority rights that non-controlling shareholders may have in the CEMEX, S.A.B. de C.V. subsidiary that is not wholly-owned. Any material additional future limitations on our subsidiaries could adversely affect CEMEX, S.A.B. de C.V.'s ability to service our debt and meet its other cash obligations. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on the impact of COVID-19 on our operating subsidiaries and the possibility of less income being generated by our operating subsidiaries.

We are subject to restrictions and reputational risks resulting from non-controlling interests held by third parties in our consolidated subsidiaries.

We conduct our business through subsidiaries. In some cases, third-party shareholders hold non-controlling interests in these subsidiaries, including CLH, CHP, Trinidad Cement Limited ("TCL") and Caribbean Cement Company Limited ("CCCL"), among others. Various disadvantages may result from the participation of non-controlling shareholders whose interests may not always be aligned with ours. Some of these disadvantages may, among other things, result in our inability to implement organizational efficiencies, divest or acquire assets and transfer cash and assets from one subsidiary to another in order to allocate assets most effectively. In addition, we are also exposed to third-party shareholders initiating different actions or proceedings against us as controlling shareholders on corporate and corporate governance related matters, which could also harm our reputation and have an adverse effect on our business, liquidity, financial condition and results of operations.

We have to service our debt and other financial obligations denominated in Dollars with revenues generated in Mexican Pesos or other currencies, as we do not generate sufficient revenue in Dollars from our operations to service all our debt and other financial obligations denominated in Dollars. This could adversely affect our ability to service our obligations in the event of a devaluation or depreciation in the value of the Mexican Peso, or any of the other currencies of the countries in which we operate, compared to the Dollar. In addition, our consolidated reported results and outstanding indebtedness are significantly affected by fluctuations in exchange rates between the Dollar (our reporting currency, vis-à-vis the Mexican Peso and significant other currencies within our operations).

A substantial portion of our total debt plus other financial obligations is denominated in Dollars. As of December 31, 2019, our debt plus other financial obligations denominated in Dollars represented 67% of our total debt plus other financial obligations, which does not include \$371 million of Dollar-denominated Perpetual Debentures. Our Dollar-denominated debt must be serviced with funds generated mostly by CEMEX, S.A.B. de C.V.'s as well as its direct and indirect subsidiaries' operations in Mexico. Although we have substantial operations in the U.S., we continue to strongly rely on our non-U.S. assets to generate revenues to service our Dollar-denominated debt. Consequently, we have to use revenues generated in Mexican Pesos, Euros or other currencies to service our Dollar-denominated obligations. See "Item 5—Operating and Financial Review and Prospects—Quantitative and Qualitative Market Disclosure—Interest Rate Risk, Foreign Currency Risk and Equity Risk—Foreign Currency Risk." A devaluation or depreciation in the value of the Mexican Peso, Euro, Pound Sterling, Colombian Peso, Philippine Peso or any of the other currencies of the countries in which we operate, compared to the Dollar, could adversely affect our ability to service our Dollar-denominated debt. In 2019, our operations in Mexico, the United Kingdom, France, Germany, Spain, the Rest of Europe, Colombia, Panama, the Dominican Republic, Caribbean TCL (as defined below), Rest of South, Central America and the Caribbean, the Philippines, Israel and the Rest of Asia, Middle East and Africa, which are our main non-Dollar denominated operations, together generated 65% of our total revenues in Dollar terms (21%, 5%, 6%, 3%, 2%, 5%, 4%, 1%, 2%, 2%, 4%, 3%, 5% and 2%, respectively) before eliminations resulting from consolidation. In 2019, 27% of our revenues in Dollar terms were generated from our operations in the U.S. before eliminations resulting from consolidation.

During 2019, the Mexican Peso appreciated 3.7% against the Dollar, the Euro depreciated 2.1% against the Dollar and the Pound Sterling appreciated 3.9% against the Dollar. Currency hedges that we may be a party to or may enter in the future may not be effective in covering all our currency-related risks. Our consolidated reported results for any period and our outstanding indebtedness as of any date are significantly affected by fluctuations in exchange rates between the Dollar and other currencies, as those fluctuations influence the amount of our non-Dollar indebtedness when translated into Dollars and also result in foreign exchange gains and losses as well as gains and losses on derivative contracts, including those entered into to hedge our exchange rate exposure. For a description of these impacts, see "—Our use of derivative instruments has negatively affected, and any new derivative financial

instruments could negatively affect, our operations, especially in volatile and uncertain markets.” See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19 on the Mexican Peso value against the Dollar.

In addition, as of December 31, 2019, our Euro-denominated total debt plus other financial obligations represented 23% of our total debt plus other financial obligations, which does not include the €64 million aggregate principal amount of our Euro-denominated Perpetual Debentures.

Our use of derivative financial instruments has negatively affected, and any new derivative financial instruments could negatively affect, our operations, especially in volatile and uncertain markets.

We have used, and may continue to use, derivative financial instruments to manage the risk profile associated with interest rates and currency exposure of our debt, to reduce our financing costs, to access alternative sources of financing and to hedge our net assets in certain currency, as well as some of our financial and operating risks. However, we cannot assure you that our use of such instruments will allow us to achieve these objectives due to the inherent risks in any derivatives transaction or the risk that we will not continue to have access to such instruments at reasonable costs, or at all.

As of December 31, 2019, our derivative financial instruments consisted of foreign exchange forward contracts under a net investment hedge program, interest rate swap instruments related to bank loans, equity forwards on third-party shares, as well as fuel price hedging derivatives, which had an impact on our financial position. The fair value changes of our derivative financial instruments are reflected in our income statement, which could introduce volatility in our controlling interest net income and our related ratios. As of December 31, 2018 and 2019, the aggregate notional amount under our outstanding derivative financial instruments was \$2,608 million (\$1,249 million of net investment hedge, \$1,126 million of interest rate swaps, \$111 million of forwards on third-party shares and \$122 million of fuel price hedging) and \$2,324 million (\$1,154 million of net investment hedge, \$1,000 million of interest rate swaps, \$74 million of forwards on third-party shares and \$96 million of fuel price hedging), respectively, with a mark-to-market valuation representing a net liability of \$18 million as of December 31, 2018 and a net liability of \$100 million as of December 31, 2019. See note 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our derivative financial instruments. For the majority of the last eleven years, CEMEX has significantly decreased its use of both currency and interest rate derivatives related to debt, thereby reducing the risk of cash margin calls. However, with respect to our existing financial derivatives, we may incur net losses and be subject to margin calls that do not require a substantial amount of cash to cover such margin calls. If we enter into new derivative financial instruments, we may incur net losses and be subject to margin calls in which the cash required to cover margin calls may be substantial and may reduce the funds available to us for our operations or other capital needs. In addition, as with any derivative position, CEMEX assumes the creditworthiness risk of the counterparty, including the risk that the counterparty may not honor its obligations to us. In addition, entering into new derivative financial instruments incurs costs, and we cannot assure you that any new derivative financial instrument that we enter into will be done so at reasonable costs, or, if our credit risk worsens, will be available to us at all.

We are subject to the laws and regulations of the countries where we operate and do business and any material changes in such laws and regulations and/or any significant delays in assessing the impact and/or adapting to such changes may have an adverse effect on our business, financial condition, liquidity and results of operations.

Our operations are subject to the laws and regulations of the countries where we operate and do business, and such laws and regulations, and/or governmental interpretations of such laws and regulations, may change. Because CEMEX, S.A.B. de C.V. is organized under Mexican laws, and because of the considerable size of CEMEX, S.A.B. de C.V.’s operations in the U.S. and the fact that CEMEX, S.A.B. de C.V.’s ADSs trade on the New York Stock Exchange (the “NYSE”), we have to comply with the laws and regulations, and/or governmental interpretations of such laws and regulations, of Mexico and the U.S., whether or not we operate and do business through a subsidiary located in Mexico or the U.S.

Any change in such laws and regulations, and/or governmental interpretations of such laws and regulations, may have a material adverse effect on our business, financial condition, liquidity and results of operations. Furthermore, changes in laws and regulations, and/or governmental interpretations of such laws and regulations, may require us to devote a significant amount of time and resources to assess and, if required, to adjust our operations to any such changes, which could have a material adverse effect on our business, financial condition, liquidity and results of operations. In addition, any significant delays in assessing the impact and/or, if required, in adapting to changes in laws and regulations and/or governmental interpretations of such laws and regulations may also have a material adverse effect on our business, financial condition, liquidity, results of operations and prospects. For more information, see “—Economic conditions in some of the countries where we operate and in other regions or countries may adversely affect our business, financial condition, liquidity and results of operations,” “—Political and social events and possible changes in governmental policies in some of the countries where we operate could have a material adverse effect on our business, financial condition, liquidity and results of operations” and “—Our operations are subject to environmental laws and regulations.”

We or our third-party providers may fail to maintain, obtain or renew or may experience material delays in obtaining requisite governmental or other approvals, licenses and permits for the conduct of our business.

We and our third-party providers of goods and services, as applicable, require various approvals, licenses, permits, concessions and certificates in the conduct of our business. We cannot assure you that we, or our third-party providers of goods and services, will not encounter significant problems in obtaining new or renewing existing approvals, licenses, permits, concessions and certificates required in the conduct of our business, or that we, or our third-party providers of goods and services, will continue to satisfy the conditions to such approvals, licenses, permits, concessions and certificates that we currently have or may be granted in the future. There may also be delays on the part of regulatory and administrative bodies in reviewing our applications and granting approvals. The implementation of new laws and regulations on environmental-related matters in the countries in which we operate or in the countries from which our third-party providers of goods and services source their deliverables to us, may create stricter requirements to comply with. This could delay our ability to obtain the related approvals, licenses, permits, concessions and certificates, or could result in us not being able to obtain them at all. If previously obtained approvals, licenses, permits and certificates are revoked and/or if we, or our third-party providers of goods and services, fail to obtain and/or maintain the necessary approvals, licenses, permits, concessions and certificates required for the conduct of our business, we may be required to incur substantial costs or temporarily suspend or alter the operation of one or more of our operating units, production facilities, mineral extraction locations or of any relevant component of them, which could affect the general production of these units, facilities or locations, which in turn could have a material adverse effect on our business, financial condition, liquidity, results of operations and prospects. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary closures of our operating facilities to stop the spread of COVID-19.

We may fail to secure certain materials required to run our business.

We increasingly use in most of our business certain by-products of industrial processes produced by third parties, such as pet coke, fly ash, slag and synthetic gypsum, among others, as well as natural resources such as water. While we are not dependent on our suppliers and we try to secure the supply of the required materials, products or resources through long-term renewable contracts and framework agreements, which allow us to better manage supplies, short-term contracts are entered into in certain countries where we operate. Should existing suppliers cease operations or reduce or eliminate production of these by-products, or should for any reason any suppliers not be able to deliver to us the contractual quantities, or should laws and/or regulations in any region or country limit the access to these materials, products or resources, sourcing costs for these materials could increase significantly or require us to find alternative sources for these materials, which could have a material adverse effect on our business, financial condition, liquidity, results of operations and prospects. In particular, scarcity and quality of natural resources (such as water and aggregates reserves) in some of the countries where we operate could have a material adverse effect on our operations, costs and results of operations. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19 on supply chains.

We may not be able to realize the expected benefits from any acquisitions or joint ventures, some of which may have a material impact on our business, financial condition, liquidity and results of operations.

Although we have not made any major acquisitions in recent years or entered into significant joint ventures in recent years, our ability to realize the expected benefits from any acquisitions or joint ventures depends, in large part, on our ability to integrate acquired operations with our existing operations in a timely and effective manner or on our ability to properly manage, together with any joint venture partner, any joint venture business. These efforts may not be successful. Although we have disposed of assets in the past and may continue to do so to reduce our overall leverage and rebalance our portfolio, the 2017 Facilities Agreement and other debt instruments restrict our ability to acquire assets and enter into joint ventures. We may in the future acquire new operations or enter into joint ventures and integrate such operations into our existing operations, and some of such acquisitions or joint ventures may have a material impact on our business, financial condition, liquidity and results of operations. We cannot assure you that we will be successful in identifying or acquiring suitable assets in the future, or that the terms under which we may acquire any assets or enter into joint ventures in the future would be favorable to us or that we will be able to find suitable partners for our joint ventures at all. If we fail to achieve any anticipated cost savings from any acquisitions or joint ventures, our business, financial condition, liquidity and results of operations could be materially and adversely affected.

High energy and fuel costs may have a material adverse effect on our operating results.

Electric energy and fuel costs represent an important part of our overall cost structure. The price and availability of electric energy and fuel are generally subject to market volatility and, therefore, may have an adverse impact on our costs and operating results. Furthermore, if third-party suppliers fail to provide to us the required amounts of energy or fuel under existing agreements, we may need to acquire energy or fuel at an increased cost from other suppliers, without being reimbursed for the increased costs by the

committed supplier, to fulfill certain contractual commitments with third parties or for use in our operations. In addition, governments in several of the countries in which we operate are working to reduce energy subsidies, introduce clean energy obligations or impose new excise taxes, which could further increase energy costs and have a material adverse effect on our business, financial condition, liquidity and results of operations.

Furthermore, if our efforts to increase our use of alternative fuels are unsuccessful, due to their limited availability, price volatility or otherwise, we would be required to use traditional fuels, which may increase our energy and fuel costs and could have a material adverse effect on our business, financial condition, liquidity and results of operations.

See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to the Effects of the COVID-19 Pandemic on Oil Prices and Demand” for more information on the impact of COVID-19 on energy and fuel costs, in particular the decrease in the price of oil.

The introduction of substitutes for cement, ready-mix concrete or aggregates into the market and the development of new construction techniques and technologies could have a material adverse effect on our business, financial condition, liquidity and results of operations.

Materials such as plastic, aluminum, ceramics, glass, wood and steel can be used in construction as a substitute for cement, ready-mix concrete or aggregates. In addition, other construction techniques, such as the use of dry wall, and the integration of new technologies in the construction industry, such as 3-D printing, mini-mills and mobile plants, and changes in housing preferences could adversely impact the demand and price for our cement, ready-mix concrete and/or aggregates. Furthermore, research aimed at developing new construction techniques and modern materials and digitalizing the construction industry may introduce new products and technologies in the future that could reduce the demand for and prices of our products.

We operate in highly competitive markets with numerous players employing different competitive strategies and if we do not compete effectively, our revenues, market share and results of operations may continue to be affected.

The markets in which we operate are highly competitive and are served by a variety of established companies with recognized brand names, as well as new market entrants and increasing imports. Companies in these markets compete based on a variety of factors, often employing aggressive pricing strategies to gain market share. We compete with different types of companies based on different factors in each market. For example, in the relatively consolidated cement and ready-mix concrete industries, we generally compete based on quality, client segmentation, value proposition, and superior customer experience. In the more fragmented market for aggregates, we generally compete based on capacity and price for our products and our customer centric culture. In certain areas of the markets in which we compete, some of our competitors may be more established, benefit from greater brand recognition or have greater manufacturing and distribution channels and other resources than we do. In addition, if our competitors were to combine, they may be able to compete more effectively with us, and they may also dispose of assets, which could lead to new market entrants, increasing competition in our markets. For example, Lafarge, S.A. (“Lafarge”) and Holcim Ltd. (“Holcim”) merged in 2015, and Ireland’s CRH plc (“CRH”) acquired the vast majority of the assets disposed by Lafarge and Holcim pursuant to the requirements of regulators. Another example is HeidelbergCement AG’s (“Heidelberg”) acquisition of Italcementi S.p.A., which was completed in July 2016. In addition, as of the date of this annual report, some of our major competitors have announced they intend to divest assets in different parts of the world (Southeast Asia for example), which may lead to increased competition in the markets in which we operate. It is unclear how competitors that could potentially acquire those assets will compete in the markets in which we operate. Some may use aggressive competitive strategies based on imports and pricing that could be damaging to our industry’s profitability and, as a consequence, our results of operations. In addition, asset optimization by buyers of the disposed assets could result in an operational cost advantage.

As a result, if we are not able to compete effectively, we may continue to lose market share, potentially substantially, in the countries in which we operate, and our revenues could decline or grow at a slower rate and our business and results of operations would be harmed, which could have a material adverse effect on our business, financial condition, liquidity and results of operations.

A substantial amount of our total assets consists of intangible assets, including goodwill. We have recognized charges for goodwill impairment in the past, and if market or industry conditions deteriorate further, additional impairment charges may be recognized.

Our 2019 audited consolidated financial statements, included elsewhere in this annual report, have been prepared in accordance with IFRS as issued by the IASB, under which goodwill is not amortized and is tested for impairment. Tests for impairment are carried out when indicators exist or at least once a year during the fourth quarter of each year, and are performed by determining the recoverable amount of the groups of cash-generating units (“CGUs”) to which goodwill balances have been allocated. The recoverable amount of CGUs consist of the higher of such groups of cash-generating units’ fair value, less cost to sell, and their corresponding value in use, represented by the discounted amount of estimated future cash flows expected to be generated by such groups of CGUs to which goodwill has been allocated. An impairment loss is recognized under IFRS if the recoverable amount is lower than the net book value of the groups of CGUs to which goodwill has been allocated within other expenses, net. We determine the discounted amount of estimated future cash flows over periods of five years. In specific circumstances, when, according to our experience, actual results for a given CGU do not fairly reflect historical performance

and most external economic variables provide us with confidence that a reasonably determinable improvement in the mid-term is expected in their operating results, management uses cash flow projections over a period of up to ten years, to the point at which future expected average performance resembles the historical average performance and to the extent we have detailed, explicit and reliable financial forecasts. If the value in use of a group of CGUs to which goodwill has been allocated is lower than its corresponding carrying amount, we determine its corresponding fair value using methodologies generally accepted in the markets to determine the value of entities, such as multiples of Operating EBITDA and/or by reference to market transactions.

Impairment tests are significantly sensitive to, among other factors, the estimation of future prices of our products, in the development of operating expenses, local and international economic trends in the construction industry, the long-term growth expectations in the different markets, as well as the discount rates and the growth rates in perpetuity applied. For purposes of estimating future prices, we use, to the extent available, historical data plus the expected increase or decrease according to information issued by trusted external sources, such as national construction or cement producer chambers and/or in governmental economic expectations. Operating expenses are normally measured as a constant proportion of revenues, following experience. However, such operating expenses are also reviewed considering external information sources in respect of inputs that behave according to international prices, such as oil and gas. We use specific pre-tax discount rates for each group of CGUs to which goodwill is allocated, which are applied to pre-tax cash flows. The amounts of estimated undiscounted cash flows are significantly sensitive to the growth rates in perpetuity applied. The higher the growth rate in perpetuity applied, the higher the amount of undiscounted future cash flows by group of CGUs obtained. Moreover, the amounts of discounted future cash flows are significantly sensitive to the weighted average cost of capital (discount rate) applied. The higher the discount rate applied, the lower the amount of discounted estimated future cash flows by group of CGUs obtained.

During the last quarters of each of 2017, 2018 and 2019, we performed our annual goodwill impairment test. For the years ended December 31, 2018 and December 31, 2019, we did not determine any goodwill impairments. During 2017, uncertainty over the improvement of indicators affecting Spain's construction industry (and consequently the expected consumption of cement, ready-mix concrete and aggregates), partially due to the country's then complex prevailing political environment, resulted in limited expenditure in infrastructure projects, as well as uncertainty in the expected price recovery and the effects of increased competition and imports. As a result, our management determined that the net book value of our operating segment in Spain exceeded its value in use by \$98 million. As a result, we recognized a goodwill impairment during 2017 in the aforementioned amount as part of "Other expenses, net" in the income statement against the related goodwill balance. See note 15.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Considering the important role that economic factors play in testing goodwill for impairment, we cannot assure that any downturn in the economies where we operate will not necessitate further impairment tests and a possible downward readjustment of our goodwill for impairment under IFRS. Such an impairment test could result in impairment charges which could be material to our financial statements, which could have a material adverse effect on our financial condition.

We are subject to litigation proceedings, including a federal securities class action, government investigations relating to corruption and antitrust proceedings, that could harm our business and our reputation.

From time to time, we are and may become involved in litigation, investigations and other legal or administrative proceedings relating to claims arising from our operations, either in the normal course of business or not, or arising from violations or alleged violations of laws, regulations or acts. As described in, but not limited to, "Item 4—Information on the Company—Regulatory Matters and Legal Proceedings," as of December 31, 2019, we were subject to a number of significant legal proceedings, including, but not limited to, a federal securities class action alleging false and misleading statements in connection with alleged misconduct relating to the Maceo Project (as defined under "Regulatory Matters and Legal Proceedings—Other Legal Proceedings—Maceo, Colombia—Legal Proceedings in Colombia") and the potential regulatory or criminal actions that might arise as a result, an SEC investigation concerning a new cement plant being built by CEMEX Colombia S.A. ("CEMEX Colombia") in the Antioquia department of the Municipality of Maceo, Colombia, as well as an investigation from the United States Department of Justice (the "DOJ") mainly relating to our operations in Colombia and other jurisdictions, and antitrust investigations in countries in which we operate, including by the DOJ in the territorial U.S. In addition, our main operating subsidiary in Egypt, Assiut Cement Company ("ACC"), is involved in certain Egyptian legal proceedings relating to the acquisition of ACC. Investigations and litigation, and in general any legal or administrative proceedings, are subject to inherent uncertainties and unfavorable rulings may occur. We cannot assure you that these or any of our other regulatory matters and legal proceedings, including any that may arise in the future, will not harm our reputation or materially affect our ability to conduct our business in the manner that we expect or otherwise materially adversely affect us should an unfavorable ruling occur, which could have a material adverse effect on our business, financial condition, liquidity and results of operations.

Failure to maintain effective internal control over financial reporting could result in material misstatements in our financial statements which could negatively impact the market price of our stock.

We cannot assure you that our internal control over financial reporting will be effective in the future or that a material weakness will not be discovered with respect to a prior period for which we had previously believed that our internal control over financial reporting was effective. Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Internal control over financial reporting refers to a process designed by, or under the supervision of, the Chief Executive Officer (the “CEO”) and Executive Vice President of Finance and Administration/Chief Financial Officer (the “CFO”) and effected by CEMEX, S.A.B. de C.V.’s board of directors and our management to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. As an example, in 2016 and 2017, our management concluded that our internal control over financial reporting was not operating effectively. As of December 31, 2018 and December 31, 2019, respectively, our management and our independent registered public accounting firm concluded that our internal controls over financial reporting were operating effectively. However, we cannot assure you that additional material weaknesses will not be identified in the future, which could result in material misstatements in our financial statements or a failure to meet our reporting obligations. This, in turn, could negatively impact our business and operating results, access to capital markets, the market price of our shares and our ability to remain listed on the NYSE.

Our operations are subject to environmental laws and regulations.

Our operations are subject to a broad range of environmental laws and regulations in each of the jurisdictions in which we operate. These laws and regulations impose stringent environmental protection standards regarding, among other things, air emissions, wastewater discharges, the use and handling of hazardous waste or materials, waste disposal practices and the remediation of environmental damage or contamination. These laws and regulations expose us to the risk of substantial environmental costs and liabilities, including fines and other sanctions, the payment of compensation to third parties, remediation costs and damage to reputation. Moreover, the enactment of stricter laws and regulations, stricter interpretation of existing laws or regulations or new enforcement initiatives, may impose new risks or costs on us or result in the need for additional investments in pollution control equipment, which could result in a material decline in our profitability.

In late 2010, the U.S. Environmental Protection Agency (“EPA”) issued the final Portland Cement National Emission Standard for Hazardous Air Pollutants (“Portland Cement NESHAP”) under the federal Clean Air Act (“CAA”). This rule required Portland cement plants to limit mercury emissions, total hydrocarbons, hydrochloric acid and particulate matter by September 2013. The rule was challenged in federal court, and in December 2011, the D.C. Circuit Court of Appeals remanded the Portland Cement NESHAP to EPA and directed the agency to recompute the standards. In February 2013, EPA issued a revised final Portland Cement NESHAP rule that relaxed emissions limits for particulate matter and moved the compliance deadline to September 2015. In April 2013, environmental groups again challenged the revised Portland Cement NESHAP rule in federal court. In April 2014, the D.C. Circuit issued a ruling upholding both the revised particulate matter emission limits and the September 2015 compliance deadline. As of December 31, 2019, Portland Cement NESHAP compliance-related work continued to be conducted at several of our plants. While we expect to meet all emissions standards imposed by the Portland Cement NESHAP, failure to do so could have a material adverse impact on our business operations, liquidity and financial condition; however, we expect that such impact would be consistent with the impact on the cement industry as a whole.

In February 2013, EPA issued revised final emissions standards under the CAA for commercial and industrial solid waste incinerators (“CISWI”). Under the CISWI rule, if a material being used in a cement kiln as an alternative fuel is classified as a solid waste, the plant must comply with CISWI standards. The CISWI rule covers nine pollutants and imposes potentially more stringent emissions limits on certain pollutants that also are regulated under the Portland Cement NESHAP. EPA received petitions to further reconsider certain provisions of the 2013 CISWI rule. EPA granted reconsideration on four specific issues and finalized the reconsideration of the CISWI rule in June 2016. The 2013 CISWI rule was also challenged by both industrial and environmental groups in federal court. In July 2016, the D.C. Circuit issued a ruling upholding most of the rule and remanding several portions to EPA for further consideration. EPA has not issued a revised final rule after remand but the portions of the rule upheld on appeal are final and in effect. The final CISWI rule established a compliance date of February 2018, which was not impacted by the appeal. If kilns at CEMEX plants in the U.S. are determined to be CISWI kilns due to the use of certain alternative fuels, the emissions standards imposed by the CISWI rule could have a material impact on our business operations.

Under certain environmental laws and regulations, liability associated with investigation or remediation of hazardous substances can arise at a broad range of properties, including properties currently or formerly owned or operated by CEMEX, as well as facilities to which we sent hazardous substances or wastes for treatment, storage or disposal, or any areas affected while we transported any hazardous substances or wastes. Such laws and regulations may apply without regard to causation or knowledge of contamination. We occasionally evaluate various alternatives with respect to our facilities, including possible dispositions or closures. Investigations undertaken in connection with these activities (or ongoing operational or construction activities) may lead to hazardous substance releases or discoveries of historical contamination that must be remediated, and closures of facilities may trigger compliance

requirements that are not applicable to operating facilities. While compliance with these laws and regulations has not materially adversely affected our operations in the past, we cannot assure you that these requirements will not change, and that compliance will not adversely affect our operations in the future. Furthermore, we cannot assure you that existing or future circumstances or developments with respect to contamination will not require us to make significant remediation or restoration expenditures, which could have a material adverse effect on our business, financial condition, liquidity and results of operations.

The cement manufacturing process requires the combustion of large amounts of fuel and creates CO₂ as a by-product of the calcination process. Therefore, efforts to address climate change through federal, state, regional, EU and international laws and regulations requiring reductions in emissions of greenhouse gases (“GHGs”) can create economic risks and uncertainties for our business. Such risks could include the cost of purchasing allowances or credits to meet GHG emission caps, the cost of installing equipment to reduce emissions to comply with GHG limits or required technological standards, decreased profits or losses arising from decreased demand for our goods and higher production costs resulting directly or indirectly from the imposition of legislative or regulatory controls. To the extent that financial markets view climate change and GHG emissions as a financial risk, this could have a material adverse effect on our cost of and access to capital. Given the uncertain nature of the actual or potential statutory and regulatory requirements for GHG emissions at the federal, state, regional, EU and international levels, we cannot predict the impact on our operations or financial condition or make a reasonable estimate of the potential costs to us that may result from such requirements. However, the impact of any such requirements, whether individually or cumulatively, could have a material economic impact on our operations in the U.S. and in other countries. For more information on certain laws and regulations addressing climate change that we are, or could become, subject to, and the impacts to our operations arising therefrom, see “Item 4—Information on the Company—Regulatory Matters and Legal Proceedings—Environmental Matters.”

As part of our insurance-risk governance approach, from time to time we evaluate the need to address the financial consequences of environmental laws and regulations through the purchase of insurance. As a result, we do arrange certain types of environmental impairment insurance policies for both site-specific, as well as multi-site locations. We also organize non-specific environmental impairment insurance as part of the provision of a broader corporate insurance strategy. These latter insurance policies are designed to offer some assistance to our financial flexibility to the extent that the specifics of an environmental incident could give rise to a financial liability. However, we cannot assure you that a given environmental incident will be covered by the environmental insurance we have in place, or that the amount of such insurance will be sufficient to offset the liability arising from the incident. Any such liability may be deemed to be material to us and could have a material adverse effect on our business, financial condition, liquidity, results of operations and reputation.

We are an international company and are exposed to risks in the countries in which we have operations or interests.

We are dependent, in large part, on the economies of the countries in which we market our products and services. The economies of these countries are in different stages of socioeconomic and political development. Consequently, like many other companies with significant international operations, we are exposed to risks from, among other things, changes in economic growth, foreign currency exchange rates, interest rates, inflation, oil price volatility, trade policy, government policies, regulatory framework, social instability and other political, economic or social developments, including the outbreak of disease or similar public threats, such as COVID-19, that may materially affect our business, financial condition, liquidity and results of operations.

As of December 31, 2019, our operations were mostly in Mexico, the U.S., certain countries in Europe, SCA&C, Asia and the Middle East and Africa (as described in “Item 4—Information on the Company—Business Overview”).

For a geographic breakdown of our revenues for the year ended December 31, 2019, see “Item 4—Information on the Company—Geographic Breakdown of Revenues for the Year Ended December 31, 2019.”

In recent years, concerns over global economic conditions, protectionist trade policies, oil price, energy costs, climate change, geopolitical issues, political uncertainty, social instability, the availability and cost of credit and the international financial markets have contributed to economic uncertainty and reduced expectations for the global economy.

In addition, the current COVID-19 pandemic and its impact on supply chains, global trade, people mobility, business continuity, lower demand and oil prices, among other things, has increased the risk of a deep global recession in 2020. Even though some governments and central banks have announced and implemented monetary and fiscal policies to curb the potential impact on the economies and financial markets, these measures may vary by country and may not be enough to deter material adverse economic and financial effects. Fears about the magnitude of the economic downturn have had and may continue to have a negative impact on financial markets and emerging market currencies, which in turn have impacted and may continue to impact our results of operations and financial condition.

As of the date of this annual report, 2020, the wide spread of COVID-19 has impacted and may continue to impact our company's business in some of the markets where we operate. Many of our operations have been and may continue to be impacted by governments' decisions to suspend non-essential activities or lower production to comply with social distancing protocols, as well as by lower demand for our products. In Mexico, we are operating in accordance to technical guidelines defined by the Mexican government. In the South and Central America and the Caribbean region, with the exception of Costa Rica, Nicaragua and Haiti, our operations have been temporarily affected. In Europe, Middle East, Africa and Asia, the main impacts have been felt in Spain and the Philippines, where our operations are running on a limited basis. Other countries have taken a toll on the market side, with drops in demand which has ended up in some temporary site closures. In the U.S., while all of our sites remain operational, the main impact has been a slowdown in demand particularly in California and the mid-south region. The fact that many states continue to put in place shelter in place orders will probably add complexity in terms of logistics and cause some additional delays in orders and site construction projects.

While the impact and duration of COVID-19 are highly uncertain and remain unclear, we have undertaken several measures to maximize the protection and health of our employees, communities, third parties and other stakeholders while reinforcing our business strength and financial resilience across our markets. However, if the COVID-19 pandemic continues to escalate, it could potentially have a material adverse effect on our business, financial condition, liquidity and results of operations.

Our operations in Egypt, the United Arab Emirates ("UAE") and Israel have experienced instability as a result of, among other things, civil unrest, terrorism, extremism, deterioration of general diplomatic relations and changes in the geopolitical dynamics in the region. There can be no assurances that political turbulence in Egypt, Iran, Iraq, Syria, Libya, Yemen and other countries in Africa, the Middle East and Asia will abate in the near future or that neighboring countries will not be drawn into conflict or experience instability. In addition, some of our operations are or may be subject to political risks, such as confiscation, expropriation and/or nationalization, as for example was the case of our past operations in Venezuela and is currently the case in Egypt. See "Item 4—Information on the Company—Regulatory Matters and Legal Proceedings—Other Legal Proceedings—Egypt Share Purchase Agreement."

Since 2011, our operations in Egypt have been exposed to political and social turmoil in the country. Throughout this time, CEMEX has continued with its cement production, dispatch and sales activities. Abdel Fattah el-Sisi has been the president of Egypt since 2014, and was reelected for a second term in March 2018 (2018-2022). The current government faced unrest in 2019, due to clashes between government forces and opposition protesters. Further mobilization and social turbulence cannot be discounted in the future. Egypt will hold parliamentary elections on December 31, 2020, which could lead to renewed waves of popular unrest. Additional risks to CEMEX's operations in Egypt include a potential reduction in overall economic activity, exchange rate volatility, increased cost of energy, cement oversupply, changes in regulations, the threat of terrorist attacks, which could have a material adverse effect on our operations in the country.

Our operations are also exposed to the Israeli-Palestinian conflict. Confrontations between the Israeli Defense Force and Palestinians in the Gaza Strip have continued generating sporadic events of violence in the region. Progress on peace continues to be stalled, despite efforts from third parties (including the U.S. and the United Nations) to reach an agreement. As of December 31, 2019, the parties continued to portray opposite views over the contested territory and neither side has shown intentions for making concessions. If the conflict escalates, it could have a negative impact on the geopolitics and economy in the region, which in turn could adversely affect our operations, financial condition, liquidity and results of operations.

Military activities in Ukraine and on its borders, including Russia effectively taking control of Crimea in 2014, as well as Russia's intervention in Syria have made the country subject to international sanctions from different countries, including the U.S. and the EU. While not directly impacting territories in which we had operations as of December 31, 2019, the Ukrainian dispute could negatively affect the economies of the countries in which we operate and their access to Russian energy supplies. In addition, the dispute could negatively impact the global economy as a whole. Furthermore, potential responses by Russia to those sanctions could adversely affect European economic conditions, which could have a material adverse effect on our operations mainly in Europe. If conflicts with Russia escalate to military conflict, it could also have a material adverse effect on our business, financial condition, liquidity and results of operations.

In the Middle East, regional tensions have intensified since the U.S.'s withdrawal from the Joint Comprehensive Plan of Action (2018), commonly known as the Iran Nuclear Deal. The conflict escalated after General Qasem Soleimani, the Iranian Commander of the Quds Force, was killed in a U.S. drone strike, which was followed by Iranian retaliation. The Iran conflict poses a significant security and terrorism risk, mainly for the U.S. and Iran's allies in the region. Increased tensions could lead to a risk of full military action, and could potentially have a material adverse effect on our business, financial condition, liquidity and results of operations, mainly in Israel and UAE. In addition, the ongoing Qatar-Gulf crisis and the civil war in Syria may have a negative economic impact on the region.

In Asia, there is geopolitical tension related to pro-democracy protests in Hong Kong, Taiwan's status in relation to China, South Korea's disputes with North Korea and disputes between the U.S. and North Korea. Similarly, mutually exclusive territorial disputes among several Southeast Asian countries in the South China Sea continue. A major outbreak of hostilities or political upheaval in China, Taiwan, North Korea, South Korea or Hong Kong could adversely affect the global economy, which could have a material adverse effect on our business, financial condition, liquidity or results of operations. In addition, China was impacted by its trade war with the U.S., which have had major implications on global trade and supply chains. A potential sharp reduction of economic growth in China could affect the global economy to an extent that could have a material adverse effect on our business, financial condition, liquidity and results of operations.

Numerous protests have erupted in Latin American countries, such as Colombia, Chile, Ecuador, Nicaragua, Puerto Rico among others. In addition, the region continues to be affected by the Venezuelan crisis, which has had a major impact on the regional economy and poses an important social and security risk.

There have been terrorist attacks and ongoing threats of future terrorist attacks in countries in which we maintain operations. We cannot assure you that there will not be other attacks or threats that will cause any damage to our operating units and facilities or locations, or harm any of our employees, including members of CEMEX, S.A.B. de C.V.'s board of directors or senior management, or lead to an economic contraction or erection of material barriers to trade in any of our markets. An economic contraction in any of our major markets could affect domestic demand for our products, which could have a material adverse effect on our business, financial condition, liquidity and results of operations.

As part of our risk governance approach, from time to time we evaluate the need to address the financial consequences of political or social risk through the purchase of insurance. As a result, we purchase certain types of political risk insurance policies for selected countries where we operate and which are exposed to political turmoil, geopolitical issues or political uncertainty. These insurance policies are designed to offer some assistance to our financial flexibility to the extent that the specifics of a political incident could give rise to a financial liability. However, we cannot assure you that a given social or political event and possible changes in government policies will be covered by the political risk insurance policies we have in place, or that the amount of such insurance will be sufficient to offset the liability arising from such applicable events. Any such liability could have a material adverse effect on our business, financial condition, liquidity and results of operations.

Our operations and ability to source products and materials can be affected by adverse weather conditions and natural disasters.

Construction activity, and thus demand for our products, decreases substantially during periods of cold weather, when it snows or when heavy or sustained rainfalls occur, or generally, in any rainy and snowy weather. Consequently, demand for our products is significantly lower during the winter or raining and snowing seasons in the countries in which we operate and do business. Generally, winter weather in our European and North American operations significantly reduces our first quarter sales volumes, and to a lesser extent our fourth quarter sales volumes. Sales volumes in these and similar markets generally increase during the second and third quarters because of normally better weather conditions. However, high levels of rainfall and/or snow can also adversely affect our operations during these periods, as well as our access to products and materials used in our operations (as was the case in 2018 with regard to our operations in the Philippines, which was exacerbated by a natural landslide that affected our operations in the country). Natural disasters such as the earthquake in Mexico and Hurricanes Harvey and Irma in the U.S. in 2017 could have a negative impact on our sales volumes, which could also have a material adverse effect on our results of operations. Our operations in Florida and Texas, the Caribbean and certain parts of the Gulf of Mexico are particularly exposed to hurricanes and similar weather events. This decrease in sales volumes is usually counterbalanced by the increase in the demand for our products during the reconstruction phase, unless any of our operating units or facilities are impacted by the natural disaster. Such adverse weather conditions and natural disasters can have a material adverse effect on our business, financial condition, liquidity and results of operations if they occur with unusual intensity, during abnormal periods, or last longer than usual in our major markets, or if they cause scarcity and increases in the cost of the products we need to run our business, especially during peak construction periods.

We will be adversely affected by any significant or prolonged disruption to our production facilities.

Any prolonged and/or significant disruption to our production facilities, whether due to repair, maintenance or servicing, governmental or administrative actions, regulatory issues, civil unrest, industrial accidents, unavailability or excessively high cost of raw materials such as energy to the point of making it inefficient to run our production facilities, mechanical equipment failure, human error, natural disaster or otherwise, will disrupt and adversely affect our operations. Additionally, any major or sustained disruptions in the supply of utilities such as water or electricity or any fire, flood, earthquake, volcanic eruption, landslide or other natural calamities or communal unrest or acts of terrorism may disrupt our operations or damage our production facilities or inventories and could have a material adverse effect on our business, financial condition, liquidity and results of operations.

We typically shut down our facilities to undertake maintenance and repair work at scheduled intervals. Although we schedule shutdowns such that not all our facilities are shut down at the same time, the unexpected shutdown or closure of any facility may nevertheless materially affect our business, financial condition, liquidity and results of operations from one period to another. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on government measures to temporarily suspend some of our operations to stop the spread of COVID-19.

We are increasingly dependent on information technology and our systems and infrastructure, as well as those provided by third-party service providers, face certain risks, including cyber-security risks.

We increasingly rely on a variety of information technology and cloud services, on a fully digital customer integration platform, such as CEMEX Go, and on automated operating systems to manage and support our operations, as well as to offer our products to our customers. The proper functioning of this technology and these systems is critical to the efficient operation and management of our business, as well as for the sales generated by our business. Our systems and technologies may require modifications or upgrades as a result of technological changes, growth in our business and to enhance our business security. These changes may be costly and disruptive to our operations, and could impose substantial demands on our systems and increase system outage time. Our systems and technology, as well as those provided by our third-party service providers, such as International Business Machines Corporation (“IBM”) and Microsoft, two of our main information technology and service providers, may be vulnerable to damage, disruption or intrusion caused by circumstances beyond our control, such as physical or electronic break-ins, catastrophic events, power outages, natural disasters, computer system or network failures, security breaches, computer viruses and cyber-attacks, including malicious codes, worms, ransomware, phishing, denial of service attacks and unauthorized access. For example, our digital solutions to improve sales, customer experience, enhance our operations and increase our business efficiencies could be impeded by such damages, disruptions or intrusions. To try to minimize such risks, we safeguard our systems and electronic information through a set of cyber-security controls, processes and a proactive monitoring service to attend to potential breaches. In addition, we also have disaster recovery plans in case of incidents that could cause major disruptions to our business. However, these measures may not be sufficient, and our systems have in the past been subject to certain minor intrusions. Although we are certified under and compliant with International Organization for Standardization (“ISO”) 27001:2013 standards for information security management systems to preserve the confidentiality, integrity and availability of data and also are certified on the Payment Card Industry security standard which provides a trustful e-commerce mechanism for customers, we cannot assure that we will always be able to retain or renew this certification or that our systems will not be subject to certain intrusions.

In relation to our overall operations, particularly due to our digital transformation initiatives and the implementation of CEMEX Go, our audit committee is informed of the cyber-security threats we face and is involved in approving general steps to try to mitigate any such cyber-security threats. As of December 31, 2019, CEMEX Go has more than 36,300 users across the countries in which we do business, and through CEMEX Go we receive approximately 66% of our main product orders. As of December 31, 2019, we have not detected, and our third-party service providers have not informed us of, any relevant event that has materially damaged, disrupted or resulted in an intrusion of our systems. Any significant information leakages or theft of information, or any unlawful processing of personal data, could affect our compliance with data privacy laws and make us subject to regulatory action, including substantial fines and private litigation with potentially large costs, and could damage our relationship with our employees, customers and suppliers, which could have a material adverse impact on our business, financial condition, liquidity, results of operations and prospects.

As of December 31, 2019, our 13-month insurance program, which expires on June 25, 2020, includes insurance coverage that, subject to its terms and conditions, is intended to address certain costs associated with cyber incidents, network failures and data privacy-related concerns. Nevertheless, this insurance coverage may not, depending on the specific facts and circumstances surrounding an incident, cover all losses or types of claims that may arise from an incident or the damage to our reputation or brands that may result from an incident. However, any significant disruption to our systems could have a material adverse effect on our business, financial condition, liquidity and results of operations, and could also harm our reputation.

Activities in our business can be hazardous and can cause injury to people or damage to property in certain circumstances.

Most of our production facilities and units, as well as mineral extraction locations, require individuals to work with chemicals, equipment and other materials that have the potential to cause fatalities, harm and injury when used without due care. An accident or injury that occurs at our facilities could result in disruptions to our business and operations and could have legal and regulatory, as well as reputational, consequences. As a result, we may be required to compensate such individuals or incur other costs and liabilities, any and all of which could have a material adverse impact on our reputation, business, financial condition, liquidity, results of operations and prospects.

Additionally, cement production raises a number of health and safety issues. As is the case with other companies in our industry, some of our aggregate products contain varying amounts of crystalline silica, a common mineral. Also, some of our construction and material processing operations release, as dust, crystalline silica that is in the materials being handled. Excessive, prolonged inhalation of very small-sized particles of crystalline silica has allegedly been associated with respiratory disease (including silicosis). As part of our annual due diligence, we work with our stakeholders to verify that certain health and safety protocols are in place with regards to the management of silica and its health effects, as well as in relation to other substances and products. Nonetheless, any health issues related to cement and aggregates production can result in future claims related to exposure to these products or substances, which could have a material adverse impact on our reputation, business, financial condition, liquidity, results of operations and prospects.

Other health and safety issues related to our business include: burns arising from contact with hot cement kiln dust or dust on preheater systems; airborne hazards related to our aggregates mining activities; noise, including from chutes and hoppers, milling plants, exhaust fans and blowers; the potential for dioxin formation if chlorine-containing alternative fuels are introduced into kilns; plant cleaning and maintenance activities involving working at height or in confined or other awkward locations, and the storage and handling of coal, pet coke and certain alternative fuels, which, in their finely ground state, can pose a risk of fire or explosion; and health hazards associated with operating ready-mix concrete trucks. We may also be exposed to liability resulting from injuries or fatalities involving third-party service providers, such as drivers for our suppliers when delivering products or services to us. While we actively seek to minimize the risk posed by these issues, personal injury claims may be made, and substantial damages awarded, against us, which could have a material adverse impact on our reputation, business, financial condition, liquidity and results of operations. Additionally, we may also be required to change our operational practices, involving material capital expenditure.

Labor activism and unrest, or failure to maintain satisfactory labor relations, could adversely affect our results of operations.

Labor activism and unrest may adversely affect our operations and thereby adversely affect our business, financial condition, liquidity, results of operations and prospects. Although most of our significant operations have not been affected by any significant labor disputes in the past, we cannot assure you that we will not experience labor unrest, activism, disputes or actions in the future, including as a result of labor laws and regulations that have recently been enacted or that could come into effect in the future, some of which may be significant and could adversely affect our business, financial condition, liquidity, results of operations and prospects. For example, the activity of labor unions in Mexico is expected to increase, as a result of law that permits unions to actively seek sponsorship of collective bargaining agreements. For a description of our most relevant collective bargaining agreements, see “Item 6—Directors, Senior Management and Employees—Employees” in the 2018 Annual Report.

Increases in liabilities related to our pension plans could adversely affect our results of operations.

We have obligations under defined benefit pension and other benefit plans in certain countries in which we operate, mainly in North America and Europe. Our actual funding obligations will depend on benefit plan changes, government regulations and other factors, including changes in longevity and mortality statistics. Due to the large number of variables and assumptions that determine pension liabilities and funding requirements, which are difficult to predict because they change continuously as demographics evolve, despite the fact that we support our projections with studies by external actuaries. We have a net projected liability recognized in our statement of financial position as of December 31, 2019 of \$1,138 million. The future cash funding requirements for our defined benefit pension plans and other post-employment benefit plans could significantly differ from the amounts estimated as of December 31, 2019. If so, these funding requirements, as well as our possible inability to properly fund, and/or provide sufficient guarantees for, such pension plans if we are unable to deliver the cash or equivalent funding requirements, could have a material adverse effect on our business, financial condition, liquidity, results of operations and prospects. See note 18 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a detailed description of our pension obligations.

Our insurance coverage may not cover all the risks to which we may be exposed.

Among others, we face the risks of fatalities and injury of our employees and contractors, loss and damage to our products, property and machinery due to, among other things, fire, theft and natural disasters such as floods, and also face risks related to cyber-security related matters. Such events may cause a disruption to, or cessation of, our operations and business. While we believe that we have adequate and sufficient coverage, in line with industry practices, in some instances our insurance coverage may not be sufficient to cover all of our potential unforeseen losses and liabilities. In addition, our insurance coverage may not cover all the risks to which we may be exposed, such as all risks related to cyber-security, pandemics and/or epidemics (including COVID-19). If our losses exceed our insurance coverage, or if we are not covered by the insurance policies we have taken up, we may be liable to cover any shortfall or losses. Our insurance premiums may also increase substantially because of such claims. Such circumstances could have a material adverse effect on our business, liquidity, financial condition and results of operations.

Our success depends on the leadership of CEMEX, S.A.B. de C.V.'s board of directors and on key members of our executive management team.

Our success depends largely on the efforts and strategic vision of CEMEX, S.A.B. de C.V.'s board of directors and on key members of our executive management team. The loss of some or all of CEMEX, S.A.B. de C.V.'s directors or our senior management could have a material adverse effect on our business, financial condition, liquidity and results of operations, as well as on our reputation. Although we have for the last five years appointed new members to the board of directors (including to replace outgoing directors), we cannot assure you that one or more members on our board of directors will continue to change each year.

The execution of our business strategy also depends on our ongoing ability to attract and retain additional qualified employees. For a variety of reasons, particularly with respect to the competitive environment and the availability of skilled labor, we may not be successful in attracting and retaining the personnel we require. If we are unable to hire, train and retain qualified employees at a reasonable cost, we may be unable to successfully operate our business or capitalize on growth opportunities and, as a result, our business, financial condition, liquidity and results of operations could be materially and adversely affected.

We are subject to anti-corruption, anti-bribery, anti-money laundering and antitrust laws and regulations in the countries in which we operate, some of which are considered high-risk countries. Any violation of any such laws or regulations could have a material adverse impact on our reputation and results of operations and financial condition.

We are subject to anti-corruption, anti-bribery, anti-money laundering, antitrust and other international laws and regulations and are required to comply with the applicable laws and regulations of the countries in which we operate, some of which, including Mexico, Jamaica, Trinidad and Tobago, Colombia, Panama, Egypt, the Philippines, El Salvador, the Dominican Republic, Guatemala, Nicaragua, and Haiti, are considered high-risk countries with regard to corruption-related matters. In addition, we are subject to regulations on economic sanctions that restrict dealings with certain sanctioned countries, individuals and entities. Given the large number of contracts that we are a party to around the world, the geographic distribution of our operations and the great variety of actors that we interact with in the course of business, we are subject to the risk that our affiliates, employees, directors, officers, partners, agents and service providers may misappropriate our assets, manipulate our assets or information, make improper payments or engage in corruption, bribery, money laundering or other illegal activity, for such person's personal or business advantage.

There can be no assurance that our internal policies and procedures will be sufficient to prevent or detect all inappropriate practices, fraud or violations of law by our affiliates, employees, directors, officers, partners, agents and service providers or that any such persons will not take actions in violation of our policies and procedures. If we fail to fully comply with applicable laws and sanction regulations, the relevant government authorities of the countries where we operate have the power and authority to investigate us and, if it is the case, impose fines, penalties and remedies, which could cause us to lose clients, suppliers and access to debt and capital markets. Any violations by us of anti-bribery and anti-corruption laws or regulations could have a material adverse effect on our business, liquidity, reputation, results of operations and financial condition.

For further information regarding our ongoing proceedings with respect to anti-corruption laws, see "Item 3—Key Information—Risk Factors—Risks Relating to Our Business—We are subject to litigation proceedings, including a federal securities class action, government investigations relating to corruption and antitrust proceedings, that could harm our business and our reputation" and "Item 4—Information on the Company—Regulatory Matters and Legal Proceedings."

Certain tax matters may have a material adverse effect on our cash flow, financial condition and net income, as well as on our reputation.

We are subject to certain tax matters, mainly in Colombia and Spain, that, if adversely resolved, may have a material adverse effect on our operating results, liquidity and financial position, as well as on our reputation. See notes 2.13 and 19.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report, "Item 4—Information on the Company—Regulatory Matters and Legal Proceedings—Tax Matters—Colombia," and "Item 4—Information on the Company—Regulatory Matters and Legal Proceedings—Tax Matters—Spain" for a description of the legal proceedings regarding these Colombian and Spanish tax matters, all included elsewhere in this annual report.

It may be difficult to enforce civil liabilities against us or the members of CEMEX, S.A.B. de C.V.'s board of directors, our senior management and controlling persons.

CEMEX, S.A.B. de C.V. is a publicly traded variable stock corporation (*sociedad anónima bursátil de capital variable*) organized under the laws of Mexico. Substantially all members of CEMEX, S.A.B. de C.V.'s board of directors and the majority of the members of our senior management reside in Mexico, and all or a significant portion of the assets of those persons may be, and the majority of our assets are, located outside the U.S. As a result, it may not be possible for you to effect service of process within the

U.S. upon such persons or to enforce against them or against us in U.S. courts judgments predicated upon the civil liability provisions of the federal securities laws of the U.S. We have been advised by our General Counsel, Roger Saldaña Madero, that there is doubt as to the enforceability in Mexico, either in original actions or in actions for enforcement of judgments of U.S. courts, of civil liabilities predicated on the U.S. federal securities laws.

The protections afforded to non-controlling shareholders in Mexico are different from those in the U.S. and may be more difficult to enforce.

Under Mexican law, the protections afforded to non-controlling shareholders are different from those in the U.S. and countries in continental Europe. In particular, the legal framework and case law pertaining to directors' duties and disputes between shareholders and us, the members of CEMEX, S.A.B. de C.V.'s board of directors, our officers or CEMEX, S.A.B. de C.V.'s controlling shareholders, are less developed under Mexican law than under U.S. and continental European law. Mexican law only permits shareholder derivative suits (i.e., suits for our benefit as opposed to the direct benefit of our shareholders) and there are procedural requirements for bringing shareholder derivative lawsuits, such as minimum holdings, which differ from those in effect in other jurisdictions. There is also a substantially less active plaintiffs' bar dedicated to the enforcement of shareholders' rights in Mexico than in the U.S. As a result, in practice it may be more difficult for our non-controlling shareholders to initiate an action against us or our directors or controlling shareholders or obtain direct remedies than it would be for shareholders of a U.S. company.

ADS holders may only vote the Series B shares represented by the CPOs deposited with the ADS depository through the ADS depository and are not entitled to vote the Series A shares represented by the CPOs deposited with the ADS depository or to attend shareholders' meetings.

Any person acquiring CEMEX, S.A.B. de C.V.'s ADSs should be aware of the terms of the ADSs, the corresponding deposit agreement pursuant to which CEMEX, S.A.B. de C.V.'s ADSs are issued (the "Deposit Agreement"), the CPO Trust (as defined in the Deposit Agreement) and CEMEX, S.A.B. de C.V.'s by-laws. Under such terms, a holder of an ADS has the right to instruct the ADS depository to exercise voting rights only with respect to Series B shares (as defined below) represented by the CPOs deposited with the depository, but not with respect to the Series A shares (as defined below) represented by the CPOs deposited with the depository. ADS holders will not be able to directly exercise their right to vote unless they withdraw the CPOs underlying their ADSs (and, in the case of non-Mexican holders, even if they do so, they may not vote the Series A shares represented by the CPOs) and may not receive voting materials in time to ensure that they are able to instruct the depository to vote the CPOs underlying their ADSs or receive sufficient notice of a shareholders' meeting to permit them to withdraw their CPOs to allow them to cast their vote with respect to any specific matter. Holders of ADSs will not have the right to instruct the ADS depository as to the exercise of voting rights in respect of Series A shares underlying CPOs held in the CPO Trust. Under the terms of the CPO Trust, Series A shares underlying CPOs held by non-Mexican nationals, including all Series A shares underlying CPOs represented by ADSs, will be voted by the Trustee (as defined in the Deposit Agreement), according to the majority of all Series A shares held by Mexican nationals and Series B shares voted at the meeting. In addition, the depository and its agents may not be able to send out voting instructions on time or carry them out in the manner an ADS holder has instructed. As a result, ADS holders may not be able to exercise their right to vote and they may lack recourse if the CPOs underlying their ADSs are not voted as they requested. In addition, ADS holders are not entitled to attend shareholders' meetings. ADS holders will also not be permitted to vote the CPOs underlying the ADSs directly at a shareholders' meeting or to appoint a proxy to do so without withdrawing the CPOs. If the ADS depository does not receive voting instructions from a holder of ADSs in a timely manner such holder will nevertheless be treated as having instructed the ADS depository to give a proxy to a person we designate, or at our request, the corresponding CPO trust's technical committee designates, to vote the Series B shares underlying the CPOs represented by the ADSs in his/her discretion. The ADS depository or the custodian for the CPOs on deposit may represent the CPOs at any meeting of holders of CPOs even if no voting instructions have been received. The CPO trustee may represent the Series A shares and the Series B shares represented by the CPOs at any meeting of holders of Series A shares or Series B shares even if no voting instructions have been received. By so attending, the ADS depository, the custodian or the CPO trustee, as applicable, may contribute to the establishment of a quorum at a meeting of holders of CPOs, Series A shares or Series B shares, as appropriate.

Non-Mexicans may not hold CEMEX, S.A.B. de C.V.'s Series A shares directly and must have them held in a trust at all times.

Non-Mexican investors in CEMEX, S.A.B. de C.V.'s CPOs or ADSs may not directly hold the underlying Series A shares, but may hold them indirectly through CEMEX, S.A.B. de C.V.'s CPO trust. Upon the early termination or expiration of the term of CEMEX, S.A.B. de C.V.'s CPO trust on September 6, 2029, the Series A shares underlying CEMEX, S.A.B. de C.V.'s CPOs held by non-Mexican investors must be placed into a new trust similar to the current CPO trust for non-Mexican investors to continue to hold an economic interest in such shares. We cannot assure you that a new trust similar to the CPO trust will be created or that the relevant authorization for the creation of the new trust or the transfer of our Series A shares to such new trust will be obtained. In that event, since non-Mexican holders currently cannot hold Series A shares directly, they may be required to sell all of their Series A shares to a Mexican individual or corporation, which could expose shareholders to a loss in the sale of the corresponding Series A shares and which may cause the price of CEMEX, S.A.B. de C.V.'s CPOs and ADSs to decrease.

Preemptive rights may be unavailable to ADS holders.

ADS holders may be unable to exercise preemptive rights granted to CEMEX, S.A.B. de C.V.'s shareholders, in which case ADS holders could be substantially diluted following future equity or equity-linked offerings. Under Mexican law, whenever CEMEX, S.A.B. de C.V. issues new shares for payment in cash or in kind, CEMEX, S.A.B. de C.V. is generally required to grant preemptive rights to CEMEX, S.A.B. de C.V.'s shareholders, except if the shares are issued in respect of a public offering or if the relevant shares underlie convertible securities. However, ADS holders may not be able to exercise these preemptive rights to acquire new shares unless both the rights and the new shares are registered in the United States or an exemption from registration is available. We cannot assure you that we would file a registration statement in the United States at the time of any rights offering.

Selected Consolidated Financial Information

The financial data set forth below as of December 31, 2018 and 2019, and for each of the three years ended December 31, 2017, 2018 and 2019 have been derived from, and should be read in conjunction with, and are qualified in their entirety by reference to, our 2019 audited consolidated financial statements included elsewhere in this annual report.

Our 2019 audited consolidated financial statements included elsewhere in this annual report have been prepared in accordance with IFRS, which differ in significant respects from U.S. GAAP. The regulations of the SEC do not require foreign private issuers that prepare their financial statements on the basis of IFRS (as published by the IASB) to reconcile such financial statements to U.S. GAAP.

Presentation Currency

Beginning March 31, 2019, and for all subsequent periods, as permitted under IAS 21 under IFRS, we changed our presentation currency from the Mexican Peso to the Dollar. Our audited consolidated financial statements, including comparative amounts and the accompanying notes to the audited consolidated financial statements, are presented as if the new presentation currency had always been our presentation currency. All currency translation adjustments have been set to zero as of January 1, 2010, which was the date of our transition to IFRS. Translation adjustments and currency translation results of foreign subsidiaries recognized in other comprehensive income (loss) have been presented as if we had used Dollars as the presentation currency from that date. Comparative financial statements and their related notes were re-presented for the change in presentation currency by applying the methodology set out in IAS 21, using the year-end closing exchange rates for the consolidated statements of financial position and the closing exchange rates of each month within the respective periods for consolidated income statements, consolidated statements of comprehensive income and consolidated statements of cash flows. Historic equity transactions were translated at the foreign exchange rate on the date of the transactions and were subsequently carried at historical value.

The financial statements of foreign subsidiaries, as determined using their respective functional currency, are translated to Dollars at the year-end closing exchange rate for statement of financial position accounts and at the closing exchange rates of each month within the period for income statement accounts.

Adoption of IFRS 16

Moreover, beginning January 1, 2019, IFRS 16 superseded all existing guidance related to lease accounting including IAS 17, Leases, and introduced a single lessee accounting model that requires a lessee to recognize, for all leases, allowing exemptions in the case of leases with a term of less than 12 months or when the underlying asset is of low value, assets for the right-of-use of the underlying asset against a corresponding financial liability, representing the net present value of estimated lease payments under the contract. Under this model, the lessee recognizes in its income statement depreciation of the asset for right-of-use and interest on the lease liability. After concluding the inventory and measurement of our leases, we adopted IFRS 16 using the full retrospective approach by means of which we determined an opening cumulative effect in our statement of financial position as of January 1, 2017, that is at the beginning of the oldest comparative period and re-presented previously reported financial statements of comparative periods. Therefore, unless otherwise indicated, all comparative amounts from our comparative financial statements as of December 31, 2018 and for the years ended December 31, 2017 and 2018 have been re-presented to include the effects of adoption of IFRS 16. See note 2.1 to our 2019 audited consolidated financial statements included in elsewhere in this annual report for a detailed description of our adoption of IFRS 16.

Acquisitions and discontinued operations

The operating results of newly acquired businesses are consolidated in our financial statements beginning on the acquisition date. Therefore, all periods presented do not include operating results corresponding to newly acquired businesses before we assumed control. As a result, the financial data for the years ended December 31, 2017, 2018 and 2019 may not be comparable to that of prior periods.

As of December 31, 2019, through an affiliate in the United Kingdom, we were in negotiations with Breedon for the sale of certain assets in the United Kingdom for a total consideration of \$235 million, including \$31 million of debt. The assets held for sale mainly consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom. After completion of the potential divestiture, we will retain significant operations in the United Kingdom related to, among other things the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. As of December 31, 2019, the assets and liabilities associated with this segment under negotiation in the United Kingdom are presented in the statement of financial position within the line items of

“assets held for sale,” including a proportional allocation of goodwill of \$49 million, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2017, 2018 and 2019 the operations related to this segment are presented net of tax in the single line item “Discontinued operations.” See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.

On November 26, 2019, we announced that our U.S. affiliate Kosmos Cement Company (“Kosmos”), a partnership with a subsidiary of BUZZI Unicem S.p.A. in which CEMEX held a 75% interest, entered into a binding agreement for the sale of certain assets to Eagle Materials Inc. (“Eagle Materials”) for \$665 million. The divestment successfully closed on March 6, 2020. The share of proceeds to us from this transaction was \$499 million, minus transaction costs. The assets that were divested consisted of the Kosmos cement plant in Louisville, Kentucky, as well as related assets which include seven distribution terminals and raw material reserves. As of December 31, 2019, the assets and liabilities associated with the sale of the Kosmos cement plant in Louisville, Kentucky, and related assets in the U.S. are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$291 million, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2017, 2018 and 2019 the operations related to this segment are presented net of income tax in the single line item “Discontinued operations.” See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.

On June 28, 2019, after obtaining customary authorizations, we closed with several counterparties the sale of our ready-mix and aggregates business in the central region of France for an aggregate price of €31.8 million (\$36.2 million). Our operations of these disposed assets in France for the period from January 1 to June 28, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements, net of income tax, in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$17 million net of a proportional allocation of goodwill related to this reporting segment of \$8 million.

On May 31, 2019, we concluded the sale of our aggregates and ready-mix assets in the North and North-West regions of Germany to GP Günter Papenburg AG for €87 million (\$97 million). The assets divested in Germany consisted of four aggregates quarries and four ready-mix facilities in North Germany, and nine aggregates quarries and 14 ready-mix facilities in North-West Germany. Our operations of these disposed assets for the period from January 1 to May 31, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements net of income tax in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$59 million.

On March 29, 2019, we closed the sale of our businesses in the Baltics and Nordics to the German building materials group Schwenk Zement KG (“Schwenk”) for a price in Euro equivalent to \$387 million. The divested Baltic assets consisted of one cement production plant in Broceni with a production capacity of 1.7 million tons, four aggregates quarries, two cement quarries, six ready-mix plants, one marine terminal and one land distribution terminal in Latvia. The divested assets also included our 37.8% indirect interest in one cement production plant in Akmene, Lithuania with a production capacity of 1.8 million tons, as well as the exports business in Estonia. The divested Nordic assets consisted of three import terminals in Finland, four import terminals in Norway and four import terminals in Sweden. Our operations of these disposed assets for the period from January 1 to March 29, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements net of income tax in the single line item “Discontinued operations,” including a gain on sale of \$66 million in 2019.

On March 29, 2019, we entered into a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest our white cement business outside of Mexico and the U.S. for \$180 million, including our Buñol cement plant in Spain and our white cement customers list. The closing of the transaction is subject to approval by Spanish authorities. As of the date of this annual report, we expect to close the transaction during the first half of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing. Our operations of these assets in Spain for the years ended December 31, 2017, 2018 and 2019 are reported in the income statements, net of income tax, in the single line item “Discontinued operations.”

On September 27, 2018, we concluded the sale of our construction materials operations in Brazil (the “Brazilian Operations”) through the sale to Votorantim Cimentos N/NE S.A. of all the shares of our Brazilian subsidiary Cimento Vencemos Do Amazonas Ltda., consisting of a fluvial cement distribution terminal located in Manaus, Amazonas province, as well as the operating license. The sale price was \$31 million.

On June 30, 2017, we concluded the sale of our Pacific Northwest Materials Business (the “Pacific Northwest Materials Business”) consisting of aggregate, asphalt and ready-mix concrete operations in Oregon and Washington to Cadman Materials, Inc. (“Cadman Materials”), a subsidiary of HeidelbergCement Group, for \$150 million. We recorded a net gain on disposal of these assets of \$22 million, which included a proportional allocation of goodwill of \$73 million. The operations of our Pacific Northwest Materials Business for the six-month period ending June 30, 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations.”

On January 31, 2017, we concluded the sale of our Concrete Reinforced Pipe Manufacturing Business (“Concrete Pipe Business”) in the U.S. to Quikrete Holdings, Inc. (“Quikrete”) for \$500 million plus a potential contingent consideration based on future performance of \$40 million. We determined a net gain on disposal of these assets of \$148 million which included a proportional allocation of goodwill of \$260 million. The operations of the Concrete Pipe Business for the one-month period ending January 31, 2017 are reported in the income statements net of tax in the single line item “Discontinued operations.”

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Selected Consolidated Financial Information

	As of and for the Year Ended December 31,				
	2015 ⁽¹⁴⁾⁽¹⁶⁾	2016 ⁽¹⁴⁾⁽¹⁶⁾	2017 ⁽¹⁴⁾	2018 ⁽¹⁴⁾	2019
	(in millions of Dollars, except ratios and share and per share amounts)				
Income Statement Information:					
Revenues	\$ 13,726	\$ 13,355	\$ 12,926	\$ 13,531	\$ 13,130
Cost of sales ⁽¹⁾	(9,050)	(8,568)	(8,365)	(8,849)	(8,825)
Gross profit	4,676	4,787	4,561	4,682	4,305
Operating expenses	(2,996)	(2,882)	(2,826)	(2,979)	(2,972)
Operating earnings before other expenses, net ⁽²⁾	1,680	1,905	1,735	1,703	1,333
Other expenses, net	(182)	(91)	(205)	(296)	(347)
Operating earnings ⁽²⁾	1,498	1,814	1,530	1,407	986
Financial items ⁽³⁾	(1,325)	(931)	(902)	(724)	(782)
Share of profit of equity accounted investees	44	37	33	34	49
Earnings before income tax	217	920	661	717	253
Discontinued operations ⁽⁴⁾	62	38	222	77	88
Non-controlling interest net income	58	64	75	42	36
Controlling interest net income	58	726	792	528	143
Basic earnings per share ⁽⁵⁾⁽⁶⁾	0.0015	0.0164	0.0174	0.0114	0.0031
Diluted earnings per share ⁽⁵⁾⁽⁶⁾	0.0015	0.0164	0.0174	0.0114	0.0031
Basic earnings per share from continuing operations ⁽⁵⁾⁽⁶⁾	0.0001	0.0155	0.0125	0.0098	0.0012
Diluted earnings per share from continuing operations ⁽⁵⁾⁽⁶⁾	0.0001	0.0155	0.0125	0.0098	0.0012
Number of shares outstanding ⁽⁵⁾⁽⁷⁾⁽⁸⁾	49,124	48,668	48,439	48,015	47,322
Statement of Financial Position Information:					
Cash and cash equivalents	887	561	699 ⁽¹⁵⁾	309	788
Assets held for sale ⁽⁹⁾	313	1,015	70 ⁽¹⁵⁾	107	839
Property, machinery and equipment, net and assets for the right-of-use, net ⁽¹³⁾	12,428	11,107	12,782 ⁽¹⁵⁾	12,454	11,850
Total assets	31,472	28,944	29,884 ⁽¹⁵⁾	29,181	29,363
Short-term debt	13	59	864 ⁽¹⁵⁾	45	62
Long-term debt	13,298	11,342	9,009 ⁽¹⁵⁾	9,266	9,303
Liabilities directly related to assets held for sale	39	39	—	16	37
Non-controlling interest and Perpetual Debentures ⁽¹⁰⁾	1,178	1,397	1,571 ⁽¹⁵⁾	1,572	1,503
Total controlling interest	8,327	8,097	9,027 ⁽¹⁵⁾	9,481	9,321
Other Financial Information:					
Book value per share ⁽⁵⁾⁽⁸⁾⁽¹¹⁾	0.1695	0.1664	0.1864 ⁽¹⁵⁾	0.1975	0.1970
Operating margin before other expenses, net	12.3%	14.3%	13.4%	12.6%	10.2%
Operating EBITDA ⁽¹²⁾	2,596	2,761	2,698	2,685	2,378
Capital expenditures	764	685	984	964	1,033
Depreciation and amortization of assets	916	856	963	982	1,045
Net cash flow provided by operating activities from continuing operations before financial expense, coupons on Perpetual Debentures and income taxes	2,719	3,278	2,859	2,383	2,144
Basic earnings per CPO from continuing operations ⁽⁵⁾⁽⁶⁾	0.0003	0.0465	0.0375	0.0294	0.0036
Basic earnings per CPO ⁽⁵⁾⁽⁶⁾	0.0045	0.0492	0.0522	0.0342	0.0093
Total debt plus other financial obligations ⁽¹³⁾	15,566	13,218	12,626 ⁽¹⁵⁾	11,758	11,790

(1) Cost of sales includes depreciation, amortization and depletion of assets involved in production, expenses related to storage in production plants, freight expenses of raw materials in plants and delivery expenses of our ready-mix concrete business. Our cost of sales excludes (i) expenses

related to personnel and equipment comprising our selling network and those expenses related to warehousing at the points of sale and (ii) freight expenses of finished products from our producing plants to our points of sale and from our points of sale to our customers' locations, which are all included as part of the line item titled "Operating expenses."

- (2) In the income statements, we include the line item titled "Operating earnings before other expenses, net" considering that is a relevant measure for our management as explained in note 2.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report. Under IFRS, while there are line items that are customarily included in the income statements, such as revenues, operating costs and expenses and financial revenues and expenses, among others, the inclusion of certain subtotals such as "Operating earnings before other expenses, net" and the display of such income statements varies significantly by industry and company according to specific needs.

- (3) Financial items include our financial expense and our financial income and other items, net, which includes our results in the sale of associates and remeasurement of previously held interest before change in control of associates, financial income, results from financial instruments, net (derivatives, fixed-income investments and other securities), foreign exchange results and effects of amortized cost on assets and liabilities and others, net. See notes 7.1 and 7.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- (4) Considering the disposal of entire reportable operating segments as well as the sale of significant businesses, CEMEX's income statements present in the single line item of "Discontinued operations" the results of: (a) the assets held for sale in the United Kingdom for the years 2017, 2018 and 2019; (b) Kosmos' assets held for sale in the United States for the years 2017, 2018 and 2019; (c) the white cement business held for sale in Spain for the years 2017, 2018 and 2019; (d) the French assets sold for the years 2017 and 2018 and for the period from January 1 to June 28, 2019; (e) the German assets sold for the years 2017 and 2018 and for the period from January 1 to May 31, 2019; (f) the Baltic and Nordic businesses sold for the years 2017 and 2018 and for the period from January 1 to March 29, 2019; (g) the operating segment in Brazil sold for the years 2016 and 2017 and for the period from January 1 to September 27, 2018; (h) CEMEX's Pacific Northwest Materials Business operations in the United States sold for the years 2015 and 2016 and for the six months ended June 30, 2017; (i) CEMEX's Concrete Pipe Business operations in the United States for the years 2015 and 2016 and for the one-month ended January 31, 2017; (j) CEMEX's operations in Bangladesh and Thailand for the year 2015 and for the period from January 1 to May 26, 2016; and (k) CEMEX's operations in Austria and Hungary sold for the period from January 1 to October 31, 2015. See note 4.2 in our consolidated financial statements included elsewhere in this annual report.
- (5) CEMEX, S.A.B. de C.V.'s capital stock consists of Series A shares and Series B shares. Each CPO represents two Series A shares and one Series B share. As of December 31, 2019, 99.88% of CEMEX, S.A.B. de C.V.'s outstanding share capital was represented by CPOs. Each ADS represents ten CPOs.
- (6) Earnings per share is calculated based upon the weighted-average number of shares outstanding during the year, as described in note 22 to our 2019 audited consolidated financial statements included elsewhere in this annual report. Basic earnings per CPO is determined by multiplying the basic earnings per share for each period by three (the number of shares underlying each CPO). Basic earnings per CPO is presented solely for the convenience of the reader and does not represent a measure under IFRS. As shown in notes 4.2 and 22 to our 2019 audited consolidated financial statements included elsewhere in this annual report, and in connection with our discontinued operations mentioned above, for the year ended December 31, 2015, "Basic earnings per share" and "Diluted earnings per share" include \$0.0001 from "Continuing operations," for the year ended December 31, 2016, "Basic earnings per share" and "Diluted earnings per share" include \$0.0155 from "Continuing operations," for the year ended December 31, 2017, "Basic earnings per share" and "Diluted earnings per share" include \$0.0125 from "Continuing operations," for the year ended December 31, 2018, "Basic earnings per share" and "Diluted earnings per share" include \$0.0098 from "Continuing operations," and for the year ended December 31, 2019, "Basic earnings per share" and "Diluted earnings per share" include \$0.0012 from "Continuing operations." In addition, for the years ended December 31, 2015, 2016, 2017, 2018 and 2019, "Basic earnings per share" and "Diluted earnings per share" include \$0.0014, \$0.0009, \$0.0049, \$0.0016 and \$0.0019, respectively, from "Discontinued operations." See note 22 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- (7) CEMEX, S.A.B. de C.V. did not declare a dividend for fiscal year 2017. For fiscal year 2018, CEMEX, S.A.B. de C.V. declared a cash dividend in the amount of \$150 million, payable in Mexican Pesos in two equal installments, in June 2019 and December 2019. At CEMEX, S.A.B. de C.V.'s 2016 annual general ordinary shareholders' meeting, held on March 30, 2017, CEMEX, S.A.B. de C.V.'s shareholders approved a capitalization of retained earnings. New CPOs issued pursuant to such recapitalization were allocated to shareholders on a prorata basis. As a result, shares equivalent to 562 million CPOs were allocated to shareholders on a prorata basis in connection with the 2016 recapitalizations, respectively. In each case, CPO holders received one new CPO for each 25 CPOs held and ADS holders received one new ADS for each 25 ADSs held. There was no cash distribution and no entitlement to fractional shares. No recapitalization of retained earnings was approved at CEMEX, S.A.B. de C.V.'s 2017 and 2018 annual general ordinary shareholders' meetings held on April 5, 2018 and March 28, 2019, respectively. No recapitalization of retained earnings or cash dividend was proposed for CEMEX, S.A.B. de C.V.'s 2019 annual general ordinary shareholders' meeting held on March 26, 2020.
- (8) Represents the weighted average number of shares diluted included in note 22 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- (9) In 2015, includes the assets held for sale of Andorra plant in Spain. In 2016, includes the assets held for sale of Fairborn cement plant and the Concrete Pipe Business in the United States, the ready-mix pumping equipment in Mexico and the assets of Andorra plant in Spain. In 2017, includes the assets held for sale of Andorra plant in Spain. In 2018, includes the assets held for sale in the central region of France. In 2019, includes assets held for sale in the United Kingdom, Kosmos' assets in the United States and the white cement assets in Spain.
- (10) As of December 31, 2017, 2018 and 2019, non-controlling interest included \$447 million, \$444 million and \$443 million, respectively, that represents the nominal amount of Perpetual Debentures, denominated in Dollars and Euros, issued by consolidated entities. In accordance with IFRS, these securities qualify as equity due to their perpetual nature and the option to defer the coupons.
- (11) Book value per share is calculated by dividing the total controlling interest by the number of shares outstanding.
- (12) Operating EBITDA equals operating earnings before other expenses, net, plus depreciation and amortization expenses. Operating EBITDA is calculated and presented because we believe that it is widely accepted as a financial indicator of our ability to internally fund capital expenditures and service or incur debt. Operating EBITDA is a non-IFRS measure and should not be considered an indicator of our financial performance as an alternative to cash flow, as measures of liquidity or as being comparable to other similarly titled measures of other companies. Under IFRS, while

there are line items that are customarily included in income statements prepared pursuant to IFRS, such as revenues, operating costs and expenses and financial revenues and expenses, among others, the inclusion of certain subtotals, such as operating earnings before other expenses, net, and the display of such income statement varies significantly by industry and company according to specific needs. Our Operating EBITDA may not be comparable to similarly titled measures reported by other companies due to potential differences in the method of calculation. Operating EBITDA is reconciled below to operating earnings before other expenses, net, as reported in the income statements, and to net cash flows provided by operating activities from continuing operations before financial expense, coupons on Perpetual Debentures and income taxes, as reported in the statement of cash flows. Financial expense under IFRS does not include coupon payments of the Perpetual Debentures issued by consolidated entities of \$25 million in 2017, \$29 million in 2018 and \$29 million in 2019, as described in note 20.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

- (13) From 2017 through 2019, other financial obligations include: (a) lease contracts as per IFRS 16; (b) liabilities secured with accounts receivable; and (c) the liability components associated with CEMEX's financial instruments convertible into CEMEX's CPOs. In 2015 and 2016, other financial obligations included capital leases according to former IAS 17. See notes 2.1, 14.2 and 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- (14) The information for the years ended December 31, 2015 and 2016 does not include rights of use, as IFRS 16 requires. The information for the years ended December 31, 2017 and 2018 was re-presented after the adoption of IFRS 16 and discontinued operations. See note 2.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- (15) The amounts that correspond to "Statement of Financial Position Information" presented in the 2017-year column, as well as the information derived from such financial statement, are amounts which represent balances as of January 1, 2018 and not December 31, 2017.

(16) In 2019, CEMEX changed its presentation currency from the Mexican Peso to the Dollar and adopted IFRS 16, both with retrospective effect for 2017 and 2018. See note 2.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report. The amounts for 2015 and 2016 were translated into Dollars using the exchange rates at the reporting date for the balance sheet and the exchange rates at the end of each month for the income statement.

	For the Year Ended December 31,				
	2015 ⁽¹⁾	2016 ⁽¹⁾	2017 ⁽²⁾	2018 ⁽²⁾	2019
	(in millions of Dollars)				
Reconciliation of Net cash flow provided by operating activities from continuing operations before financial expense, coupons on Perpetual Debentures and income taxes to Operating EBITDA					
Net cash flow provided by operating activities from continuing operations before financial expense, coupons on Perpetual Debentures and income taxes	\$ 2,719	\$ 3,278	\$ 2,859	\$ 2,383	\$ 2,144
Plus/minus:					
Changes in working capital excluding income taxes	225	589	(431)	55	(98)
Depreciation and amortization of assets	(916)	(856)	(963)	(982)	(1,045)
Other items, net	(348)	(1,106)	270	247	332
Operating earnings before other expenses, net	<u>1,680</u>	<u>1,905</u>	<u>1,735</u>	<u>1,703</u>	<u>1,333</u>
Plus:					
Depreciation and amortization of assets	916	856	963	982	1,045
Operating EBITDA	<u>\$ 2,596</u>	<u>\$ 2,761</u>	<u>\$ 2,698</u>	<u>\$ 2,685</u>	<u>\$ 2,378</u>

(1) The information for the years ended December 31, 2015 and 2016 was not re-presented for the effects of IFRS 16.

(2) As re-presented after the adoption of IFRS 16 and discontinued operations.

Item 4—Information on the Company

Unless otherwise indicated, references in this annual report to our sales and assets, including percentages, for a country or region are calculated before eliminations resulting from consolidation, and thus include intercompany balances between countries and regions. These intercompany balances are eliminated when calculated on a consolidated basis.

Business Overview

CEMEX, S.A.B. de C.V. is a publicly traded variable stock corporation (*sociedad anónima bursátil de capital variable*) organized under the laws of Mexico, with its principal executive offices located at Avenida Ricardo Margáin Zozaya #325, Colonia Valle del Campestre, San Pedro Garza García, Nuevo León, 66265, Mexico. CEMEX, S.A.B. de C.V.'s main phone number is +52 81 8888-8888.

Our website is located at www.cemex.com. The information on our website is not, and is not intended to be, part of this annual report and is not incorporated into this annual report by reference.

CEMEX, S.A.B. de C.V. started doing business in 1906 and was registered with the Mercantile Section of the Public Registry of Property and Commerce in Monterrey, Nuevo León, Mexico, on June 11, 1920 for a period of 99 years. At CEMEX, S.A.B. de C.V.'s 2002 ordinary general shareholders' meeting, this period was extended to the year 2100 and in 2015 this period changed to be indefinite. Beginning April 2006, CEMEX's full legal and commercial name is CEMEX, Sociedad Anónima Bursátil de Capital Variable.

We are one of the largest cement companies in the world, based on annual installed cement production capacity. As of December 31, 2019, we had 93.1 million tons of annual installed cement production capacity and our cement sales volumes in 2019 were 62.8 million tons. We estimate we are one of the largest ready-mix concrete and aggregates companies in the world with annual sales volumes of 50.1 million cubic meters and 135.1 million tons, respectively, in each case, based on our annual sales volumes in 2019. We are also one of the world's largest traders of cement and clinker, having traded 9.2 million tons of cement and clinker in 2019. This information does not include discontinued operations. See note 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report. CEMEX, S.A.B. de C.V. is an operating and a holding company engaged, directly or indirectly, through its operating subsidiaries, primarily in the production, distribution, marketing and sale of cement, ready-mix concrete, aggregates, clinker and other construction materials throughout the world. We also provide related services and reliable construction-related services to customers and communities and maintain business relationships in more than 50 countries throughout the world.

We operate in different parts of the world, with operations in Mexico, the U.S., Europe, South America, Central America, the Caribbean (“SCA&C”), Asia, the Middle East and Africa. We had total assets of \$29,363 million as of December 31, 2019, and an equity market capitalization of \$3,032 million as of April 20, 2020.

As of December 31, 2019, our cement production facilities were located in Mexico, the U.S., the United Kingdom, Germany, Spain, Poland, the Czech Republic, Croatia, Colombia, Panama, Costa Rica, Guatemala, the Dominican Republic, Puerto Rico, Nicaragua, Trinidad and Tobago, Jamaica, Barbados, Egypt, the UAE, and the Philippines. As of December 31, 2019, our assets (after eliminations), cement and grinding plants as well as installed capacity, on an unconsolidated basis by region, were as set forth below. Installed capacity, which refers to theoretical annual production capacity, represents gray portland cement and white cement grinding capacity including, for example, the grinding mill in the UAE, and includes installed capacity of cement and grinding plants that have been temporarily closed. Installed capacity may vary due to product mix changes in our production facilities.

	As of December 31, 2019		
	Assets After Eliminations (in Millions of Dollars)	Number of Cement and Grinding Plants	Installed Cement Grinding Capacity (Millions of Tons Per Annum)
Mexico⁽¹⁾	\$ 3,910	15	26.4
U.S.⁽²⁾	13,898	10	14.1
Europe			
United Kingdom	1,562	3	3.6
France	978	—	—
Germany	401	2	3.1
Spain	1,190	6	7.7
Rest of Europe ⁽³⁾	756	8	8.1
SCA&C			
Colombia	1,187	4	4.1
Panama	337	1	1.2
Caribbean TCL ⁽⁴⁾	542	3	2.9
Dominican Republic	193	1	2.4
Rest of South, Central America and the Caribbean ⁽⁵⁾	381	6	3.3
Asia, Middle East and Africa (“AMEA”)			
Philippines	689	2	5.7
Israel	611	—	—
Rest of Asia, Middle East and Africa ⁽⁶⁾	423	2	6.6
Corporate and Other Operations	1,466	—	—
Continuing Operations	28,524	63	89.2
Assets held for sale⁽⁷⁾	839	2	3.9
Total	<u>\$ 29,363</u>	<u>65</u>	<u>93.1</u>

“—” Not applicable

The above table excludes our proportional interest in the installed capacity of companies in which we hold a non-controlling interest and reflects our organizational structure as of December 31, 2019.

- (1) “Number of cement plants” and “installed cement production capacity” includes two cement plants that were temporarily inactive with an aggregate annual installed capacity of 2.4 million tons of cement.
- (2) “Number of cement plants” and “installed cement production capacity” includes two cement plants that were temporarily inactive with an aggregate annual installed capacity of 2.0 million tons of cement.
- (3) “Rest of Europe” refers mainly to our operations in Poland, the Czech Republic and Croatia.
- (4) “Caribbean TCL” refers to TCL’s operations mainly in Trinidad and Tobago, Jamaica, Barbados and Guyana.
- (5) “Rest of South, Central America and the Caribbean” or “Rest of SCA&C” refers mainly to our operations in Costa Rica, Puerto Rico, Nicaragua, Jamaica, the Caribbean, Guatemala and El Salvador, excluding our operations of Caribbean TCL.
- (6) “Rest of Asia, Middle East and Africa” or “Rest of AMEA” includes mainly our operations in Egypt and the UAE.
- (7) Number of Cement Plants and Installed Cement Production Capacity classified under “Assets held for sale” refers mainly to our cement plants in Louisville, KY, U.S. and Buñol, Spain.

For the majority of the last 30 years, we had embarked on a major geographic expansion program intended to diversify our cash flows and enter into markets whose economic cycles within the cement industry operate largely independently from Mexico and which we believe offered long-term

growth potential. We have built an extensive network of marine and land-based distribution centers and terminals that give us marketing access around the world. As part of our strategy, we also periodically review and reconfigure our operations in implementing our post-merger integration process, and we also divest assets that we believe are less fundamental to our portfolio. The following are our most significant acquisitions, divestitures and reconfigurations that we have announced or closed since 2016:

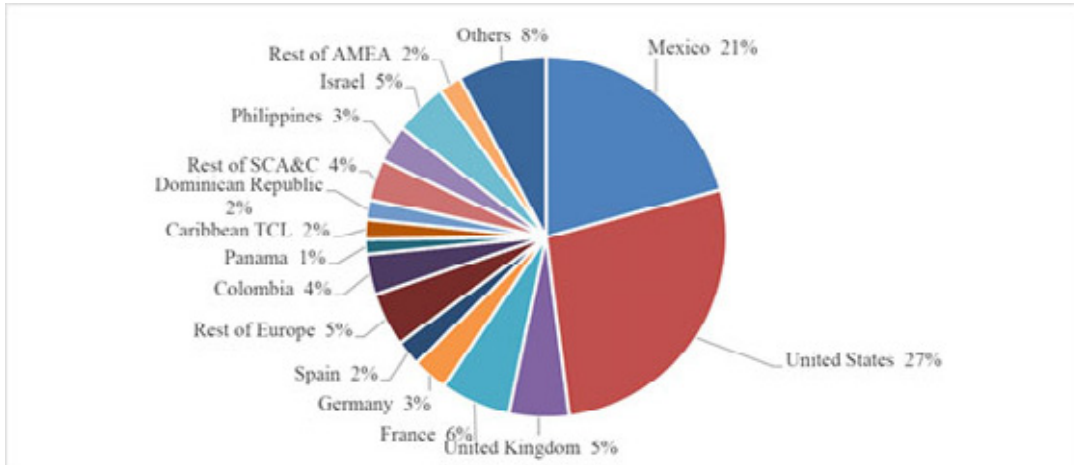
- On December 2, 2016, we agreed to the sale of our assets and operations related to our ready-mix concrete pumping business in Mexico to Cementos Españoles de Bombeo, S. de R.L., a Mexican subsidiary of Pumping Team S.L.L. (“Pumping Team”), a specialist in the supply of ready-mix concrete pumping services based in Spain, for \$88 million. This agreement included the sale of fixed assets upon closing of the transaction for \$16 million plus administrative and client and market development services. Under this agreement, we will also lease facilities in Mexico to Pumping Team over a period of ten years with the possibility to extend such term for three additional years, for an aggregate initial amount of \$77 million, plus contingent revenue, subject to results, productivity and term-extension fees for up to \$30 million, linked to annual metrics within the first five years of the agreement. On April 28, 2017, after receiving the approval by the Mexican authorities, we concluded the sale.
- On December 5, 2016, Sierra Trading (“Sierra”), a wholly-owned CEMEX España subsidiary, one of our indirect subsidiaries, presented an offer (as amended, the “Offer”) to all shareholders of TCL, a company then publicly listed in Trinidad and Tobago, Jamaica and Barbados, to acquire up to 132,616,942 ordinary shares in TCL, pursuant to which Sierra offered a certain offer price (the “Offer Price”) payable at the option of shareholders of TCL, except for shareholders of TCL in Barbados, in either Trinidad and Tobago Dollars, or \$ in Trinidad and Tobago and Jamaican Dollars, or \$ in Jamaica. The Offer Price represented a premium of 50% over the December 1, 2016 closing price of TCL’s shares on the Trinidad and Tobago Stock Exchange. The total number of TCL shares tendered and accepted in response to the Offer was 113,629,723 which, together with Sierra’s pre-existing shareholding in TCL (147,994,188 shares), represented 69.83% of the outstanding TCL shares. The total cash payment by Sierra for the tendered shares was \$86 million. CEMEX started consolidating TCL for financial reporting purposes on February 1, 2017. In March 2017, TCL de-listed from the Jamaica and Barbados stock exchanges. TCL’s subsidiaries include, but are not limited to, CCCL and Arawak Cement Company Limited (“Arawak”), which, as of December 31, 2019, owned cement plants in Jamaica and Barbados, respectively.
- On January 31, 2017, one of our subsidiaries in the U.S. closed the sale of its Concrete Pipe Business to Quikrete for \$500 million plus an additional \$40 million contingent consideration based on future performance.
- On February 10, 2017, one of our subsidiaries in the U.S. sold its Fairborn, Ohio cement plant and cement terminal in Columbus, Ohio to Eagle Materials for \$400 million.
- During January and September 2017, by means of a public offering on the Mexican Stock Exchange (*Bolsa Mexicana de Valores*) (“MSE”) and a definitive sale to two financial institutions, respectively, we sold an aggregate of 76.5 million shares of Grupo Cementos de Chihuahua, S.A.B. de C.V. (“GCC”), representing a 23% equity interest in GCC that was held through our investments in companies in which we have a minority interest. We received combined proceeds of \$377 million. We continue to hold a 20% indirect interest in GCC through Camcem, S.A. de C.V. (“CAMCEM”), GCC’s parent company.
- On June 30, 2017, one of our subsidiaries in the U.S. closed the divestment of the Pacific Northwest Materials Business, consisting of aggregate, asphalt and ready-mix concrete operations in Oregon and Washington to Cadman Materials for \$150 million.
- On September 29, 2017, one of our subsidiaries in the U.S. closed the divestment of the Block USA Materials Business (the “Block USA Materials Business”), consisting of concrete block, architectural block, concrete pavers, retaining walls and building material operations in Alabama, Georgia, Mississippi and Florida, to Oldcastle APG South, Inc. (“Oldcastle”) for \$38 million.
- On February 14, 2018, we increased our interest in Lehigh White Cement Company, a company that manufactures white cement in the U.S., from 24.5% to 36.75% by paying a total consideration of \$36 million.
- In August 2018, our subsidiary in the United Kingdom acquired shares of the ready-mix concrete producer Procon Readymix Ltd (“Procon”) for an amount in Pounds Sterling equivalent to \$22 million, based on the Pound Sterling to Dollar exchange rate as of August 31, 2018. Based on the valuation of the fair values of the assets acquired and liabilities assumed, the net assets of Procon amount to \$10 million and goodwill was determined in the amount of \$12 million. See note 4.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- On September 27, 2018, one of our subsidiaries concluded the sale of our Brazilian Operations through the sale to Votorantim Cimentos N/NE S.A. of all shares of our Brazilian subsidiary Cimento Vencemos Do Amazonas Ltda., consisting of a fluvial cement distribution terminal located in Manaus, Amazonas province, as well as the related operating license. The sale price was \$31 million. See note 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.
- On March 29, 2019, we closed the sale of our businesses in the Baltics and Nordics to the German building materials group Schwenk, for a price equivalent to \$387 million. The divested Baltic business consisted of one cement production plant in Broceni with a production capacity of 1.7 million tons, four aggregates quarries, two cement quarries, six ready-mix plants, one marine terminal and one land distribution terminal in Latvia. The divested business also included our

37.8% indirect interest in one cement production plant in Akmenes in Lithuania, with a production capacity of 1.8 million tons, as well as the exports business to Estonia. The divested Nordic assets consisted of three import terminals in Finland, four import terminals in Norway and four import terminals in Sweden. CEMEX's operations of these disposed assets for the period from January 1 to March 29, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements net of income tax on the single line item "Discontinued operations," including a gain on sale of \$66 million in 2019.

- On March 29, 2019, we entered into a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest our white cement business outside of Mexico and the U.S. for \$180 million, including our Buñol cement plant in Spain and our white cement customers list. The closing of the transaction is subject to approval by Spanish authorities. As of the date of this annual report, we expect to close the transaction during the first half of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing.
- On May 31, 2019, we concluded the sale of our aggregates and ready-mix business in the North and North-West regions of Germany to GP Günter Papenburg AG for €87 million (\$97 million). The assets divested in Germany consisted of four aggregates quarries and four ready-mix facilities in North Germany, and nine aggregates quarries and 14 ready-mix facilities in North-West Germany.
- On June 28, 2019, after obtaining customary authorizations, we closed with several counterparties the sale of our ready-mix and aggregates business in the central region of France for an aggregate price of €31.8 million (\$36.2 million).
- On November 26, 2019, our U.S. affiliate Kosmos, a partnership with a subsidiary of BUZZI Unicem S.p.A. in which CEMEX held a 75% interest, entered into a binding agreement for the sale of certain assets to Eagle Materials for \$665 million. The divestiture successfully closed on March 6, 2020. The proceeds to CEMEX from this transaction was \$499 million, minus transaction costs. The assets being divested consisted of the Kosmos cement plant in Louisville, Kentucky, as well as related assets which include seven distribution terminals and raw material reserves. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans" for more information regarding our assets in the U.S.
- As of December 31, 2019, through an affiliate in the United Kingdom, we were in negotiations with Breedon for the sale of certain assets in the United Kingdom for a total consideration of \$235 million, including \$31 million of debt. The assets held for sale mainly consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom. After completion of the potential divestiture, we will retain significant operations in the United Kingdom related to the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans" for more information regarding this transaction.
- On January 29, 2020, CHP announced the successful completion of its stock rights offering resulting in the issuance of 8,293,831,169 common shares. The listing date for the offered shares occurred on March 4, 2020. As of December 31, 2019, we held 66.78% of CHP's common shares. After giving effect to the stock rights offering, our ownership of CHP's common shares increased to 75.66%. On December 16, 2019, CHP had announced that it obtained approval from the Philippine Stock Exchange to raise the equivalent in Philippine Peso of up to \$250 million through a stock rights offering to all eligible shareholders. The net proceeds from the offering for CHP will be used primarily to fund the expansion of our Solid Cement Plant (as defined below) and to repay intra-group loans. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments" for the status of the stock rights offering.

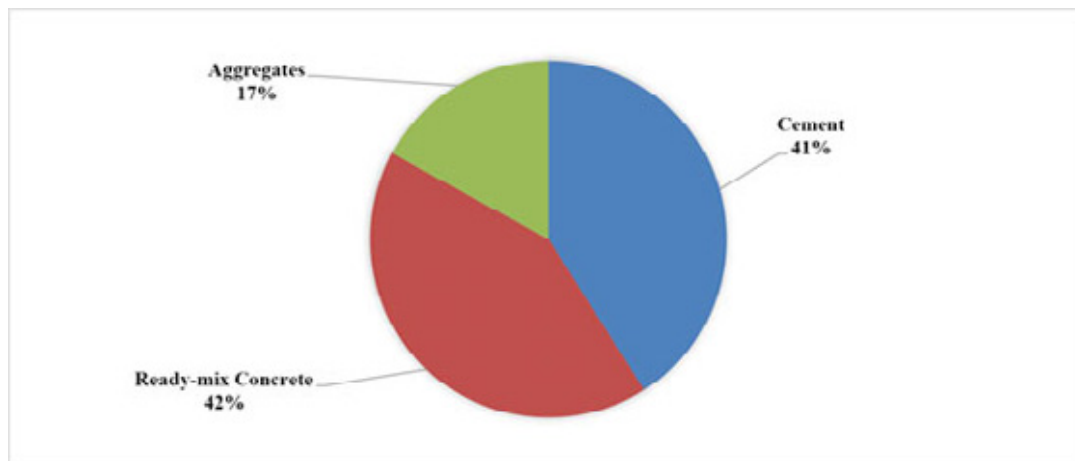
Geographic Breakdown of Revenues for the Year Ended December 31, 2019

The following chart indicates the geographic breakdown of our revenues, before eliminations resulting from consolidation, for the year ended December 31, 2019:



Breakdown of Revenues by Line of Business for the Year Ended December 31, 2019

The following chart indicates the breakdown of our revenues by product, after eliminations resulting from consolidation, for the year ended December 31, 2019:



Our Products

We strive to provide superior building solutions in the markets we serve. To this end, we tailor our products and services to suit customers' specific needs, from home construction, improvement and renovation to agricultural, industrial and marine/hydraulic applications.

Cement

Cement is a binding agent, which, when mixed with sand, stone or other aggregates and water, produces either ready-mix concrete or mortar. Whether in bags or in bulk, we provide our customers with high-quality branded cement products and services. We use our professional knowledge and experience to develop customized products designed to satisfy our clients' specific requirements and that also foster sustainable construction. In many of the countries where we have cement operations, a large proportion of cement sold is a bagged, branded product. We often deliver the product to a large number of distribution outlets such that our bagged, branded cement is available to the end users at a point of sale in close proximity to where the product will be used. We seek to develop brand identity and recognition in our bagged product.

We manufacture cement through a closely controlled chemical process, which begins with the mining and crushing of limestone and clay, and, in some instances, other raw materials. The clay and limestone are then pre-homogenized, a process which consists of combining different types of clay and limestone. The mix is typically dried, then fed into a grinder which grinds the various materials in preparation for the kiln. The raw materials are calcined, or processed, at a very high temperature in a kiln, to produce clinker. Clinker is the intermediate product used in the manufacture of cement. For limestone, clay and gypsum, requirements are based on chemical composition that, depending on the other materials available, matches the quality demanded by the production process. For cement limestone, clay and gypsum, we run chemical tests to prepare the mining plan of the quarry, to confirm material quality and reduce variations in the mineral content. We consider that limestone and clay quality of our cement raw material quarries are adequate for the cement production process.

There are two primary processes used to manufacture cement: the dry process and the wet process. The dry process is more fuel efficient. As of December 31, 2019, 53 of our 55 operative cement production plants used the dry process and two used the wet process. Our operative production plants that use the wet process are in Nicaragua and Trinidad and Tobago. In the wet process, the raw materials are mixed with water to form slurry, which is fed into a kiln. Fuel costs are greater in the wet process than in the dry process because the water that is added to the raw materials to form slurry must be evaporated during the clinker manufacturing process. In the dry process, the addition of water and the formation of slurry are eliminated, and clinker is formed by calcining the dry raw materials. In the most modern application of this dry process technology, the raw materials are first blended in a homogenizing silo and processed through a pre-heater tower that utilizes exhaust heat generated by the kiln to pre-calcine the raw materials before they are calcined to produce clinker.

Clinker and gypsum are fed in pre-established proportions into a cement grinding mill where they are ground into an extremely fine powder to produce finished cement. We primarily cover our gypsum needs from third parties; however, we also operate gypsum quarries in the U.S., Spain, the Dominican Republic and Egypt. Our main types of cement include the following:

Gray Ordinary Portland Cement: Our gray ordinary portland cement is a high-quality, cost-effective building material, mainly composed of clinker, that meets applicable chemical and physical requirements and is widely used in all construction segments: residential, commercial, industrial, and public infrastructure.

White Portland Cement: We manufacture this type of cement with limestone, low iron content kaolin clay, and gypsum. Customers use our white portland cement in architectural works requiring great brightness and artistic finishes, to create mosaics and artificial granite, and for sculptural casts and other applications where white prevails.

Masonry or Mortar: Masonry or mortar is a portland cement that we mix with finely ground inert matter (limestone). Our customers use this type of cement for multiple purposes, including concrete blocks, templates, road surfaces, finishes, and brick work.

Oil-well Cement: Our oil-well cement is a specially designed variety of hydraulic cement produced with gray portland clinker. It usually forges slowly and is manageable at high temperatures and pressures. Produced in classes from A to H and J, our oil-well cement is applicable for different depth, chemical aggression, or pressure levels.

Blended Cement: Blended hydraulic cements are produced by inter-grinding or blending portland cement and supplementary cementitious materials such as ground granulated blast furnace slag, fly ash, silica fume, calcined clay, hydrated limestone, and other pozzolans. The use of blended cements in ready-mix concrete reduces mixing water and bleeding, improves workability and finishing, inhibits sulfate attack and the alkali-aggregate reaction, and reduces the heat of hydration. CEMEX offers an array of blended cements which have a lower CO₂ footprint resulting from their lower clinker content due to the addition of supplementary cementitious materials. The use of blended cements reinforces our dedication to sustainable practices and furthers our objective of offering an increasing range of more sustainable products.

Ready-Mix Concrete

Ready-mix concrete is a combination of cement, fine and coarse aggregates, admixtures (which control properties of the concrete including plasticity, pumpability, freeze-thaw resistance, strength and setting time), and water. We tailor our ready-mix concrete to fit our clients' specific needs. By changing the proportion of water, aggregates, and cement in the mix, we modify our concrete's resistance, manageability, and finish. We also use additives to customize our concrete consistent with the transportation time from our plant to the project, weather conditions at the construction site, and the project's specifications. From our water-resistant to our self-compacting concrete, we produce a great variety of specially designed concrete to meet the many challenges of modern construction.

We develop solutions based on our thorough knowledge and application of ready-mix concrete technology. Leveraging years of experience, a global pool of knowledge, and state-of-the-art expertise about the different ready-mix concrete constituents and their interaction, we offer our customers tailor-designed concrete. CEMEX ready-mix concrete technologists are able to modify the properties of concrete through the use of innovative chemical admixtures, combined with the proper proportions of the various concrete constituents. For example, depending on the type of application and jobsite requirements, we can design ready-mix concrete that is more fluid, stronger, develops strength faster, and also retains workability longer. Through the development of chemical admixtures solutions, our researchers design special concretes that fulfill the construction industry's increasingly demanding performance requirements. CEMEX offers a special ready-mix concrete portfolio, comprised of such products as ultra-rapid hardening concrete, crack-resistant/low shrinkage concrete, self-consolidating concrete, architectural concrete, pervious concrete, antibacterial concrete and a number of others.

We continuously work to improve the properties of ready-mix concrete that make it a key component of sustainable construction: durability, resistance to aggressive environments, light reflection, and capacity to store energy, among others. We also constantly work to develop innovative solutions that advance the sustainability of structures made with ready-mix concrete. This way, our customers can design sustainable buildings that can take advantage of the benefits of concrete in a wide range of applications. We offer engineered concrete for harbors and bridges with a special design of high-performance concrete that combines durability and low maintenance with resistance to aggressive environments, and for industrial applications which consists of concrete with high acid resistance which is robust and durable for such uses as cooling towers. We also offer concrete for building and housing used for structures such as self-compacting concrete that improves the strength and durability of building structures, while reducing energy use and noise due to concrete vibration, and envelope concrete such as structural lightweight concrete or insulating concrete forms which offer insulation solutions to improve energy efficiency in buildings, and concrete for building design that takes advantage of concrete's capacity to store energy—its thermal mass—minimizing temperature fluctuations in a building over the course of the day, reducing the need for additional heating and cooling. We also offer ready-mix concrete for water and wastewater management and for roads and pavements.

The types of ready-mix concrete we offer our clients include, but are not limited to:

Standard Ready-Mix Concrete: Standard ready-mix concrete is the most common form of concrete. It is prepared for delivery at a concrete plant instead of mixed on the construction site.

Architectural and Decorative Concrete: This type of ready-mix concrete can provide a structural function, as well as an aesthetic or decorative finish. It can offer smooth or rough surfaces or textures, as well as a variety or range of colors.

Rapid-Setting Concrete: Designed to enhance early strength development, this type of ready-mix concrete allows fast formwork removal, accelerated construction sequencing, and rapid repair for such jobs as roads and airport runways. Typically used in low temperature (5-10°C) concreting during winter, this type of ready-mix concrete can also be used in buildings, railways, and precast applications. In addition to saving time, this type of ready-mix concrete technology offers improved durability and acid resistance.

Fiber-Reinforced Concrete: Ready-mix concrete designed with micro or macro fibers that can be used either for structural applications, where the fibers can potentially substitute for steel rebar reinforcement, or for reducing shrinkage, primarily early age shrinkage. Macro fibers can significantly increase the ductility of concrete, making it highly resistant to crack formation and propagation.

Fluid-Fill Concrete: Fluid mortar or ready-mix concrete simplifies the process of laying pipe and cable by surrounding the pipe or cable with a tightly packed shell that provides protection from the elements, prevents settling, and enables crews to work quickly.

Roller-Compacted Concrete: Compacted in place and cured, roller-compacted concrete is a zero-slump ready-mix concrete with the abrasion resistance to withstand high velocity water, making it the material of choice for spillways and other infrastructure subject to high flow conditions. It represents a competitive solution in terms of cost and durability when compared to asphalt.

Self-Consolidating Concrete: Self consolidating concrete has very high flow; therefore, it is self-leveling, eliminating the need for vibration. Due to the superplasticizers used, chemical admixtures that impart very high flow, self-consolidating concrete exhibits very high compaction as a result of its low air content. Consequently, self-consolidating concrete can have very high strengths, exceeding 50 megapascals.

Pervious Concrete: Because of its unique design mix, pervious concrete is a highly porous material that allows water, particularly rainwater, to filter through, reduces flooding and heat concentration by up to 4°C, and helps to prevent skidding on wet roads. This ready-mix concrete is ideally used in parking lots, footpaths, and swimming pool border applications.

Antibacterial Concrete: This type of ready-mix concrete helps control bacteria growth and is used to help maintain clean environments in structures such as hospitals, laboratories, and farms.

Aggregates

We are one of the world's largest suppliers of aggregates: primarily the crushed stone, sand and gravel, used in virtually all forms of construction. Our customers use our aggregates for a wide array of applications: as a key component in the construction and maintenance of highways, walkways, parking lots, airport runways, and railways; for drainage, water filtration, purification, and erosion control; as fill material; for sand traps on golf courses, beaches, playing field surfaces, horse racing tracks, and related applications; and to build bridges, homes, and schools.

Aggregates are obtained from land-based sources such as sand and gravel pits and rock quarries or by dredging marine deposits.

Hard Rock Production. Rock quarries usually operate for at least 30 years and are developed in distinct benches or steps. A controlled explosion is normally used to release the rock from the working face. It is then transported by truck or conveyor to a crusher to go through a series of crushing and screening stages to produce a range of final sizes to suit customers' needs. Dry stone is delivered by road, rail or water from the quarry.

Sand and Gravel Production. Sand and gravel quarries are much shallower than rock quarries and are usually worked and restored in progressive phases. Water can either be pumped out of the quarries allowing them to be worked dry or they can be operated as lakes with extraction below water. A conveyor draws the raw material into the processing plant where it is washed to remove unwanted clay and to separate sand. Sand separated during processing is dewatered and stockpiled. Gravel then passes over a series of screens that sieve the material into different sizes. Processing separates the gravel into stockpiles in a range of sizes for delivery.

Marine Aggregate Production. A significant proportion of the demand for aggregates is satisfied from rivers, lakes, and sea beds. Marine resources are increasingly important to the sustainable growth of the building materials industry. Marine aggregates also play an important role in replenishing beaches and protecting coastlines from erosion. At sea, satellite navigation is used to position a vessel precisely within its licensed dredging area. Vessels trail a pipe along the seabed and use powerful suction pumps to draw sand and gravel into the cargo hold. Dredged material is discharged at wharves, where it is processed, screened and washed for delivery.

Aggregates are an indispensable ingredient in ready-mix concrete, asphalt, and mortar. Accounting for 60% to 75% of ready-mix concrete's volume, aggregates strongly influence concrete's freshly mixed and hardened properties. Aggregates not only increase concrete's strength, but also can make the mix more compact, enabling applications such as weatherproofing and heat retention. They can further contribute to concrete's aesthetic qualities. For example, sand gives surface treatments their brightness.

The types of aggregates we offer our clients include, but are not limited to:

Crushed Stone and Manufactured Sand: These products are obtained by mining rock and breaking it down to a preferred size. In the case of manufactured sand, the product is obtained by crushing rock to the selected shape or texture, ensuring product and project specifications are met. Sources of crushed stone can be igneous, sedimentary, or metamorphic.

Gravel: Gravel deposits are produced through a natural process of weathering and erosion. It can be used for roads, for concrete manufacturing, or for decorative purposes.

Sand: Sand occurs naturally and is composed of fine rock material and mineral particles. Its composition is variable depending on the source. It can be used for roads, concrete manufacturing, or sanitation.

Recycled Concrete: Recycled concrete is created by breaking, removing, and crushing existing concrete to a preferred size. It is commonly used as a base layer for other construction materials because it compacts to form a firm surface.

Related Products

We rely on our close relationship with our customers to offer them complementary products for their construction needs, which mainly include the following:

Asphalt: We offer a wide range of cost effective, high performance asphalt products, from our standard hot mix asphalt, which is made by combining crushed stone with liquid asphalt cement, to highly technical products that can be used on major highway systems, driveways, commercial parking lots, or rural country roads. Designed for consistency and reliability, our asphalt products are designed to withstand different weight loads, traffic volumes, and weather conditions.

Concrete Block: Standard concrete block, sometimes referred to as gray block, concrete masonry unit, or cinder block, is one of the most practical and long-lasting materials used in building. Its strength, durability, and versatility, including its energy efficiency, excellent fire and high wind resistance, and noise insulation, make concrete block a compelling alternative to many other building materials.

Roof Tiles: We offer a comprehensive range of concrete roof tiles and fittings, designed to meet the requirements of most roofing applications. Available in a wide selection of sizes, shapes, and colors, our roof tiles serve residential and commercial needs.

Architectural Products: Our high-end architectural concrete products offer a range of styles for different building or landscaping projects. Specialty rock products, as well as architectural block, in an array of colors, sizes, and textures, take our customers' designs to a new level. Block paving solutions and decorative paving provide an ideal range of applications for any hard landscaping project.

Pipe: We design and manufacture standard and special concrete pipe for various applications such as storm and sanitary sewers. Offered in diverse types, sizes, and lengths, our pipe products meet or exceed applicable standards and customer requirements throughout our different operations.

Other Precast Products: Among our other precast products, we offer rail products, concrete floors, box culverts, bridges, drainage basins, barriers, and parking curbs. In selected markets, we further complement our commercial offer with admixtures, gypsum, and cementitious materials such as fly ash and blast furnace slag.

Building Solutions

We help build the homes people live in, the roads that connect them, and the infrastructure that makes their cities vibrant. With over a century of experience delivering tailor-made building solutions, we work with our customers around the world to build sustainable structures that will thrive today and well into the future.

Housing: We integrate our cutting-edge design, building materials, and construction systems into flexible and replicable housing solutions for our clients and communities across the globe.

Paving: As the world's leader in concrete-based pavement solutions, we help connect cities and their surrounding communities through safer, more durable, and energy-efficient highways, mass transit systems, airport runways, rural roadways, and city streets.

Green Building Consultancy: We are focused on delivering sustainable building solutions to the increasingly complex needs of societies with limited natural resources.

Urbanization Solutions

Our urbanization solutions seek to replicate stand-alone businesses, leverage our core business, and offer a value proposition based on sustainability and connect to the broader city ecosystem. Addressing urbanization challenges, our high-quality, sustainable construction products and innovative building solutions aim to exceed our customers' expectations and meet society's growing needs. We participate throughout the entire construction value chain and selectively in complementary businesses that enable us to become closer to our customers.

Services

We continuously communicate and interact with our customers to identify and implement effective ways to meet their toughest challenges. We recognize that customer loyalty happens by design, not by chance. To better serve our customers, we not only need to have a clear understanding of what they need, but also the means and passion to fulfill those needs.

In each market and locality in which we operate, we do our best to provide our customers with the most compelling integrated building solutions. For example, to solve infrastructure needs in major cities, we not only provide ready-mix concrete, but we also design the project, define the best technical solution, offer different financial schemes and execute the project in collaboration with local builders. Similarly, we work alongside our neighbors in small, less-affluent communities to help them solve their housing needs and pave their streets and sidewalks.

The following are examples of the different services offered to our customers throughout our operations, all of which services are provided in substantially all our operations and may vary from location to location:

24/7 LOAD[®]: Our delivery service offers customers the ease of receiving products mostly whenever they need them, allowing our customers to optimize their project schedules according to their specific needs.

ATM-like Bulk Cement Dispatch System: This service offers our customers greater flexibility and efficiency. It enables them to get cement at their convenience, shortening their logistics schedules by minimizing loading and unloading times and also cutting back on more traditional transactional practices.

Construrama[®]: We partner with our cement distribution network to offer customers an extensive range of brand-name products at competitive prices. Our retailers also receive integral training to better manage all aspects of their business, including inventory management, product promotion, salesforce programs, product-delivery and sourcing logistics.

Customer-oriented Educational and Training Services: In several of the countries where we operate, customers can receive training on specific topics related to the use of building materials. By sharing knowledge and best practices, our educational and training services guide and teach our customers. Topics range from teaching customers about the characteristics and uses of white cement, to showing retailers how to improve their inventory management and increase their sales.

Construction Financing Services: Most of our customers can receive financing on certain projects and product purchases through various innovative financing programs that vary from country to country. For example, since 1998, our United Nations award-winning low-income housing program, *Patrimonio Hoy*, has assisted more than 587,000 families with affordable services and building materials through financing mechanisms and technical assistance. Additionally, in certain countries where we operate, such as Mexico, we offer turn-key solutions for developers and partner with governments and local authorities to identify, coordinate, and develop public infrastructure projects.

Mobile Solutions: Through automated messages sent via short message services (SMS), most of our customers can be notified each time an order of cement or ready-mix concrete is ready for delivery. This free-of-charge service keeps our customers well informed of their specific project logistics. Most of our customers can also receive information about their pending invoice payments.

Multiproducts: We offer our customers in most of the countries in which we operate a one-stop shopping experience by providing them with a full array of complementary construction-related supplies through our retail stores from plumbing and electrical supplies to paint, lumber, and lighting fixtures.

Online Services: Most of our customers have all day online access to information, from account balances to new products and services releases through online services such as CEMEX Go, CEMEX Connect, CEMEX One, eSelling, CEMEXNet and Commercial Portal. Our customers can place online cement orders, and in some countries, they are able to review their order status at any time of day or night. The online service is also an open communication channel to receive feedback from our customers. We believe that our online services, such as CEMEX Go, can represent an advantage in certain situations, such as the COVID-19 pandemic, in which our customers can access our products and services remotely. During 2019, we successfully completed the deployment of our CEMEX Go digital platform throughout our targeted markets and it is now available in 21 countries. 90% of our total recurring cement, ready-mix concrete, and aggregates customers are using CEMEX Go, conducting more than half of their purchases, or more than 45% of our global sales, through the platform.

Service Centers: We offer a one-stop contact call center where customers can manage their business and find fast, reliable service, place orders, make inquiries, review order status, or request technical assistance, all in one single call.

Smart Silo[®]: We work together with our customers, so they always have the appropriate quantity of cement in their silos. Through 24-hour monitoring of our customers' silos' cement stock levels, our SmartSilo[®] technology allows us to anticipate and respond to their product replenishment needs ahead of time.

Technical Support: We aim to provide our customers with top-level technical assistance through our state-of-the-art equipment and our highly professional, well-trained technical services staff. We look to take extra efforts and provide value above and beyond fulfilling our customers' need for cement, aggregates, ready-mix concrete, and related products such as mortar.

Description of Our Raw Materials Reserves

We are a leading global provider of building materials, including cement, ready-mix concrete and aggregates. Our cement production process begins with the mining and crushing of limestone and clay, and, in some instances, other raw materials. We have access to limestone and clay quarries near most of our cement plant sites worldwide since these minerals are the main raw materials in the cement production process.

In addition, we are one of the world's largest suppliers of aggregates, primarily hard rock, sand and gravel, obtained from quarries, to be used in ready-mix concrete and other concrete-based products such as blocks and pipes.

Customers use our aggregates for a wide array of purposes, from key components in the construction and maintenance of highways, walkways, and railways to indispensable ingredients in concrete, asphalt and mortar. Aggregates can be used in their natural state or crushed into smaller size pieces.

Raw materials for aggregates and cement production are primarily extracted from open pit or open cut mines, which target deposits of economically useful minerals or rocks that are found near the land surface. Open-pit mines that produce raw material for our industry are commonly referred to as quarries.

Open-pit mines are typically enlarged until either the mineral resource is exhausted or an increasing ratio of overburden to exploitable material makes further mining economically unfeasible. In some cases, we also extract raw materials by dredging underwater deposits.

Raw materials for our own cement production processes are obtained mainly from our own sources. However, we may cover our needs for aggregates and other raw materials through third-party suppliers. For the year ended December 31, 2019, 15% of our total raw material needs were supplied by third parties.

Reserves are considered as proven when all legal and environmental conditions have been met and permits have been granted. Proven reserves are those for which (i) the quantity is computed from dimensions revealed by drill data, together with other direct and measurable observations such as outcrops, trenches and quarry faces and (ii) the grade and/or quality are computed from the results of detailed sampling; and (iii) the sampling and measurement data are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of the reserves are well-established. Probable reserves are those for which quantity and grade and/or quality are computed from information similar to that used from proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.

Our reserve estimates are prepared by CEMEX's engineers and geologists and are subject to annual review by our corporate staff jointly with the regional technical managers associated with our business units. In specific circumstances we have used the services of third-party geologists and/or engineers to validate our own estimates. During the three-year period ended December 31, 2019, we have employed third parties to review (i) our cement raw materials reserves estimates in Mexico, Colombia, Nicaragua, Costa Rica, the United Kingdom, Germany, Spain and the Philippines and (ii) our aggregates reserves estimates in France, Poland, the Czech Republic, the United Kingdom, Germany and Mexico.

Our reserves determination includes only materials meeting specific quality requirements. For aggregates used in ready-mix concrete, such requirements are based on hardness, shape and size. For cement raw materials (mainly limestone and clay), such requirements are based on a chemical composition that matches the quality demanded by the production process. In the case of cement raw materials, since chemical composition varies between production sites and even within the same site, we conduct geostatistical chemical tests and determine the best blending proportions to meet production quality criteria and to try to maintain an extraction ratio close to 100% of the reported reserves for such materials.

The main equipment utilized in our production sites is as follows:

- In our cement facilities: drills, crushers, kilns, coolers, mills, packing/loading machines, pay loaders, excavators, off-road trucks and other material handling equipment.
- In our ready-mix concrete facilities: batch plants, silos and mobile equipment and mixer trucks.
- In our aggregates facilities: drills, crushers, screens, belt conveyors, pay loaders, excavators, trucks and other material handling equipment.

We believe that our facilities are generally in good condition and adequate for efficient operations. During 2019, our total quarry material production was 179.1 million tons, of which 62% was used for our own consumption to produce cement, ready-mix concrete and/or other products which are later sold to the public and the remaining 38% was directly sold to customers.

Our estimates distinguish between owned and leased reserves, the latter being determined over the term of the lease contract, and including only those permitted reserves which are proven and probable. As of December 31, 2019, the total surface of property in our quarries operations (including cement raw materials quarries and aggregates quarries) was 86,054 hectares, of which 82% was owned by us and 18% was managed through lease or similar contracts.

As of December 31, 2019, we operated 187 cement raw materials quarries across our global operations, serving our facilities dedicated to cement production, which are located at or near the cement plant facilities. We estimate that our proven and probable cement raw material reserves, on a consolidated basis, have an average remaining life of 87 years, assuming 2015-2019 average annual cement production (last five years average production).

The table set forth below presents our total permitted proven and probable cement raw materials reserves by geographic segment and material type extracted or produced in our cement raw materials quarries operations.

Location	Mineral	Number of quarries	Property Surface (hectares)		Reserves (Million tons)			Years to depletion	2019 Annualized Production	5 years aver. Annualized Production	Own Use
			Owned	Leased	Proven	Probable	Total				
Mexico ⁽¹⁾	Limestone	19	9,871	48	1,285	1,629	2,914	141	17.8	20.7	94%
	Clay	15	8,912	—	155	148	303	92	2.8	3.3	100%
	Others	16	1,756	150	8	24	32	98	0.5	0.3	100%
United States ⁽²⁾	Limestone	18	18,933	91	482	136	618	50	13.0	12.2	100%
	Clay	3	144	39	20	13	33	0	0.4	0.0	100%
	Others	2	30	—	—	3	3	0	0.1	0.0	100%
Europe											
United Kingdom											
	Limestone	3	431	107	52	59	111	46	2.1	2.4	100%
	Clay	2	108	107	22	5	27	21	0.6	1.3	100%
Germany	Limestone	1	298	—	5	88	93	37	2.6	2.5	100%
Spain	Limestone	12	726	117	289	131	420	93	4.1	4.5	100%
	Clay	6	64	30	17	—	17	38	0.4	0.5	93%
	Others	3	102	3	1	14	15	391	0.0	0.0	100%
Rest of Europe	Limestone	5	637	68	210	216	426	71	5.7	6.0	99%
	Others	1	4	5	—	—	—	60	—	—	—
SCA&C											
Colombia	Limestone	13	3,026	1,751	38	251	289	74	3.4	3.9	100%
	Clay	4	232	250	10	12	22	185 ⁽⁴⁾	0.1	0.1	100%
	Others	2	86	153	1	11	12	65	0.1	0.2	—
Panama	Limestone	3	110	—	68	24	92	46	1.5	2.0	100%
	Clay	2	179	—	6	—	6	25	0.2	0.3	100%
Costa Rica	Limestone	1	48	—	35	—	35	38	0.7	0.9	99%
	Clay	2	94	60	4	6	10	45	0.2	0.2	100%
	Others	1	27	—	5	—	5	206	0.0	0.0	100%
Caribbean TCL	Limestone	14	83	261	3	30	33	23	1.4	1.4	81%
	Clay	2	135	—	1	16	17	90	0.2	0.2	100%
	Others	6	—	23	1	—	1	10	0.1	0.1	9%
Rest of South, Central America and the Caribbean											
	Limestone	4	701	—	311	608	919	291	2.7	3.2	100%
	Clay	2	242	—	21	30	51	2,104	0.0	0.0	—
	Others	1	—	1,543	11	50	61	392	0.2	0.2	90%
Asia, Middle East and Africa											
Philippines ⁽³⁾	Limestone	7	278	—	216	—	216	38	5.7	5.7	100%
	Clay	3	37	—	1	2	3	14	0.0	0.2	—
	Others	5	76	9	5	—	5	7	0.1	0.7	100%
Rest of Asia, Middle East and Africa											
	Limestone	2	—	203	8	15	23	5	2.7	4.4	—
	Clay	3	—	392	2	26	28	23	0.7	1.2	—
	Others	4	—	4	—	—	—	—	0.0	0.2	—
	Limestone	102	35,142	2,646	3,003	3,187	6,190	89	63	70	94%

CEMEX**Consolidated**

Clay	44	10,147	878	258	259	517	71	6	7	80%
Others	41	2,080	1,890	31	103	134	78	1	2	71%
Totals⁽⁵⁾	187	47,370	5,414	3,292	3,548	6,840	87	70.2	78.8	74%

(1) Our cement raw materials operations in Mexico include three limestone quarries that also produce hard rock aggregates.

(2) Our cement raw materials operations in the U.S. include one limestone quarry that also produces hard rock aggregates.

- (3) Although we consolidate CHP into our consolidated financial statements under IFRS, we do not control the raw materials used in our operations in the Philippines. Such raw materials are primarily supplied by APO Land & Quarry Corporation (“ALQC”) and Island Quarry and Aggregates Corporation (“IQAC”). ALQC is wholly owned by Impact Assets Corporation, which is a corporation in which we own a 40% equity interest. IQAC is wholly owned by Albatross Holdings, which is a corporation in which we own a 40% equity interest.
- (4) Not including Maceo Plant’s (as defined below) annualized production.
- (5) Figures for Property Surface, Reserves and Years to depletion are rounded up.

As of December 31, 2019, we operated approximately 262 aggregates quarries across our global operations, mostly dedicated to serving our ready-mix concrete and aggregates businesses. We estimate that our proven and probable aggregates reserves, on a consolidated basis, have an average remaining life of 54 years, assuming 2015-2019 average production (last five years average aggregates production).

The table set forth below presents our total permitted proven and probable aggregates reserves by geographic segment and material type extracted or produced in our aggregates quarries operations. We note that the locations of our aggregates reserves differ from those of our cement reserves.

Location	Mineral	Number of quarries	Property Surface (hectares)		Reserves (Million tons)			Years to depletion	2019 Annualized Production	5 years aver. Annualized Production	Own Use
			Owned	Leased	Proven	Probable	Total				
Mexico	Hardrock	12	655	183	212	147	359	33	10.3	10.9	60%
United States	Hardrock	16	10,748	1,066	725	494	1,219	50	27.3	24.1	32%
	Sand & Gravel	42	4,337	3,974	265	233	498	30	18.2	16.8	51%
	Others	2	163	88	—	—	—	2	0.2	0.3	28%
Europe											
United Kingdom	Hardrock	20	530	979	430	57	487	43	11.1	11.3	38%
	Sand & Gravel	48	2,505	1,362	51	130	182	26	5.7	6.9	30%
France	Hardrock	10	62	131	81	5	86	29	2.9	3.0	16%
	Sand & Gravel	24	422	590	129	15	144	27	4.9	5.2	10%
Germany	Hardrock	1	26	7	6	18	24	102	0.4	0.2	32%
	Sand & Gravel	14	826	302	22	72	94	26	3.6	3.6	35%
Spain	Hardrock	17	466	234	213	183	396	429	1.5	0.9	22%
	Sand & Gravel	3	432	110	48	—	48	146	0.8	0.3	14%
Rest of Europe	Hardrock	8	14	93	16	24	40	22	2.6	1.8	12%
	Sand & Gravel	14	415	241	18	23	41	6	6.2	6.5	48%
SCA&C											
Colombia	Sand & Gravel	10	640	—	11	35	46	86	0.2	0.5	64%
Panama	Hardrock	2	31	20	5	12	17	93	0.0	0.2	—
	Others	1	—	56	—	1	1	5	0.0	0.2	—
Rest of South, Central America and the Caribbean	Hardrock	2	150	942	22	1,876	1,897	3,783	0.6	0.5	45%
	Sand & Gravel	7	289	61	3	10	13	22	0.7	1.2	7%
Asia, Middle East and Africa											
Philippines⁽¹⁾	Hardrock	2	77	25	151	—	151	477	0.0	0.3	15%
Rest of Asia, Middle East and Africa	Hardrock	6	—	20	68	10	78	7	11.8	11.9	84%
	Sand & Gravel	1	—	—	—	—	—	2	0.1	0.2	81%
	Hardrock	96	12,759	3,699	1,927	2,826	4,753	73	68.3	65.2	45%

CEMEX**Consolidated**

Sand & Gravel	163	9,868	6,639	547	519	1,066	26	40.4	41.2	40%
Others	3	163	144	1	1	1	3	0.2	0.5	28%
Totals⁽²⁾	<u>262</u>	<u>22,789</u>	<u>10,481</u>	<u>2,474</u>	<u>3,346</u>	<u>5,820</u>	<u>54</u>	<u>108.9</u>	<u>106.9</u>	<u>43%</u>

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- (1) Although we consolidate CHP into our consolidated financial statements under IFRS, we do not control the raw materials used in our operations in the Philippines. Such raw materials are primarily supplied by ALQC and IQAC. ALQC is wholly owned by Impact Assets Corporation, which is a corporation in which we own a 40% equity interest. IQAC is wholly owned by Albatross Holdings, which is a corporation in which we own a 40% equity interest.
 - (2) Figures for Property Surface, Reserves and Years to depletion are rounded up.

Our Business Strategy

Please see “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how COVID-19 has impacted our business strategy.

CEMEX has a general vision and value creation model comprised of the following six elements: (i) purpose, (ii) mission, (iii) values, (iv) strategic pillars, (v) operating model and (vi) stakeholders.

PURPOSE. We expect to build a better future for our employees, our customers, our shareholders, our suppliers and the communities where we live and work.

MISSION. We intend to create sustainable value by providing industry-leading products and solutions to satisfy the construction needs of our customers around the world.

VALUES. We intend to: (i) protect the safety of all our employees by being accountable to each other for our actions and behaviors and trying to be an industry leader by example; (ii) focus on our customers by aligning ourselves closely with their business and their needs and, following through with our commitments, resolving problems quickly and making it easy to do business with us; (iii) pursue excellence in all aspects of our business and interactions with customers by challenging ourselves to constantly improve and build upon our strong reputation around the world for quality and reliability; (iv) work as one CEMEX by leveraging our collective strength and global knowledge to share best practices, replicate good ideas and collaborate across boundaries; and (v) act with integrity by remaining honest and transparent in all our interactions, complying with our code of ethics, and caring for our people, communities and natural resources.

STRATEGIC PILLARS. To achieve our mission, our strategy is to create value by building and managing a global portfolio of integrated cement, ready-mix concrete, aggregates and related businesses. The four pillars that underpin our strategy are, in no particular order, (i) valuing our people as our main competitive advantage and primary asset, (ii) helping our customers succeed, (iii) pursuing markets that offer long-term profitability, and (iv) looking to have sustainability fully embedded in our business.

To aid our strategy, in 2018, we embarked on our strategic plan to build “A Stronger CEMEX.” This transformational plan is designed to fortify CEMEX’s position as a leading global heavy building materials company, accelerate our path to investment grade metrics, enhance CEMEX, S.A.B. de C.V.’s total shareholder return and generate long-term value for all of our stakeholders. Specifically, we believe that through this strategic plan, we can rebalance and streamline our existing portfolio in order to better position ourselves to deliver higher growth and greater stakeholder value over the mid-to-long-term by divesting between \$1.5 billion and \$2 billion in assets by the end of 2020; originally, achieve recurring operational improvements in our operations of \$230 million by 2020; accelerate our path to investment grade by further deleveraging CEMEX by reducing our debt by \$3.5 billion between the launch of the “A Stronger CEMEX” plan on July 1, 2018, and the end of 2020; and, subject to our business performance and required approvals at CEMEX, S.A.B. de C.V.’s general ordinary shareholders’ meeting for each applicable year, to return value to CEMEX, S.A.B. de C.V.’s shareholders through dividends and stock repurchase programs. For 2020, we have identified an additional \$140 million in cost-reduction actions further increasing our \$230 million target for 2020 to a total of \$370 million of recurring operational improvements by the end of 2020. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how we have increased debt and cash levels to attend to the COVID-19 pandemic and how we will not pay dividends during 2020.

As of December 31, 2019, our asset sales, announced or closed, reached \$1.6 billion, including the announced divestment of certain assets in the United Kingdom to Breedon for a total consideration of \$235 million; we achieved operational improvements of \$170 million; we achieved a debt reduction of \$407 million; and we paid a cash dividend of \$150 million and CEMEX, S.A.B. de C.V. repurchased 157.7 million CPOs.

In addition, to further fortify our balance sheet, we continue to be focused mainly on the following three initiatives, while at all times remaining committed to building a better world and helping alleviate some of the biggest challenges communities are facing today: (i) growing our Operating EBITDA through further cost-reduction efforts, operating efficiencies and customer-centric commercial strategies across all our core businesses; (ii) maximizing our free cash flow, which is expected to be used for debt

reduction; and (iii) continuing to execute selective accretive divestments by selling what we believe are non-essential assets, which could allow us to free up more free cash flow to reduce debt. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how we have raised cash to be in a position to meet any liquidity requirements and not reduce debt as a temporary measure to attend to the COVID-19 pandemic and its effect on our liquidity.

We value our people as our main competitive advantage

We aspire to hire top-class employees, and our team’s health, safety and professional growth are among our top priorities. We plan to develop leaders and encourage them to create new ways of thinking and acting, while at the same time being diligent in assessing risks and opportunities. We look to foster an open dialogue in our interactions to align our goals and achieve greater results.

Placing Health and Safety as a Top Value and Priority.

Health and Safety (“H&S”) remains one of our top values and priorities. We are working towards developing a culture within which everyone in our organization embraces H&S. We believe that the health and safety of our employees, contractors and the people we interact with in our local communities on a day-to-day basis is of the utmost importance.

To help us meet our goals, four core principles guide our decisions and actions: (i) nothing comes before the health and safety of our employees, contractors, and communities; (ii) making health and safety a moral responsibility per employee by looking after ourselves and each other; (iii) looking to create safe workplaces; and (iv) maintaining accountability for health and safety practices.

We are constantly working towards our ultimate target of zero injuries worldwide, evidenced by our Zero4Life objective. In 2019, the total number of Lost Time Injuries (“LTI”) was reduced by 2% and Total Recordable Injuries (“TRI”) was reduced by less than 1%, when compared to 2018. Our employee LTI frequency rate was held at the low level of 0.5, and we believe we are on track to reach our goal of reducing such rate to 0.3 or less by 2020. Although our employee TRI frequency rate increased from 2.4 to 2.6, we made progress with reducing the number of contractor TRIs by 7% when compared to 2018. During 2020 we are working on health-related actions to achieve a reduction in our employee sickness absence rate, which increased slightly by 1.6% in 2019.

In 2019, the number of fatal occurrences at our operations was reduced by 31%, which is the lowest ever recorded by us, and we continued to make progress in most countries, with 96% of our operations achieving zero fatalities and LTIs. However, in 2019, there was one employee fatality and five contractor fatalities, 60% of which occurred away from our premises.

Most of the fatalities were due to incidents involving moving vehicles. In an effort aimed at eliminating those types of incidents, we continue to invest in specific safety features for our company’s trucks and technology and training programs that aim to encourage our employees and contractors to use the appropriate driving techniques to take care of themselves and other vulnerable road users. For example, our Global Supply Chain Health & Safety track has helped to further embed our Vulnerable Road Users program as well as support the roll out of a communication campaign focused on contract drivers. Furthermore, in the Philippines, more than 265 drivers have graduated from Driver’s Academy, a third-party training program through which participants expand their knowledge of road safety. Additionally, under our Safety Time Out Campaign, our AMEA team held safety workshops for our employees and contractors at various plants and facilities across the region. We will continue to work hard and drive forward with our initiatives so that our employees and contractors understand the importance of and become integral to our H&S culture.

The following table sets forth our performance indicators with respect to safety by geographic location for the year ended December 31, 2019:

	Mexico	U.S.	Europe	SCA&C	AMEA	Total CEMEX
Total fatalities, employees, contractors and other third parties (#)	2	2	1	2	2	9
Fatalities employees (#)	1	—	—	—	—	1
Fatality rate employees ⁽¹⁾	0.1	—	—	—	—	—
Lost-Time injuries (LTI), employees (#)	7	16	12	10	4	50 ⁽²⁾
Lost-Time injuries (LTI), contractors (#)	6	1	16	12	2	43 ⁽³⁾
Lost-Time injury (LTI) frequency rate, employees per million hours worked	0.3	0.8	0.6	0.6	0.6	0.5

(1) Incidents per 10,000 people in a year.

(2) Includes one Lost-Time injury (LTI) in our corporate offices.

(3) Includes six Lost-Time injuries (LTI) in our corporate offices.

At CEMEX, health and safety training is a key part of our strategy to reach our Zero4Life goal. We aim for our employees to have the correct knowledge, skills and experience to perform their jobs in a safe manner. As part of our manager-training program, executives and supervisors must complete our Health and Safety Academy, which is designed to enhance the leadership skills of our line managers and supervisors, and, so that H&S is one of our top priorities across our organization for our producing plants and our corporate offices. The Health and Safety Academy was launched in 2016 with the Foundation module, which prepares our line managers to lead by example and play a fundamental role in ensuring safety throughout our operations. Our Module 2, which was launched in 2017 and rolled out further in 2018, enables our line managers to apply and use the 14 tools of our H&S Management System to support our Zero4Life objective in their operations. Since we launched the Health and Safety Academy and as of December 31, 2019, 7,500 line managers have been through our Foundation module and so far, 6,500 line managers have participated in our Module 2. In 2018, we also launched Module 3, which is aimed at enhancing proficiency in key H&S topics and so far, 2,000 line managers have participated in our Module 3. Additionally, we continued to provide a wide range of training to our front-line workers in various topics, including safe driving, machinery isolation, emergency management, and occupational health and well-being.

Furthermore, we have continued to support our global networks with respect to H&S. We have a dedicated H&S track that sits within each network to promote working together through a coordinated, consistent and collaborative approach to reach our goal of zero injuries: (i) the H&S Functional Network; (ii) the Global H&S Council; (iii) six global network H&S tracks; and (iv) a Global Health Forum.

Across our operations, we continue to enhance our health practices and reduce our safety risks to strengthen our H&S objective. During 2019, supported by our Global Health Forum specialist team, we also remained focused on the occupational health and well-being of our employees. In 2019, we continued to provide health checks and further promoted our CEMEX Health Essentials. Additionally, as part of our Fit4Life program, we defined five global areas in which to develop goal-setting standards: (i) smoking cessation; (ii) work-life balance; (iii) stress recognition training for managers; (iv) drugs and alcohol testing 'with cause'; and (v) health discussions during Visible Felt Leadership H&S engagements, which encompasses exercises that aim to reinforce our safety culture and awareness, as well as a better defined health recognition program for our operations. In some countries where we have operations, we organized a range of health activities and events to help raise awareness and to encourage healthy habits. Some examples of specific initiatives include health-related activities and events to encourage good health habits, which often involved our employees' families; a "Health Week" program which was run across our entire operations in the U.S.; and sports tournaments which were organized to promote fitness in the Philippines. Furthermore, in Mexico, for the fifth consecutive year, the 'Suma Salud' health program was carried out successfully, helping our employees to reduce their Body Mass Index and improve their lifestyles with healthier choices. In the SCA&C region, a number of Health 'challenges' activities took place in all countries across the region. In addition to the local assessment and approval of programs with contractors that we have in substantially all of the countries in which we operate, we are also implementing third-party verification to help us validate the health and safety credentials of contractors we may potentially engage, including major contractors. In 2019, we created a target to approve at least 80% of the spending value with such contractors. As of December 31, 2019, we have accomplished verification of 81% of such contractors, which represents 942 of the major contractors that access our operating facilities.

Attracting and Retaining Talent. We aim to offer programs, benefits, and a work environment that are designed to attract and retain talented employees. Our approach to talent management is founded on three pillars: (i) employ the right people, in the right place, at the right time to perform the right job to achieve our strategy; (ii) enable a high-performing and rewarding culture to deliver sustainable business value in a safe, ethical workplace; and (iii) build and develop our workforce capabilities to confront challenges and pursue excellence.

As we transform and look to expand, one of our main objectives is to develop people with the potential to fill key leadership positions, increasing their experience and capabilities with the intention of having them succeed in increasingly challenging roles. Through this process, we work to improve our employees' commitment to us by helping them meet their own career development expectations and prepare them for key roles as they face critical challenges in their professional development. Our succession management process enables us to build a talented pool of leaders with the skills and understanding of our business fundamentals to continue our pursuit of reaching our goals. Through ongoing training and development opportunities, our employees are taught new skills and their expertise is deepened in several critical areas, including H&S, customer-centric capabilities, environmental conservation and awareness, leadership development and stakeholder engagement.

We look to foster a dynamic, high-performance environment where open dialogue is encouraged and rewarded. Apart from competitive compensation, more than 60% of our global workforce receives health and life insurance benefits beyond those required by local law in their respective countries. Approximately half of our global workforce receives retirement provision benefits above local requirements and more than 40% of our operations receive additional funds for disability and invalidity coverage beyond what is required by local laws in their respective countries.

In 2017, we began to integrate our current institutional academies, which include our Commercial, Health & Safety, Supply Chain, and Culture & Values academies, under the concept of CEMEX University. CEMEX University aims to develop a digital continuous learning ecosystem for our employees and respond to our multi-region, multi-business learning needs. CEMEX University leverages traditional in-person training with new digital learning platforms to embed a growth mindset throughout our organization and fulfill our employees' potential.

In April 2018, CEMEX, S.A.B. de C.V.'s Chief Executive Officer approved our Human Rights Policy, applicable to all CEMEX employees, directors and officers, which states that, among other things, CEMEX looks to provide a workplace that is free from harassment and discrimination on the basis of race, gender, national origin, sexual orientation, disability and membership in any political, religious or union organization and offering them equal opportunities for training, personal development, individual recognition and promotion on the basis of merit. Employees who believe that there may have been a violation of the principles laid down in our Human Rights Policy can report it through various channels, including local Human Resources departments, Ethics Committees and our secured ETHOS line internet website. Community members, contractors and suppliers are also encouraged to submit a report through the ETHOS line if they believe there may have been a violation of our Human Rights Policy or any other guideline as stated in our recently updated Code of Ethics and Business Conduct.

See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on how we have addressed the health and safety of our employees during the COVID-19 pandemic.

Helping our customers succeed

We aim to place our customers at the center of everything we do. Our customers deal with important challenges daily and we aim to invest time in our relationships and listen closely to understand their needs. We aim to be where our customers are and need us to be and to offer our full value proposition of our products and services, developing stronger customer relationships and loyalty, and helping them succeed. We achieve this by delivering quality products, innovative solutions and a superior customer experience driven by digital transformation.

Delivering A Superior Customer Experience.

Our Customer Centricity Global Network has implemented various initiatives to place our customer at the center of everything we do. Additionally, through the creation of CEMEX Ventures, we are developing new sources of possible revenue by developing ideas that we expect will revolutionize our industry through the use of technology. Among these efforts, CEMEX Go is at the center of our transformation.

We want our customers to view us as reliable, easy to work with, innovative, expert and professional. We have organized our company and redesigned a considerable number of our processes in an effort to create a positive experience for our customers.

Through our Commercial Academy and related initiatives, we are reinforcing our focus on customers as a core organizational value and priority that meets both our customers' and our need for growth and profitability. Since 2012, we have reached a total of 14,500 participants undergoing its different programs across our operations, and, to date, we have delivered approximately 580 training sessions to our professionals. Additionally, we enjoy a wide reach in most of the markets where we operate, with what we believe to be the facilities and logistical capabilities to serve our customers accurately, consistently and rapidly.

Moreover, we seek to strategically expand our manufacturing and distribution capabilities to serve our customers' and communities' demand for high-quality public infrastructure, commercial buildings and housing projects more efficiently, effectively, and reliably.

Digital Transformation. Beyond changing the way we operate internally, we are leveraging digital technologies to transform our customers' experience with CEMEX. We are embracing digital technologies to both streamline and simplify the way our customers engage with us and enhance how we operate. To this end, we launched a digital transformation strategy during 2016.

Over the past few years, we developed and implemented several digital solutions that are being used by our customers. Specifically, in November 2016, we announced a partnership with IBM and Neoris, Inc., one of our subsidiaries, to develop digital solutions to help us transform how we interact with customers. Following the initial deployment, we are continuously updating and adding capabilities to improve functionality and to stay ahead of our customers' expectations.

We intend to transform the global building materials industry with CEMEX Go, an innovative, fully digital customer integration platform. CEMEX Go is a multi-device offering that provides a seamless experience for order placement, live tracking of shipments, and managing invoices and payments for our main products.

During 2017, we started the rollout of CEMEX Go in the U.S. and Mexico. During 2018, CEMEX Go was deployed in Colombia, France, Costa Rica, Panama, Nicaragua, El Salvador, Spain, the Dominican Republic, Puerto Rico, Guatemala, Peru, Poland, Philippines, the Czech Republic, Egypt and UAE. As of December 31, 2019, its deployment was completed throughout substantially all countries in which we do business, and we began to evolve CEMEX's Go capabilities to better fulfill our customer needs.

As of December 31, 2019, CEMEX Go had approximately 36,300 users across the countries in which we do business, and through it we received approximately 66% of our main products orders.

Led by our Global R&D in Switzerland, our team of experts works in close collaboration with our customers to offer them unique, integrated and cost-effective solutions that aim to fulfill their specific performance requirements, including a growing portfolio of value-added brands. In order to provide the same offering in all of our operations, our salesforce is continually informed and trained on value-added brands, with material shared by our Global R&D through our internal Global Networks. Another initiative is to begin integrating Building Information Modeling technology into our interaction with customers, providing them with an overview of their projects and how our products can be incorporated.

Technologies developed by our Global R&D are protected by more than 35 international patent families, covering new cements, cementitious materials, concrete mix designs, admixtures formulations and construction systems.

Together with members of our Aggregates Global Network, our Global R&D supported the design, creation and launch of our new value-added aggregates brand, *Neogem*. These products are specialized high-quality aggregates, whose intrinsic properties meet the essential needs of five market sectors—Agricultural, Environmental, Industrial, Landscaping and Sports. Neogem covers an extensive range of premium minerals that can add value to our customers' projects through particular functional or aesthetic features. Neogem products are innovative, carefully selected and tailor-made solutions that go beyond commonly known building materials.

Providing Superior and Sustainable Products, Solutions and Services. We aim to move from being a product-selling company to a comprehensive solutions provider.

To the best of our knowledge, as the only global building materials company with its own concrete admixtures business, we are able to design and develop novel, tailor-made concrete technologies with our proprietary chemicals. Moreover, our experts in fields such as geology, chemistry, materials science and various other engineering disciplines work alongside behavioral scientists, cultural anthropologists and commercial strategists to anticipate and understand society's trends in order to create innovative, sustainable construction solutions that seek to satisfy our customers' current and future needs, while truly challenging the current state of the art. Among other benefits, our concrete solutions help improve land use, increase water and energy efficiency, mitigate noise pollution and lower buildings' carbon footprint.

Pursue markets that offer long-term profitability

We look to operate in markets where we can add value for our employees, our customers and CEMEX, S.A.B. de C.V.'s shareholders. We intend to focus on those markets that offer long-term profitability and Operating EBITDA growth potential, leveraging those assets that are best suited to achieve this. We may venture beyond these core businesses when it is essential to better market our products. We believe that a geographically diverse portfolio of assets, in markets, regions or cities that we believe offer long-term profitability, provides us with the opportunity for significant value creation through profitable organic growth over the medium-to-long-term. Consequently, we intend to be selective and strategic about where we remain and where we operate. We believe our business portfolio should be particularly focused on small and/or medium geographies that combine strong fundamentals, ranging from economic growth potential to per-capita cement consumption, population growth, degree of urban development and political stability.

As of the date of this annual report, as part of our "A Stronger CEMEX" plan, we are undertaking actions that are designed to streamline and reposition our portfolio in order to enhance our diversification and achieve higher profitable growth. As such, we expect to optimize our portfolio by focusing on the markets we believe offer long-term growth potential and retaining those assets that we believe are best suited to grow, offering us long-term profitability. While these actions are being undertaken, we could continue to complement our "A Stronger CEMEX" plan with organic investments, on a stand-alone basis or with other partners, using a metropolis-centric approach leveraging our related businesses and digital strategy.

Furthermore, leveraging our global presence and extensive operations worldwide, we intend to continue focusing on our core cement, aggregates, ready-mix concrete and related businesses. We believe that by managing our core operations as one vertically integrated business, we not only capture a significant portion of the cement value chain, but we believe we also create value for our customers by offering comprehensive building solutions. Historically, this strategic focus has enabled us to grow our existing businesses, particularly in high-growth markets and with specialized, high-margin products.

Complementary Businesses. We participate selectively in complementary businesses, including, but not limited to, the development of alternative and renewable sources of energy, concrete pavement solutions, housing, prefabricated concrete products, asphalt and admixtures, among others. We believe such projects allows us to provide valuable services to our customers, grow our core markets, develop our competitive advantage and improve our overall performance.

New Businesses Enabled by Digital Technologies. Since its launch in 2017, our open innovation and corporate venture capital unit, CEMEX Ventures, continues to focus on engaging startups, entrepreneurs, universities, and other stakeholders expected to shape the construction ecosystem of tomorrow by tackling our industry’s toughest challenges.

Leveraging our knowledge of the industry with new, leading edge technologies and platforms, CEMEX Ventures plans to develop opportunities in key focus areas outside of our core business, including urban development, improvements in the supply chain across the construction value chain, and jointly with the CEMEX Research and Development Centers in Switzerland (the “CEMEX Research Center”) and other development areas, the expansion of our open innovation ecosystem in search of opportunities in new construction trends and technologies, including construction materials, carbon footprint and processes evolution.

CEMEX Ventures’ main role is to look for investment opportunities that go beyond our core business. It also aims to identify and assess emerging technologies to bring CEMEX new ideas and perceptions of the construction ecosystem. To this end, CEMEX Ventures allocates resources to search, incubate, and deploy innovative construction related opportunities and solutions.

During 2019, CEMEX Ventures analyzed more than 1,100 potential businesses, invested in three additional startups and two follow-on investments in startups that have been in CEMEX Ventures’ portfolio since 2017. Additionally, we developed and engaged three technology deep dives, launched the “Construction Technology Top 50 Startups” list jointly with industry partners and created the “We Speak Construction” program, an effort to gather industry experts around the world to talk about construction issues. Following its success, in 2018, CEMEX Ventures launched its Construction Startup Competition which aimed to find startups looking to lead the transformation of the construction industry, and in 2019 it held its third startup competition for entrepreneurs, innovators, businesses and employees where more than 550 startups proposed solutions and business opportunities in key focus areas.

In addition, in 2019, pursuing our goal to actively drive the innovation of our industry by unlocking new value opportunities for our current and potential customers while looking to boost our internal innovation and efficiency, we also launched “Smart Innovation,” a model aiming to bolster internal innovation at CEMEX and in our industry. The Smart Innovation platform includes the Innovation Map, the CEMEX innovation challenge and innovation day, and the innovation ideas management tool. During the year, this process yielded more than 1,250 ideas, some of which are being reviewed and analyzed.

Look to have sustainability fully embedded in our business

Our sustainability efforts begin with CEMEX, S.A.B. de C.V.’s board of directors and are then facilitated across our entire organization. CEMEX, S.A.B. de C.V.’s sustainability committee is comprised of four members of CEMEX, S.A.B. de C.V.’s board of directors. The sustainability committee reports directly to CEMEX, S.A.B. de C.V.’s board of directors. The sustainability committee is supported by our Corporate Sustainability function, which reports to the Executive Vice President of Sustainability, Commercial and Operations Development, who is also a member of our senior management. To help embed sustainability into our entire business strategy, we have coordinators representing each geographical region where we operate. In parallel, our Global Sustainability Functional Network works to implement our core sustainability initiatives across all our operating regions and business lines. On March 26, 2020, the members of CEMEX, S.A.B. de C.V.’s sustainability committee were elected at CEMEX, S.A.B. de C.V.’s general ordinary shareholders’ meeting. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments—New Climate Action Strategy” for an update on our general new action climate strategy.

Improving Quality of Life and Well-being. As a company that looks to make a progressive impact through its innovative services and solutions, our ability to operate as a responsible business is fundamental to our business model. This enables us to understand stakeholders’ material issues, map social impacts, and identify risks and opportunities in order to create shared value for us and society.

Our high impact social strategy directly contributes to our vision of building a better future and aims to understand our stakeholders’ expectations by managing our impacts and creating value and well-being through three strategic priorities: (i) co-designing and implementing socially impactful inclusive business models with customers and entrepreneurs; (ii) implementing sustainable community engagement plans intended to improve quality of life; and (iii) designing and co-creating responsible cross-functional practices within our operations and our value chain.

To achieve these three priorities, our aim is to continue improving the quality of life and well-being of our employees and our communities by considering economic, social, and environmental criteria and focusing on: (i) education and development capabilities; (ii) sustainable and resilient infrastructure and mobility; (iii) social and environmental entrepreneurship; and (iv) a culture of environmental protection and health.

Although our social projects focus on our core business expertise to create value and well-being, we believe that we are also causing positive impacts on other global challenges. Thus, consistent with our commitment to the United Nations Sustainable Development Goals, we measure our progress and contributions to some of these goals.

Pursuing Excellence in Environmental Management. We believe the pursuit of excellent environmental practices benefits sustainable growth. In addition to CEMEX, S.A.B. de C.V. board of directors' sustainability committee, our Global Environmental Council, which is composed of our primary environmental executives responsible for each of our operating regions, shares new trends, proposals and best practices to identify, inform, and tackle key environmental management concerns.

We are committed to contributing to climate change mitigation and its consequences. For decades, as part of our carbon emissions reduction strategy, we have focused on using low-emission alternatives to traditional fossil fuels, decreasing our clinker factor, promoting clean energy and increasing energy efficiency across our operations. To this end, we have continuously sought to increase our use of low carbon alternative fuels, which represented 28% of our total fuel mix in 2019, and generated more than \$165 million in savings including CO₂ emissions avoided in carbon regulated markets.

As a result of our efforts, we reduced our net CO₂ emissions per ton of cementitious products by 22.4% compared to our 1990 baseline—equivalent to the annual emissions generated by 1.6 million passenger vehicles. We actively seek to develop new technologies to reduce our carbon footprint. Most notably, as of December 31, 2019, we were involved in six European research projects that aim to directly and indirectly reduce our carbon emissions. Furthermore, we explore alternatives to traditional clinker and cement chemistry that enable the production of less CO₂-intensive cements.

To complement these technical measures, we participate in several forums and bilateral dialogues with key stakeholders. These activities are designed to disseminate knowledge about potential reduction measures in our sector and to promote a legislative framework that enables us to implement these measures. As an example, we have a long history of contributing our best practices through our work with the Cement Sustainable Initiative ("CSI"). The work done in CSI was transferred as of January 1, 2019 to the Global Cement and Concrete Association ("GCCA"). The GCCA is an initiative of more than 36 major producers that actively promotes the use of concrete as an essential material for construction.

We have the expertise to responsibly source, process, store and recover energy from alternative fuels and we strongly believe that increasing co-processing residues from other sectors in our cement plants will further contribute to overcoming challenges such as climate change, waste management and fossil fuel depletion, while utilizing the principles of a circular economy.

Our key contribution to a circular economy is our transformation of waste streams from other sectors into valuable materials. To reduce most of the waste generated from our processes, we maximize our reuse of clinker kiln dust in our production loop, largely avoiding landfill disposal. To realize the financial and environmental benefits of waste, we monitor, minimize, reuse and recycle our waste, whenever possible.

In 2019, approximately 95% of the waste generated by our production processes was recovered, reused or recycled. The remaining material was sent to disposal sites. Additionally, last year alone, we used more than 13 million tons of waste as fuel and alternative raw materials across our business lines. This is equivalent to the waste produced by almost 50 million people in one year.

CEMEX Environmental Management System ("EMS"). We use EMS to evaluate and facilitate consistent and complete implementation of risk-based environmental management tools across our operations. The EMS consists of key mechanisms for environmental impact assessment, stakeholder engagement and accident response based on input from a range of environmental and biodiversity specialists.

As of December 31, 2019, 91% of our operations had implemented either the EMS or equivalent programs. As we approach full implementation of our global EMS in 2020, our goal is for all of CEMEX's operational facilities to be 100% compliant with our internal environmental criteria.

The release of nitrogen oxides, sulfur compounds and dust occurs during cement manufacturing. Other emissions, including dioxins, furans, volatile organic compounds and heavy metals, are released in very small or negligible quantities. To control our stack emissions and ensure that we remain compliant with local and national regulations, we have steadily expanded emissions monitoring at our manufacturing operations even exceeding regulation requirements in many geographies.

Through our internal EMS and more specifically through our Atmospheric Emissions Global Procedure, we monitor major emissions which assists us with our compliance with local regulation limits. To further improve upon these efforts, we have updated the minimum performance levels to fulfill annually for major emissions. In addition, we are working on establishing more stringent environmental standards for air emissions that will be based on EU Best Available Techniques.

In 2019, we invested \$80 million in sustainability related projects at our global operations, including projects to monitor and control our air emissions, increase our operations efficiency and mitigate our carbon footprint through alternative fuels and clinker substitution efforts.

Our Environmental Incidents Management. We consistently work to minimize our environmental impact, and we believe we are prepared to respond to any emergency that may pose a potential threat to our operations and local communities: (i) we work with our neighbors, law enforcement officials, public agencies, and other stakeholders to develop contingency plans at each of our sites; (ii) we created emergency response teams that are specifically trained to address environmental incidents and hold annual emergency drills; and (iii) we consistently record and report incidents at every level of our business to identify recurring root causes and to share corrective actions.

We have updated our Global Environmental Incident Reporting Tool to include social incidents, consolidating our holistic approach to the integral management of incidents. We believe that transparent and timely reporting is the first step to reducing the occurrence and severity of such events. Our efforts to strengthen a detailed documentation and analysis of environmental and social incidents led to the registration of four Category 1 events during 2019. Moreover, given our new reporting scope, our Category 2 incidents went from 57 in 2018 to 39 in 2019. Enhancing the CEMEX Environmental and Social Incidents Reporting Procedure has also allowed the circumstances of specific incidents to be registered in the context of their corrective action to allow a better follow-up and corresponding remediation.

Preserving Land, Water and Biodiversity. The preservation of land, biodiversity and water plays a key role in our long-term resource management strategy.

To protect water and enable our business to succeed, we are increasing our water efficiency and minimizing our water waste through the implementation of our Corporate Water Policy. This policy includes standardization of our water measurement based on the Water Protocol developed in coordination with the International Union for Conservation of Nature.

OPERATING MODEL. We aim to operate effectively and achieve the greatest possible value by leveraging our knowledge and scale to establish best practices and common practices worldwide. Our operating model consists of: (i) working with global networks to market our products and solutions; (ii) providing modern support functions and technology to clients and customers; (iii) having clear and effective transactional functions at all levels of our business; and (iv) maintaining efficient governance controls.

STAKEHOLDERS. We value our: (i) employees by having plans and other resources that we believe provide a great workplace that helps them build skills, expertise and a strong sense of purpose; (ii) clients by tailoring our offerings to solve their construction needs while making it easy for them to work with us and by providing enhanced performance and reliability; (iii) shareholders by focusing on plans designed to maximize revenue, reduce costs, optimize assets and reduce risk; and (iv) community and suppliers by serving as an engine of economic growth, building more capable, inclusive and resilient communities and striving to reduce local air, water and waste impacts in an effort to conserve biodiversity.

Environment and Biodiversity Partners. We work closely with several partners to protect the environment and biodiversity of the countries in which we operate by engaging in fruitful partnerships with global, national and local organizations. At a global level, we cooperate closely with UNESCO, Wild Foundation, Birdlife International, Wildlife Conservation Society, World Business Council for Sustainable Development, Wildlife Habitat Council, Conservation International and the International Union for Conservation of Nature. These projects have led to a series of conservation and nature books that have proven widely successful.

Knowledge and Innovation Partners. We often leverage the knowledge and expertise of thought partners from varied perspectives such as consulting, research institutions, universities and technology partners.

Some of the most relevant partners we collaborate or have collaborated with include Deloitte Consulting, McKinsey & Company, IBM, ExperiencePoint, MIT Center for Information Systems, MIT Sloan School of Management, Cambridge University-Cambridge Service Alliance, Harvard Business Publishing, Degreed, NovoEd, London School of Economics, Ecole Polytechnique Fédéral de Lausanne and Tec de Monterrey. These collaborations enable the design, development, curation and delivery of relevant learning experiences aligned with our strategic capabilities and emerging practices.

Shared Value Partners. Through collaboration in responsible business processes, we can achieve better results through the co-creation of value for society. We believe that more than 500 partnerships and strategic alliances worldwide have proven to be a key factor in successfully multiplying our positive impact on society and in the creation of sustainable communities.

These collaborative alliances have made possible joint projects, best practices documentation and pilots of socially innovative solutions throughout different lines of action: resiliency, environment, education, social integration, health, women's economic empowerment in the communities, development of employability capabilities for youth and people in vulnerable situations in the communities, inclusive businesses, affordable housing, volunteering and CEMEX Foundation activities.

Regain our Investment Grade.

We remain committed to regaining our investment grade, which is one of our top priorities. We believe our "A Stronger CEMEX" plan should allow us to make progress in reaching this goal, as we expect that we should be able to increase our free cash flow, which would enable us to further reduce our debt, invest in our business and potentially return value to our shareholders.

Based on our "A Stronger CEMEX" plan, we expect to reduce our debt by \$3.5 billion between the launch of the "A Stronger CEMEX" plan on July 1, 2018, and the end of 2020, or possibly soon thereafter, with the intent to regain our investment grade. If this is achieved, it would mean that we have reduced debt by more than \$10 billion since the end of 2013. During 2019, we achieved a debt reduction of \$407 million. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans" for more information regarding these transactions.

Our financial strategy is designed to strengthen our capital structure by: (i) reducing refinancing risks, mainly by reducing short-term maturities and extending average life of debt; (ii) lowering our financial costs, using available free cash flow and divestments to reduce our liabilities and/or optimizing our funding sources by looking for opportunities to issue new securities while redeeming other securities with higher costs, as well as managing our interest rate mix between fixed and floating rates; and (iii) maintaining ample liquidity through the revolving credit facility under the 2017 Facilities Agreement and access to short-term credit lines. We believe that our debt portfolio currency mix, mainly in Dollars and Euros, allows us to balance exposures to currency fluctuations in our most important markets while allowing for optimization of our funding costs. In addition, since 2017, we began to hedge CEMEX's net investment in Mexican Pesos through derivative instruments.

Also, we have been focusing, and expect to continue to focus, on optimizing our operations by looking to grow our market positions or the markets that we believe offer the highest growth potential, and our core business and implementing our pricing policies for our products, on strengthening our capital structure and regaining financial flexibility through reducing our debt and cost of debt, on improving cash flow generation and on extending maturities. Our efforts in lowering our interest expense and our effective management of working capital have allowed us to support our free cash flow. As of the date of this annual report, we plan to continue with these efforts.

We have also introduced a comprehensive pricing strategy for our products that we expect to more fully reflect and capture the high value-creating capability of our products and services. Our strategy focuses on value enhancement, optimizing gains in customer relationships and on generating sufficient returns that would allow us to reinvest in our business. Under this strategy, we are establishing internal procedures and guidelines that are expected to support our approach to pricing our different products and services.

In addition, we plan to maintain and grow our market positions in cement, ready-mix concrete and aggregates by being one of the most customer-centric companies in the industry. Among other actions, we also expect to implement pricing initiatives for our products and receive compensation through fees for the services we provide that should allow us to improve our overall profits, as well as to operate in the most capital and cost-efficient manner possible. We may also seek to expand our presence in business related to cement, ready-mix concrete and aggregates, and potentially also implement similar pricing strategies in the markets related to these businesses.

We continue to look to reduce our overall production related costs for all of our products and regional and corporate overhead through disciplined cost management policies and through improving efficiencies by removing redundancies. We have implemented several worldwide standard platforms as part of this process and have also started different initiatives, such as a system designed to improve our operating processes worldwide and other digital-based solutions to achieve this. In addition, we implemented, and have been using, a centralized management information systems throughout our operations, including administrative, accounting, purchasing, customer management, budget preparation and control systems, which have helped us achieve cost efficiencies. We also have a strategic agreement with IBM expected to improve some of our business processes. We have also transferred key processes, such as procurement and trading, from a centralized model to a regional model and are simplifying and layering our business to accelerate decision-making and maximize efficiency. In a number of our core markets, such as Mexico, we launched initiatives aimed at reducing the use of fossil fuels, consequently looking to reduce our overall energy costs.

Furthermore, significant economies of scale in key markets at times allow us to obtain competitive freight contracts for key components of our cost structure, such as fuel and coal, among others.

Through a worldwide import and export strategy, we plan to continue to seek to optimize capacity utilization and maximize profitability by redirecting our products from countries experiencing economic downturns to target export markets where demand may be greater. Our global trading system enables us to coordinate our export activities globally to try and take advantage of demand opportunities. Should demand for our products in the U.S. improve, subject to any measures the current U.S. government could implement, we believe we are well-positioned to service this market through our established presence in the southern and southwestern regions of the country and our current ability to import to the U.S.

Our industry relies heavily on natural resources and energy, and we use cutting-edge technology to increase energy efficiency, reduce CO2 emissions and optimize our use of raw materials and water. We are committed to measuring, monitoring and improving our environmental performance. In the last few years, we have implemented various procedures to improve the environmental impact of our activities as well as our overall product quality, such as a reduction of CO2 emissions, an increased use of alternative fuels to reduce our reliance on primary fuels, an increased number of sites with local environmental impact plans in place and the use of alternative raw materials in our cement.

See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how the COVID-19 pandemic may affect us regarding our debt and cash levels, which could considerably delay us in regaining our investment grade.

Operational Improvements

In response to decreased demand in most of our markets starting in 2008, mostly as a result of the global economic recession, we identified and began implementing global cost-reduction initiatives intended to reduce our annual cost structure to a level consistent with the decline in demand for our products. Such global cost-reduction initiatives have encompassed different undertakings, including headcount reductions, capacity closures across the cement value chain and a general reduction in global operating expenses. During the past years, CEMEX has launched company-wide programs aimed at enhancing competitiveness, providing a more agile and flexible organizational structure and supporting an increased focus on the company’s markets and customers. For the year ended December 31, 2019, and as part of our “A Stronger CEMEX” plan, we implemented initiatives that allowed us to achieve recurring operational improvements of \$170 million and we expect to achieve a total of \$370 million by the end of 2020. These initiatives include improving our operational performance and expense rationalization, increasing our use of alternative fuels in several of the countries in which we operate, serving our customers better and at lower costs, optimizing our production and logistics supply chain models and optimizing our procurement strategy.

In connection with the implementation of our cost-reduction initiatives, since 2017, we have implemented a low-cost sourcing initiative which is designed to maintain the continuity of our operations, while looking to provide attractive costs without materially affecting the quality of the products and services we acquire by using a strategic sourcing process empowered by our people’s knowledge and quality management. This initiative is intended to reduce our cost of operations, while maintaining quality and timely delivery by acquiring goods and equipment from Mexico, India, Turkey and certain countries in Asia and Eastern Europe, among others.

Also as part of these initiatives, at times we temporarily shut down (some for a period of at least two months) some of our cement production lines in order to rationalize the use of our assets and reduce the accumulation of our inventories. In the past we have announced the permanent closure of some of our cement plants. Similar actions were taken in our ready-mix concrete and aggregates businesses. In the past, such rationalizations have included, among others, our operations in Mexico, the U.S. including Puerto Rico, Spain and the United Kingdom. As of December 31, 2019, we had four cement plants temporarily shut down (two in Mexico (Hidalgo, Nuevo Leon and Hermosillo, Sonora) and two in the U.S. (Brooksville, Florida and Wampun, Pennsylvania).

Furthermore, we intend to achieve energy cost-savings by actively managing our energy contracting and sourcing, and by increasing our use of alternative fuels. We believe that these cost-saving measures could better position us to quickly adapt to potential increases in demand and thereby benefit from the operating leverage we have built into our cost structure.

We also aim to better serve our customers at lower cost and to optimize our production and logistics supply chain models.

During different parts of the past years, we had reduced capital expenditures related to maintenance and expansion of our operations in response to weak demand for our products in some of the markets in which we do business. Such reductions were implemented with the intention of maximizing our free cash flow generation available for debt service and debt reduction, consistent with our ongoing efforts to strengthen our capital structure, improve our conversion of Operating EBITDA to free cash flow and regain our financial flexibility. During 2018 and 2019, our capital expenditures related to maintenance and expansion of our operations have been \$964 million and \$1,033, respectively, lower in 2018 than the \$984 million expended in 2017. Pursuant to the

2017 Facilities Agreement, we are limited in our ability to make aggregate annual capital expenditures in excess of \$1.5 billion in any financial year (excluding certain capital expenditures, joint venture investments and acquisitions to be made by each of CLH and/or CHP and their respective subsidiaries and those funded by Relevant Proceeds (as defined in the 2017 Facilities Agreement)), which capital expenditures, joint venture investments and acquisitions at any time then incurred are subject to a separate aggregate limit of (i) \$500 million (or its equivalent) for CLH and its subsidiaries and (ii) \$500 million (or its equivalent) for CHP and its subsidiaries. In addition, the amounts which we and our subsidiaries are allowed to put towards permitted acquisitions and investments in joint ventures cannot exceed certain thresholds as set forth in the 2017 Facilities Agreement. We believe that these restrictions on capital expenditures may still allow us to opportunistically increase capital expenditures in some of the markets in which we operate, if necessary, as we did in 2019 and as we intend to do in 2020, and to take advantage of improved market conditions, if any. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our reduction in capital expenditures intended to improve our liquidity during the COVID-19 pandemic and—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on possible modifications to the amount of capital expenditures as a result of possible amendments to the 2017 Facilities Agreement.

User Base

Cement is the primary building material in the industrial and residential construction sectors of the majority of markets in which we operate. We believe that the lack or shortage of available cement substitutes further enhances the marketability of our product. The primary end-users of cement in each region in which we operate vary but usually include, among others, wholesalers, ready-mix concrete producers, industrial customers and contractors in bulk. Additionally, sales of bagged cement to individuals for self-construction and other basic needs have traditionally been a significant component of the retail sector. The end-users of ready-mix concrete generally include homebuilders, commercial and industrial building contractors and road builders. Major end-users of aggregates include ready-mix concrete producers, mortar producers, general building contractors and those engaged in road building activity, asphalt producers and concrete product producers. In summary, because of their many favorable qualities, a considerable number of builders worldwide use our cement, ready-mix concrete and aggregates for almost every kind of construction project, from hospitals and highways to factories and family homes.

As of December 31, 2019, we did not depend on any single existing customer to conduct our business and the loss of any of our existing customers individually would not have had a material adverse effect on our financial condition or results of operations. For the period ended December 31, 2019, none of our individual customers represented more than 10% of our consolidated revenues.

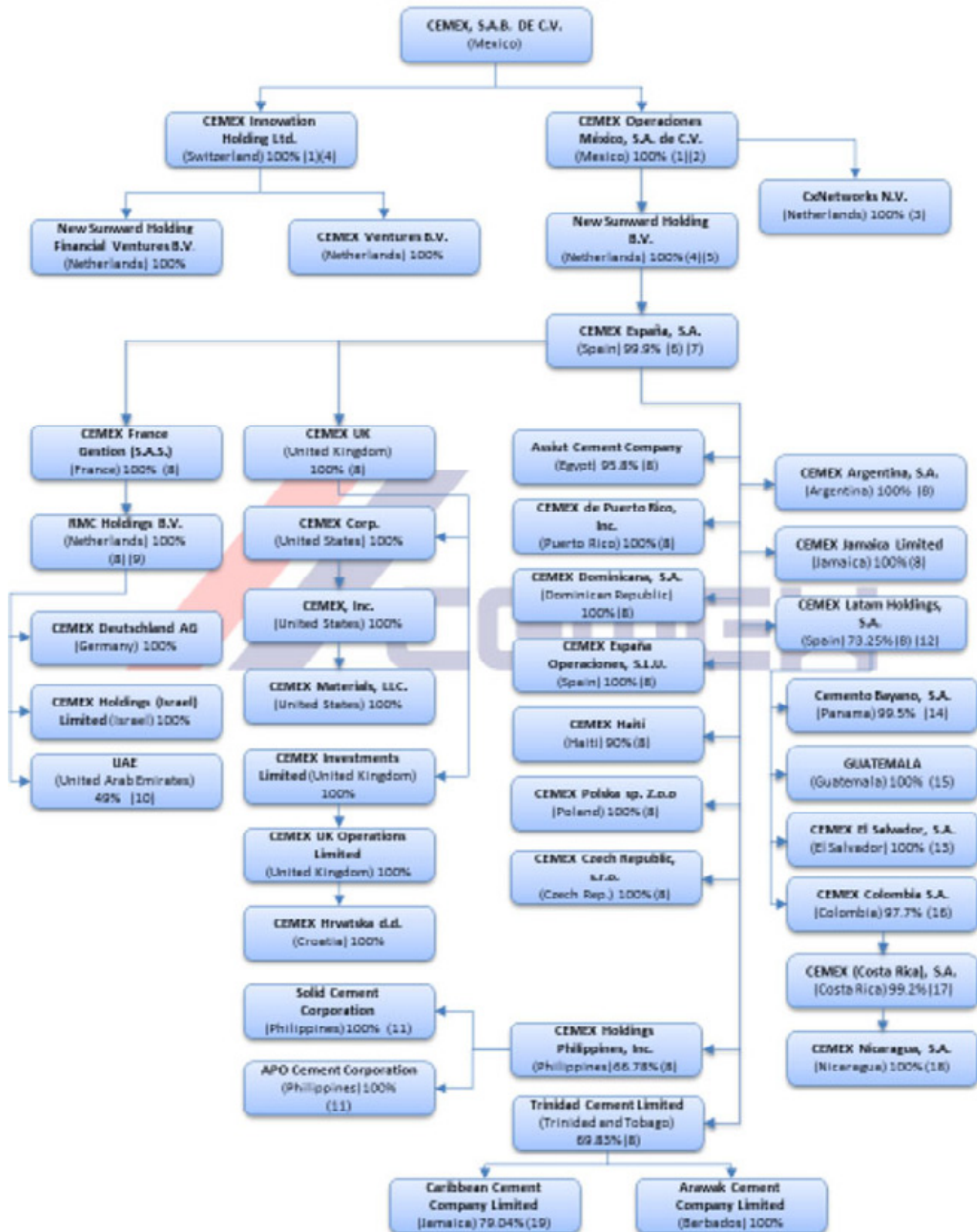
Our Corporate Structure

CEMEX, S.A.B. de C.V. is an operating and a holding company that, in general, operates its business through subsidiaries which, in turn, hold interests in CEMEX’s cement and ready-mix concrete operating companies, as well as other businesses. The following chart summarizes CEMEX’s corporate structure as of December 31, 2019. The chart also shows for each company, unless otherwise indicated, CEMEX’s approximate direct or indirect, or consolidated, percentage equity ownership or economic interest, or percentage of shares in certain subsidiaries that are part of the Collateral. The chart has been simplified to show only some of CEMEX’s major holding companies and/or operating companies in most of the main countries in which CEMEX operates, and/or relevant companies in which CEMEX holds a significant direct or indirect interest, and does not include all of CEMEX’s operating subsidiaries and its intermediate holding companies. The chart reflects the corporate reorganization approved on November 13, 2019, pursuant to which CEMEX, S.A.B. de C.V. merged and absorbed CEMEX México and Empresas Tolteca. The mergers between CEMEX, S.A.B. de C.V. and Empresas Tolteca and CEMEX, S.A.B. de C.V. and CEMEX México became effective against third parties on February 26, 2020 and March 9, 2020, respectively.

See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of the mergers into CEMEX, S.A.B. de C.V. of CEMEX México and Empresas Tolteca.

CEMEX'S Corporate Structure

as of December 31, 2019



(1) Includes CEMEX's direct or indirect, or consolidated, interest.

- (2) Includes a 99.99% interest pledged or transferred to a security trust as part of the Collateral.
- (3) CxNetworks N.V. is the holding company of the global business and IT consulting entities, including Neoris N.V.
- (4) Includes a 100% interest pledged or transferred to a security trust as part of the Collateral.
- (5) Includes COM's 54.54% interest and CIH's 45.46% interest. CEMEX, S.A.B. de C.V. indirectly holds 100% of Cemex Operaciones México and CIH.
- (6) Includes New Sunward and CEMEX, S.A.B. de C.V.'s interest, and shares held in CEMEX España's treasury.
- (7) Includes a 99.63% interest pledged or transferred to a security trust as part of the Collateral.
- (8) Includes CEMEX España's direct or indirect, or consolidated, interest.

- (9) Includes CEMEX France Gestion (S.A.S.)'s ("CEMEX France") 94.75% interest and CEMEX UK Operations Ltd.'s ("CEMEX UK") 5.25% interest.
- (10) Represents CEMEX España's indirect economic interest in three companies incorporated in the UAE, CEMEX Topmix LLC, CEMEX Supermix LLC and CEMEX Falcon LLC. CEMEX España indirectly owns a 49% equity interest in each of these companies, and CEMEX España indirectly holds the remaining 51% of the economic benefits through agreements with other shareholders.
- (11) Represents CHP's direct and indirect equity interest.
- (12) Represents outstanding shares of CLH capital stock and excludes treasury stock.
- (13) Represents CLH's indirect interest.
- (14) Represents CLH's 99.483% indirect interest in ordinary shares, and excludes: (i) a 0.516% interest held in Cemento Bayano, S.A.'s ("Cemento Bayano") treasury, and (ii) a 0.001% interest held by third parties.
- (15) Represents CLH's direct and indirect interest in four companies incorporated in Guatemala, CEMEX Guatemala, S.A. ("CEMEX Guatemala"), Global Concrete, S.A., Gestión Integral de Proyectos, S.A. and Cementos de Centroamérica, S.A.
- (16) Represents CLH's 97.70% consolidated (direct and indirect) interest in ordinary shares and 98.94% direct interest in preferred shares.
- (17) Represents CEMEX Colombia's indirect interest.
- (18) Includes CEMEX (Costa Rica), S.A.'s ("CEMEX Costa Rica") 98% interest and CEMEX Colombia's 2% indirect interest.
- (19) Includes TCL's direct and indirect 74.08% interest and CEMEX, S.A.B. de C.V.'s indirect 4.96% interest.

Mexico

Overview. For the year ended December 31, 2019, our operations in Mexico represented 21% of our revenues in Dollar terms before eliminations resulting from consolidation. As of December 31, 2019, our operations in Mexico represented 28% of our total installed cement capacity and 14% of our total assets.

As of December 31, 2019, CEMEX, S.A.B. de C.V. was both a holding company for some of our operating companies in Mexico and was involved in the production, marketing, sale and distribution of cement, ready-mix concrete, aggregates and other construction materials in Mexico, as well as a construction materials and related products service provider. CEMEX, S.A.B. de C.V., indirectly, is also the holding company of all our international operations. CEMEX, S.A.B. de C.V. accounts for a substantial part of the revenues and operating income of our operations in Mexico.

Our Tepeaca cement plant in Puebla, Mexico, as of December 31, 2019, had a production capacity of 3.1 million tons of cement per year. In December 2014, we announced the restart of the Tepeaca cement plant expansion, consisting of the construction of a new kiln and mill. Its total production capacity is expected to reach 4.9 million tons of cement per year by 2020 based on mill capacity. Additionally, we invested in the same region to increase our cement production capacity by 0.5 million tons of cement through a debottlenecking project for our operations in Huichapan. This project was completed during the first quarter of 2019.

In 2001, we launched the Construrama program, a registered brand name for construction material stores. Through this program, we offer to an exclusive group of our Mexican distributors the opportunity to sell a variety of products under the Construrama brand name, a concept that includes the standardization of stores, image, marketing, products and services. As of December 31, 2019, 948 independent concessionaries with 2,028 stores were integrated into the Construrama program, with nationwide coverage.

Industry. For 2019, the National Institute of Statistics and Geography (*Instituto Nacional de Estadística y Geografía*) indicated that total construction activity in Mexico contracted by 5.1% up to December 2019 (seasonally adjusted figures). Such contraction has been attributed to a negative performance in the building sector of minus 3.2%, in special works of minus 13.1% and lower than expected infrastructure activity of minus 6.1%.

Cement in Mexico is sold mainly through distributors, with the remaining balance sold through ready-mix concrete producers, manufacturers of pre-cast concrete products and construction contractors. Cement sold through distributors is mixed with aggregates and water by the end user at the construction site to form concrete. Ready-mix concrete producers mix the ingredients in plants and deliver it to local construction sites in mixer trucks, which pour the concrete. Unlike more developed economies, where purchases of cement are concentrated in the commercial and industrial sectors, retail sales of cement through distributors in 2019 accounted for 61% of Mexico's demand (bagged presentation). Individuals who purchase bags of cement for self-construction and other basic construction needs are a significant component of the retail sector. We believe that this large retail sales base is a factor that significantly contributes to the overall performance of the cement market in Mexico.

The retail nature of the Mexican cement market also enables us to foster brand loyalty, which distinguishes us from other worldwide producers selling primarily in bulk. We own the registered trademarks for our brands in Mexico, such as “Tolteca,” “Monterrey,” “Maya,” “Anahuac,” “Campana,” “Gallo,” “Centenario,” as well as certain sub-brands, such as “Extra,” “Impercem”

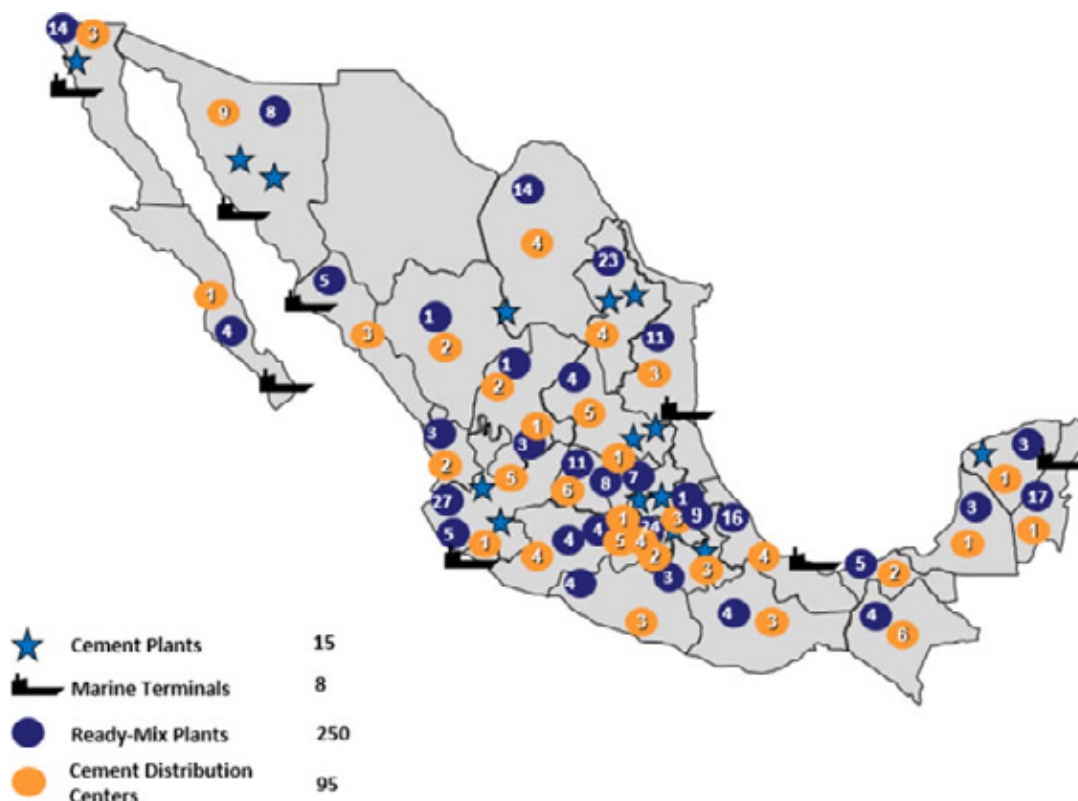
and “Optimo” for grey cements and mortar and, additionally, recently launched “Multiplast” for coatings. We believe that these brand names are important in Mexico since cement is principally sold in bags to retail customers who may develop brand loyalty based on differences in quality and service. We also have trademark registrations for our special concrete’s brands such as “Promptis,” “Resilia,” “Pervia,” “Insularis” and “Evolution.” In addition, we own the registered trademark for the “Construrama” brand name for construction material stores and for our new digital solution we have trademark registrations for “CEMEX Go” and “Olivia.”

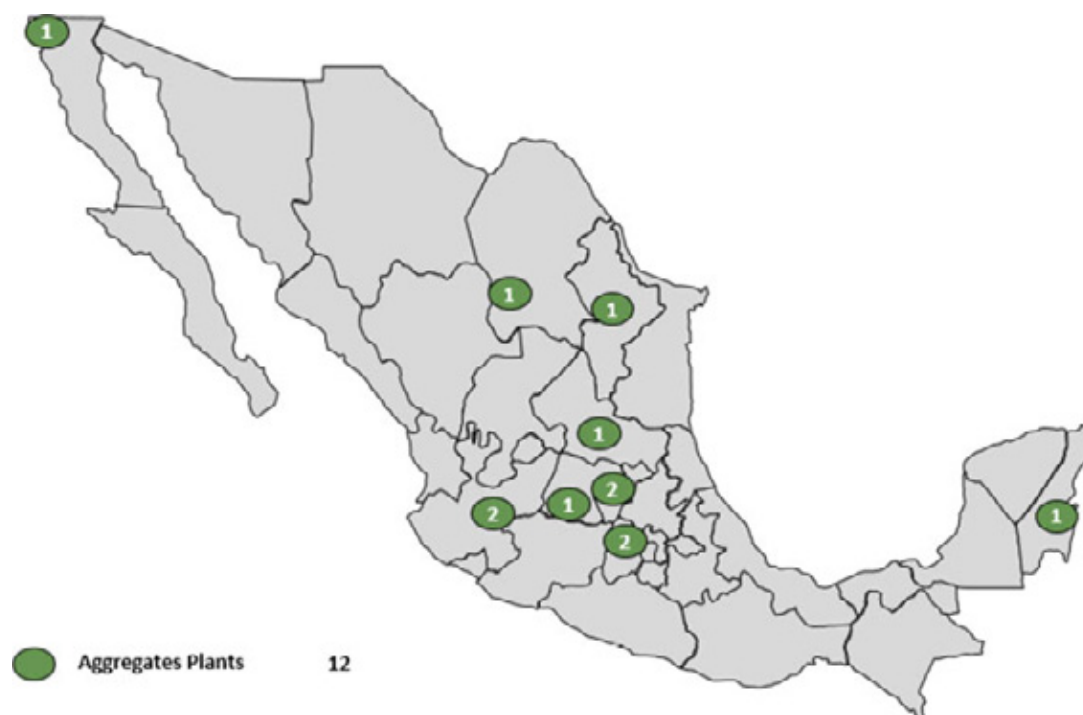
Competition. In the early 1970s, the cement industry in Mexico was regionally fragmented. However, since that time, cement producers in Mexico have increased their production capacity and the cement industry in Mexico has consolidated into a national market, thus becoming increasingly competitive. As of December 31, 2019, the major cement producers in Mexico were CEMEX; LafargeHolcim; Sociedad Cooperativa Cruz Azul, a Mexican operator; Cementos Moctezuma, an associate of Cements Molins and Buzzi-Unicem; and GCC, a Mexican operator in whose majority holder, CAMCEM, we hold a minority interest. During 2013, a then-new cement producer, Elementia (Cementos Fortaleza), entered the market and in 2014 acquired two cement plants from Lafarge (prior to the Lafarge-Holcim merger). As of December 31, 2019, the major ready-mix concrete producers in Mexico were CEMEX, LafargeHolcim, Sociedad Cooperativa Cruz Azul and Cementos Moctezuma. In addition, as of December 31, 2019, the use of non-integrated ready-mixers has been increasing.

We believe potential entrants into the Mexican cement market face various barriers to entry, including, among other things: the time-consuming and expensive process of establishing a retail distribution network and developing the brand identification necessary to succeed in the retail market; the lack of port infrastructure and the high inland transportation costs resulting from the low value-to-weight ratio of cement; the distance from ports to major consumption centers and the presence of significant natural barriers, such as mountain ranges, which border Mexico’s east and west coasts; the strong brand recognition and the wide variety of special products with enhanced properties; the extensive capital expenditure requirements; and the length of time required for construction of new plants, which we estimate is approximately two years.

Our Operating Network in Mexico

During 2019, we operated 13 out of our total of 15 cement plants (two were temporarily inactive) and 103 cement distribution centers (including eight marine terminals) located throughout Mexico.





We operate cement plants on the Gulf of Mexico and Pacific coasts of Mexico, most of the time allowing us to take advantage of attractive transportation costs to export to the U.S. and the SCA&C region, when possible.

Products and Distribution Channels

Cement. For the year ended December 31, 2019, our cement operations represented 58% of revenues for our operations in Mexico before eliminations resulting from consolidation in Dollar terms and our domestic cement sales volume represented 91% of our total cement sales volume in Mexico. As a result of the retail nature of the Mexican market, our operations in Mexico are not dependent on a limited number of large customers. The total volume of the five most important distributors accounted for 12% of our total cement sales by volume in Mexico in 2019 (excluding our in-house channels).

Ready-Mix Concrete. For the year ended December 31, 2019, our ready-mix concrete operations represented 23% of revenues for our operations in Mexico before eliminations resulting from consolidation in Dollar terms. Our ready-mix concrete operations in Mexico purchase substantially all their cement requirements from our cement operations in Mexico. Ready-mix concrete is sold through our own internal sales force and facilities network.

Aggregates. For the year ended December 31, 2019, our aggregates operations represented 6% of revenues for our operations in Mexico before eliminations resulting from consolidation in Dollar terms.

Exports. Our operations in Mexico export a portion of their cement production, mainly in the form of cement and to a lesser extent in the form of clinker. Exports of cement by our operations in Mexico represented 9% of our total cement sales volume in Mexico for 2019. In 2019, 67% of our cement exports from Mexico were to the U.S. and 33% were to our Rest of South, Central America and the Caribbean region.

The cement and clinker exports by our operations in Mexico to the U.S. are mostly marketed through our trading network subsidiaries. Our cement and clinker transactions between CEMEX and its subsidiaries, are conducted on an arm’s-length basis.

Production Costs. Our cement plants in Mexico primarily utilize pet coke and alternative fuels. We have entered into four 20-year agreements with PEMEX, two under which PEMEX has agreed to supply us with pet coke for our cement plants through 2022 and 2023. However, during the past years, the volumes delivered by PEMEX to our operations in Mexico have been affected as a result of operational issues at PEMEX’s refineries. In general, we believe our operations in Mexico would be able to purchase pet coke in the open market, if needed, to make up for any quantities not supplied by PEMEX. The PEMEX pet coke contracts have

somewhat helped in reducing the volatility of our fuel costs for our operations in Mexico. In addition, in 1992, our operations in Mexico began using alternative fuels to further reduce the consumption of residual fuel oil and natural gas. These alternative fuels represented 26.5% of the total fuel consumption for our cement plant operations in Mexico in 2019. For additional information, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Contractual Obligations.”

In 1999, we entered into an agreement with an international partnership, which financed, built and operated TEG, a 230 megawatt (“MW”) energy plant in Tamuín, San Luis Potosí, Mexico. We entered into this agreement in order to reduce the volatility of our energy costs. The power plant commenced commercial operations in April 2004. In 2007, the original operator was replaced and the agreement was extended to 2027. For additional information, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Contractual Obligations.”

In 2006, in order to take advantage of the high wind potential in the “Tehuantepec Isthmus,” CEMEX and the Spanish company ACCIONA, S.A. (“ACCIONA”), formed an alliance to develop a wind farm project for the generation of 250 MW in the Mexican state of Oaxaca. The installation of 167 wind turbines in the farm was finished on November 15, 2009. For additional information, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Contractual Obligations.”

In connection with the beginning of full commercial operations of Ventika S.A.P.I. de C.V. and Ventika II S.A.P.I. de C.V. wind farms (jointly “Ventikas”), located in the Mexican state of Nuevo Leon, with a combined generation capacity of 252 MW, we agreed to acquire a portion of the energy generated by Ventikas for our Mexican plants for a period of 20 years, which began in April 2016. During 2019, Ventikas supplied 7.4% of CEMEX’s overall electricity needs in Mexico. This agreement is for CEMEX’s own use and as of the date of this annual report CEMEX does not intend to engage in energy trading. In 2017, we signed a contract with Energía Azteca X, a natural gas combined cycle plant located in Mexicali, Baja California. This plant started supplying energy to the CEMEX Ensenada plant in November 2018. In 2019, we consumed 65.8% of the CEMEX Ensenada electric energy needs from Energía Azteca X.

On October 24, 2018, in order to take advantage of lower electric energy prices, we entered into agreements for a period of 20 years with Tuli Energía, S. de R.L. de C.V. (“Tuli Energía”) and Helios Generación, S. de R.L. de C.V. (“Helios Generación”) to acquire a portion of the energy generated by such solar projects. The solar plants located in Mexican state of Zacatecas have a combined generation capacity of 300 MW. These solar plants started producing energy in September 2019. As of December 31, 2019, we expect that the effective commencement date of such agreements will be during the first half of 2020.

We have, from time to time, purchased hedges from third parties to reduce the effect of volatility in energy prices in Mexico. See “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Contractual Obligations.” Additionally, a CEMEX’s subsidiary participated as a buyer in the third long-term power auction organized in 2017 by the National Center for Energy Control (*Centro Nacional de Control de Energía*) (“CENACE”) (the independent system operator) and has been allocated a 20-year contract, which as of the date of this annual report we expect could commence in June 2020 or at a later date. The contract is for 16,129 clean energy certificates per year for compliance with legal requirements and 14.9 GWh/a of electric power.

Description of Properties, Plants and Equipment. As of December 31, 2019, we had 15 wholly-owned cement plants (of which two were temporarily inactive) with a cement installed capacity of 26.4 million tons per year and proportional interests through associates in three other cement plants located throughout Mexico. We have exclusive access to limestone quarries and clay reserves near each of our plant sites in Mexico. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves of our operations in Mexico had an average remaining life of 141 and 92 years, respectively, assuming 2015-2019 average annual cement production levels. As of December 31, 2019, all our producing plants in Mexico utilized the dry process. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary halts in production at our operating facilities to stop the spread of COVID-19.

As of December 31, 2019, we had a network of 95 land distribution centers (five were temporarily inactive) in Mexico, which are supplied through a fleet of our own trucks and rail cars, as well as leased trucks and rail facilities, and operated eight marine terminals. In addition, we had 250 ready-mix concrete plants (47 were temporarily inactive) throughout 73 cities in Mexico, more than 2,100 ready-mix concrete delivery trucks and 12 aggregates quarries (one was temporarily inactive).

Capital Expenditures. We made capital expenditures of \$162 million in 2017, \$168 million in 2018 and \$199 million in 2019. As of December 31, 2019, we expected to make capital expenditures of over \$186 million in our operations in Mexico during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Mexico during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

United States

Overview. For the year ended December 31, 2019, our operations in the U.S. represented 27% of our revenues in Dollar terms before eliminations resulting from consolidation. As of December 31, 2019, our operations in the U.S. represented 15% of our total installed cement capacity and 49% of our total assets. As of December 31, 2019, CEMEX, Inc. was the main holding company of our operating subsidiaries in the U.S.

As of December 31, 2019, we had a cement manufacturing capacity of 15.7 million tons per year in our operations in the U.S. As of December 31, 2019, we operated a geographically diverse base of 11 cement plants (two were temporarily inactive) located in Alabama, California, Colorado, Florida, Georgia, Kentucky, Pennsylvania, Tennessee and Texas. As of that date, we also operated 42 (four temporarily inactive) rail, truck or water-served active cement distribution terminals and 11 deep-water import terminals (two were temporarily inactive) in the U.S. As of December 31, 2019, we had 333 ready-mix concrete plants located in Alabama, Arizona, California, Florida, Georgia, Nevada, Tennessee, Texas and Virginia and 60 aggregates facilities in Arizona, California, Florida, Georgia, Nevada, South Carolina and Texas.

On September 23, 2013, we and Concrete Supply Company, a leading producer of ready-mix concrete throughout North and South Carolina, entered into a joint venture agreement and formed a joint venture company named Concrete Supply Co. LLC, in which Concrete Supply Holdings Co holds a majority ownership stake in and acts as the managing member. This joint venture is a leading concrete supplier in North and South Carolina with strong local management.

In February 2015, we completed an asset swap with Vulcan Materials Company, under which CEMEX exchanged its asphalt plants in Arizona and Sacramento for 12 ready-mix concrete plants in California. Under the agreement, CEMEX continues supplying aggregates to the exchanged asphalt plants. Also, CEMEX is able to capture incremental cement sales to the acquired ready-mix concrete plants. Given the operations and strategic focus in these markets, we expect each party should earn a higher return on the exchanged assets and continue serving its customers efficiently. This swap was a cash-free transaction.

See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding our assets in the U.S.

Industry. Demand for cement is derived from the demand for ready-mix concrete and concrete products which, in turn, is dependent on the demand for construction. The construction industry is composed of three major sectors: the residential, the industrial-and-commercial and the public sectors. The public sector is the most cement intensive sector, particularly for infrastructure projects such as streets, highways and bridges.

Prior to the impact of the COVID-19 pandemic, the construction industry had showed signs of a slow recovery from the financial crisis experienced during 2008 and 2009, which was the worst downturn in over 70 years. The construction industry was hit particularly hard during this financial crisis due to the collapse of the housing sector. Housing starts fell 73% from a peak of 2.1 million units in 2005 to only 554,000 units in 2009. The decline in housing and other construction activity resulted in a 45% decline in cement demand from 2005 to 2010. The economic recovery had proceeded at a relatively moderate pace, with real gross domestic product average annual growth of 2.3% since 2011 through the end of 2019. With the economy growing again, the construction sector stabilized in 2010 and joined the economy-wide recovery in 2011. The excess vacant inventory in the housing sector has been absorbed and existing home inventories for sale have declined to below normal levels across the nation, which together have supported an increase in housing prices for 2017, 2018 and 2019 of about 16%. Housing starts increased by 223% from 554 thousand units in 2009 to 1.3 million units in 2019. Housing starts in 2019 increased by 3% from 2018 to 1.3 million units, which remains below the historical steady state level. The industrial-and-commercial sector had also been growing with nominal spending up 8% from 2014 to 2019. Industrial-and-commercial nominal spending decreased by 2% in 2019. The public sector, which has lagged compared to the other construction sectors in this recovery, recorded a spending increase of 9% in 2019. Cement demand had been increasing annually since 2014 with an estimated growth of 3.2% in 2019 after an increase of 21% from 2013 to 2018. As of December 31, 2019, the Portland Cement Association is forecasting a 1.7% increase in cement demand in the U.S. for 2020, but as of the date of this annual report we are not able to assess whether the cement demand in the U.S. will increase or not during 2020 because of the effects of the COVID-19 pandemic. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations” for more information on the risk of lower demand for our products and services.

Competition. As of December 31, 2019, the cement industry in the U.S. was highly competitive, including national and regional cement producers in the U.S. As of December 31, 2019, our principal competitors in the U.S. were LafargeHolcim, Buzzi-Unicem, HeidelbergCement and CRH.

As of December 31, 2019, the independent U.S. ready-mix concrete industry was highly fragmented. According to the National Ready-mixed Concrete Association (“NRMCA”), it is estimated that as of December 31, 2019 there were about 5,500 ready-mix concrete plants that produce ready-mix concrete in the U.S. and about 55,000 ready-mix concrete mixer trucks that delivered the concrete to the point of placement. The NRMCA estimates that, as of December 31, 2019, the value of ready-mix concrete produced by the industry was approximately \$35 billion per year. Given that the concrete industry has historically consumed approximately 75% of all cement produced annually in the U.S., many cement companies choose to develop concrete plant capabilities. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on how the ready-mix concrete industry in the U.S. could be affected by the COVID-19 pandemic.

Aggregates are widely used throughout the U.S. for all types of construction because they are the most basic materials for building activity. The United States Geological Survey (“USGS”) estimates over 2.5 billion tons of aggregates were produced in 2019, an increase of about 5% over 2018. As of December 31, 2019, crushed stone accounted for 60.7% of aggregates consumed, sand & gravel 38.6%, and slag 0.7%. These products are produced in all 50 states and had a value of \$28.5 billion as of December 31, 2019. The U.S. aggregates industry is highly fragmented and geographically dispersed. The top ten producing states represented 55% of all production as of year-end 2019. According to the USGS, during 2019, an estimated 4,061 companies operated 6,830 sand and gravel sites and 1,430 companies operated 3,440 crushed stone quarries and 98 underground mines in the 50 states.

Our Operating Network in the U.S.

The maps below reflect the location of our operating assets, including our cement plants and cement terminals in the U.S. as of December 31, 2019.





Products and Distribution Channels

Cement. For the year ended December 31, 2019, our cement operations represented 32% of revenues for our operations in the U.S., before eliminations resulting from consolidation in Dollar terms. In the U.S., we deliver a substantial portion of cement by rail, which occasionally goes directly to customers. Otherwise, shipments go to distribution terminals where customers pick up the product by truck or we deliver the product by truck. The majority of our cement sales in the U.S. are made directly to users of gray portland and masonry cements, generally within a radius of approximately 200 miles of each plant.

Ready-Mix Concrete. For the year ended December 31, 2019, our ready-mix concrete operations represented 43% of revenues for our operations in the U.S., before eliminations resulting from consolidation in Dollar terms. Our ready-mix concrete operations in the U.S. purchase most of their cement aggregates requirements from our cement operations in the U.S. Our ready-mix concrete products are mainly sold to residential, commercial and public contractors and to building companies.

Aggregates. For the year ended December 31, 2019, our aggregates operations represented 18% of revenues for our operations in the U.S., before eliminations resulting from consolidation in Dollar terms. We estimate that, as of December 31, 2019, the crushed stone quarries and sand/gravel pits permitted proven and probable reserves of our operations in the U.S. had an average remaining life of 50 and 37 years, respectively, assuming 2015-2019 average annual aggregates production levels. Our aggregates are consumed mainly by our internal operations and by our trade customers in the ready-mix, concrete products and asphalt industries.

Production Costs. The largest cost components of our plants are usually electricity and fuel, which accounted for 26% of our total production costs of our cement operations in the U.S. in 2019. As of December 31, 2019, we had been implementing a program expected to gradually replace coal with more economic fuels, such as pet coke, tires and other alternative fuels, which has resulted in reduced energy costs. By retrofitting our cement plants to handle alternative energy fuels, we believe we have gained more flexibility in supplying our energy needs and have become less vulnerable to potential price spikes in energy. In 2019, the increased use of alternative fuels helped to offset the effect on our fuel costs of increasing coal prices. Power costs in 2019 represented 11% of the cash manufacturing cost of our cement operations in the U.S., which represents production cost before depreciation. We aim to improve the efficiency of our electricity usage of our cement operations in the U.S., concentrating our manufacturing activities in off-peak hours and negotiating lower rates with electricity suppliers.

Description of Properties, Plants and Equipment. As of December 31, 2019, we operated 11 cement manufacturing plants in the U.S. (two were temporarily inactive), including the Kosmos cement plant in Louisville, Kentucky, and had a total installed cement capacity of 15.7 million tons per year. We estimate that, as of December 31, 2019, the limestone permitted proven and probable reserves of our operations in the U.S. had an average remaining life of 50 years, assuming 2015-2019 average annual cement production levels. As of that date, we operated a distribution network of 47 active cement terminals. All of our 11 cement production facilities in 2019 were wholly-owned by CEMEX, Inc., except for the cement plant in Louisville, Kentucky, which is owned by Kosmos, a joint venture in which we own a 75% interest and a subsidiary of Dyckerhoff AG (a subsidiary of Buzzi-Unicem) owns a 25% interest. As of December 31, 2019, CEMEX, Inc. had 333 wholly-owned ready-mix concrete plants (44 were temporarily inactive) and operated a total of 60 aggregates quarries (14 of which were temporarily inactive). As of December 31, 2019, we distributed fly ash through four terminals and two third-party-owned utility plants, which operate both as sources of fly ash and

distribution terminals. As of that date, we also owned 12 concrete block facilities. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding our assets in the U.S. and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the temporary shut-down of a few ready-mix concrete plants in the San Francisco area as a result of COVID-19.

In the U.S., we have continued to take a number of actions to streamline our operations and improve productivity, including temporary capacity adjustments and rationalizations in some of our cement plants, and shutdowns of ready-mix concrete and block plants and aggregates quarries. As of December 31, 2019, we were utilizing approximately 87% of our ready-mix concrete plants, 60% of our block manufacturing plants and 77% of our aggregates quarries in the U.S.

Capital Expenditures. We made capital expenditures of \$354 million in 2017, \$405 million in 2018 and \$398 million in 2019 in our operations in the U.S. As of December 31, 2019, we had expected to make capital expenditures of \$388 million in our operations in the U.S. during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the U.S. during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Europe

For the year ended December 31, 2019, our business in Europe, which includes our operations in Europe and the Rest of Europe, as described below, represented 21% of our revenues before eliminations resulting from consolidation. As of December 31, 2019, our operations in Europe represented 24% of our total installed capacity and 16% of our total assets.

As of December 31, 2019, as part of our “A Stronger CEMEX” plan, we continue to completely transform the way our Europe region is organized. We continue to fully transition from country-based organization to functional, product-focused organization across the whole region. Once completed, these changes are expected to result in higher efficiencies and faster implementation of actions to serve our customers better and increase our profitability.

Our Operations in the United Kingdom

Overview. For the year ended December 31, 2019, our operations in the United Kingdom represented 5% of our revenues in Dollar terms, before eliminations resulting from consolidation in Dollar terms. As of December 31, 2019, our operations in the United Kingdom represented 5% of our total assets.

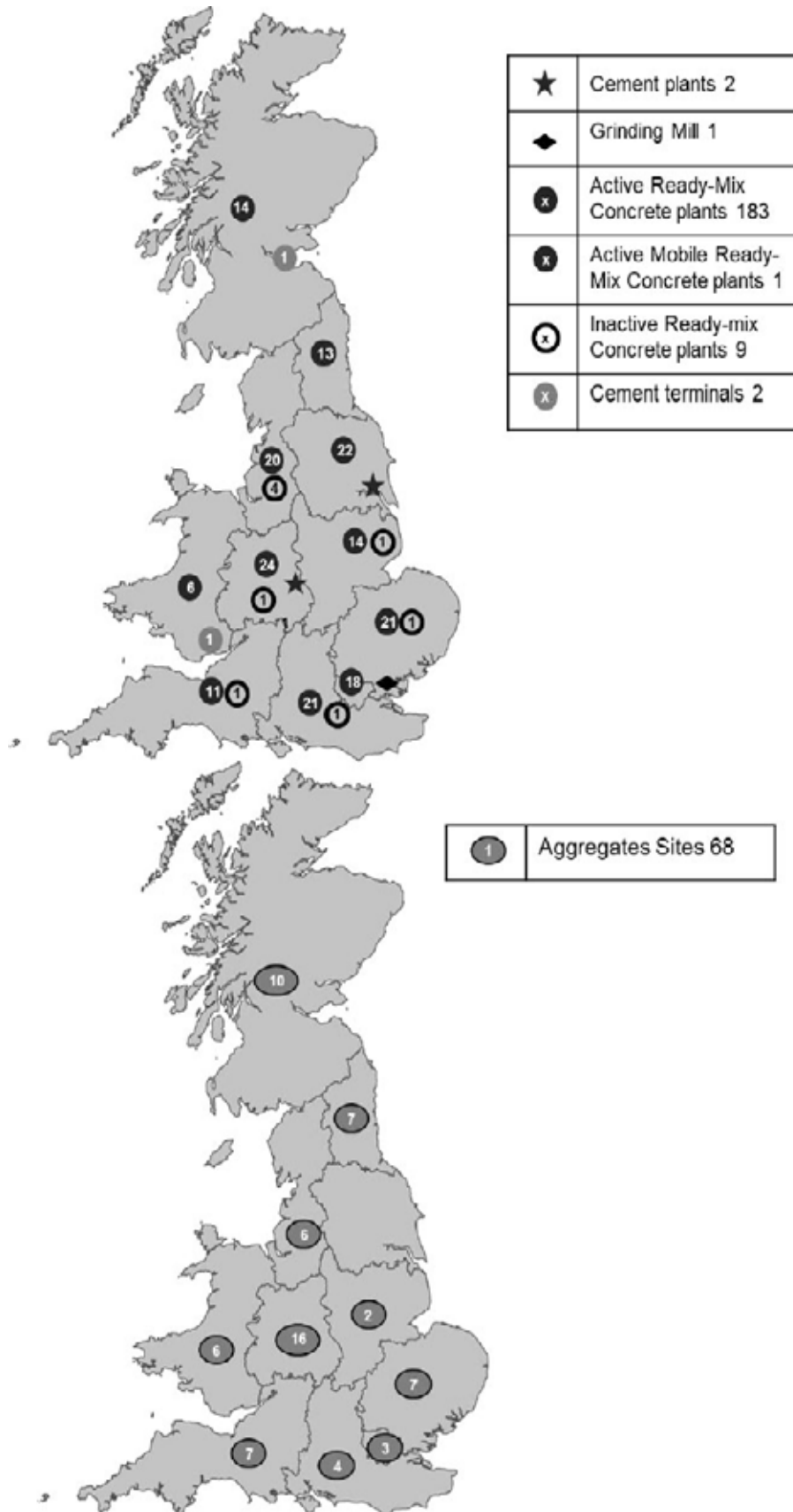
As of December 31, 2019, we were a leading provider of building materials in the United Kingdom with vertically integrated cement, ready-mix concrete, aggregates and asphalt operations, and we are also an important provider of concrete and precast materials solutions such as concrete blocks, concrete block paving, flooring systems and sleepers for rail infrastructure.

As of December 31, 2019, through an affiliate in the United Kingdom, we were in negotiations with Breedon for the sale of certain assets in the United Kingdom for a total consideration of \$235 million, including \$31 million of debt. The assets held for sale mainly consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom. After completion of the potential divestiture, we will retain significant operations in the United Kingdom related to the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding our assets in the UK.

Industry. According to the U.K. Office for National Statistics, total construction output increased by 2.3% in 2019, as compared to a 0% increase in 2018. New construction orders decreased by 1.2% in the full year 2019. Housing starts decreased 10% in the full year 2019. Industrial & Commercial segment decreased 0.5% weighed down by the commercial sector which decreased 1.3% (after a decline of 6.7% in 2018) as a result of Brexit-related uncertainty. Infrastructure grew 6.6% in 2019. As of December 31, 2019, the official data corresponding to 2019 has not been released by the Mineral Products Association, but as of the date of this annual report we estimate that domestic cement demand contracted in 2019 compared to 2018. Ready-mix concrete consumption in the full year 2019 contracted by 3.9%.

Competition. As of December 31, 2019, our primary competitors in the United Kingdom are: Tarmac (owned by CRH after divestments by Lafarge and Holcim during their merger), Hanson (a subsidiary of Heidelberg), Aggregate Industries (a subsidiary of LafargeHolcim) and Breedon, which acquired Hope Construction Materials (owned by Mittal Investments). In addition, during 2019 an estimated 2.7 million tons of cement were imported to the United Kingdom by various players including CRH, LafargeHolcim, Heidelberg and other independents, with products that compete with ours increasingly arriving from over-capacity markets including Ireland, Spain and Greece.

Our Operating Network in the United Kingdom



Products and Distribution Channels

Cement. For the year ended December 31, 2019, our cement operations represented 21% of revenues for our operations in the United Kingdom before eliminations resulting from consolidation in Dollar terms. About 73% of our United Kingdom cement sales were of bulk cement, with the remaining 23% in bags. Our bulk cement is mainly sold to ready-mix concrete, concrete block and pre-cast product customers and contractors. Our bagged cement is primarily sold to national builders' merchants.

Ready-Mix Concrete. For the year ended December 31, 2019, our ready-mix concrete operations represented 29% of revenues for our operations in the United Kingdom before eliminations resulting from consolidation in Dollar terms. Special products, including self-compacting concrete, fiber-reinforced concrete, high strength concrete, flooring concrete and filling concrete, represented 20% of our 2019 United Kingdom sales volume. In 2019, our ready-mix concrete operations in the United Kingdom purchased 97% of its cement requirements from our cement operations in the United Kingdom and 89% of its aggregates requirements from our aggregates operations in the United Kingdom. Our ready-mix concrete products are mainly sold to public, commercial and residential contractors.

Aggregates. For the year ended December 2019, our aggregates operations represented 27% of revenues for our operations in the United Kingdom before eliminations resulting from consolidation in Dollar terms. In 2019, our United Kingdom aggregates sales were divided as follows: 54% were sand and gravel and 46% were limestone. In 2019, 22% of our aggregates volumes were obtained from marine sources along the United Kingdom's coast. In 2019, 40% of our United Kingdom aggregates production was consumed by our own ready-mix concrete operations as well as our asphalt, concrete block and precast operations. We also sell aggregates to major contractors to build roads and other infrastructure projects.

Production Costs

Cement. In 2019, fixed production costs decreased by 4.8% driven by there being fewer days of major kiln overhaul in 2019 compared to 2018. Variable costs decreased by 5% in absolute terms, primarily as a result of no kiln overhaul in 2019. During 2019, we continued to implement our cost reduction programs through our use of alternative fuels.

Ready-Mix Concrete. In 2019, fixed production costs decreased by 4.6%, as compared to fixed production costs in 2018, due to savings in maintenance spend.

Aggregates. In 2019, fixed production costs increased by 8.2% as compared to 2018 fixed production costs.

Description of Properties, Plants and Equipment. As of December 31, 2019, we operated two cement plants and one clinker grinding facility in the United Kingdom. Assets in operation at year-end 2019 represent an installed cement capacity of 3.6 million tons per year. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves of our operations in the United Kingdom had an average remaining life of 46 and 21 years, respectively, assuming 2015-2019 average annual cement production levels. As of December 31, 2019, including the assets under negotiation with Breedon, we also owned two cement import terminals and operated 193 ready-mix concrete plants (190 fixed and three mobile, from which seven and two, respectively, were temporarily inactive) and 68 aggregates quarries in the United Kingdom. In addition, we had operating units dedicated to the asphalt, concrete blocks, concrete block paving, sleepers and flooring businesses in the United Kingdom. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans" for more information regarding our assets in the UK.

In order to have access to blended cements, which are more sustainable based on their reduced clinker factor and use of by-products from other industries, our grinding and blending facility at the Port of Tilbury, located on the Thames River east of London has an annual grinding capacity of 0.9 million tons, which allows us to have access to blended cements. Blended cements are more sustainable based on their reduced clinker factor and use of by-products from other industries.

Capital Expenditures. We made capital expenditures of \$84 million in 2017, \$61 million in 2018 and \$67 million in 2019 in our operations in the United Kingdom. As of December 31, 2019, we expected to make capital expenditures of \$71 million in our operations in the United Kingdom during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the United Kingdom during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on our capital expenditures.

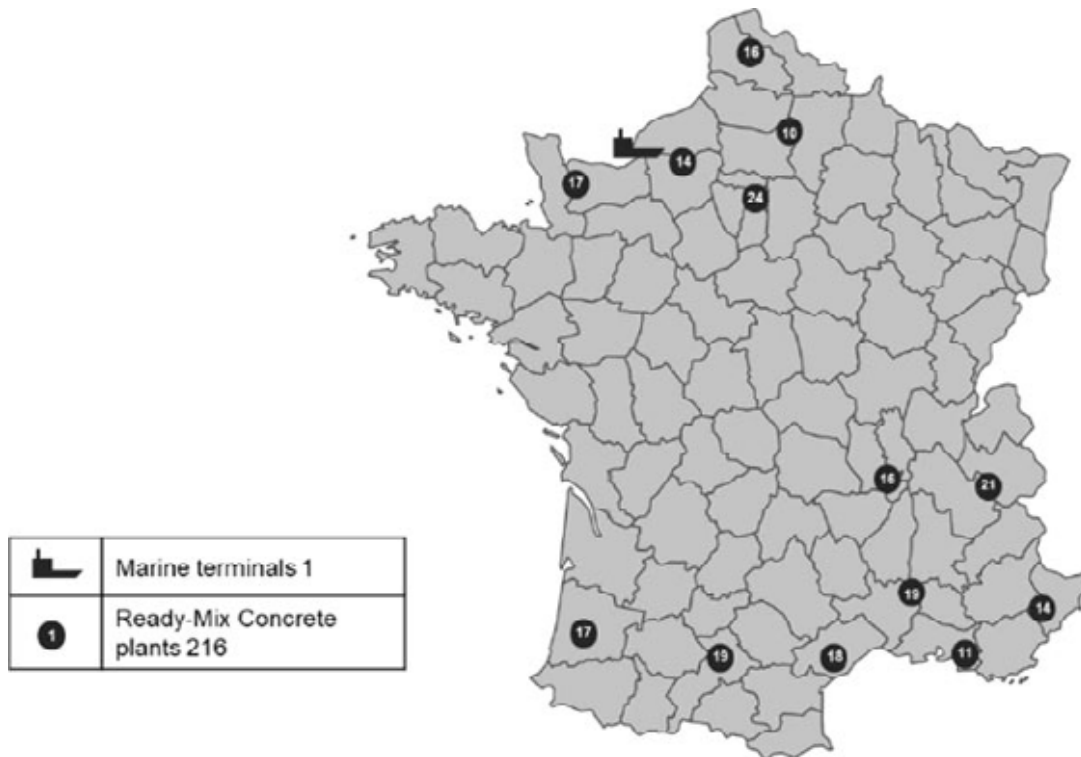
Our Operations in France

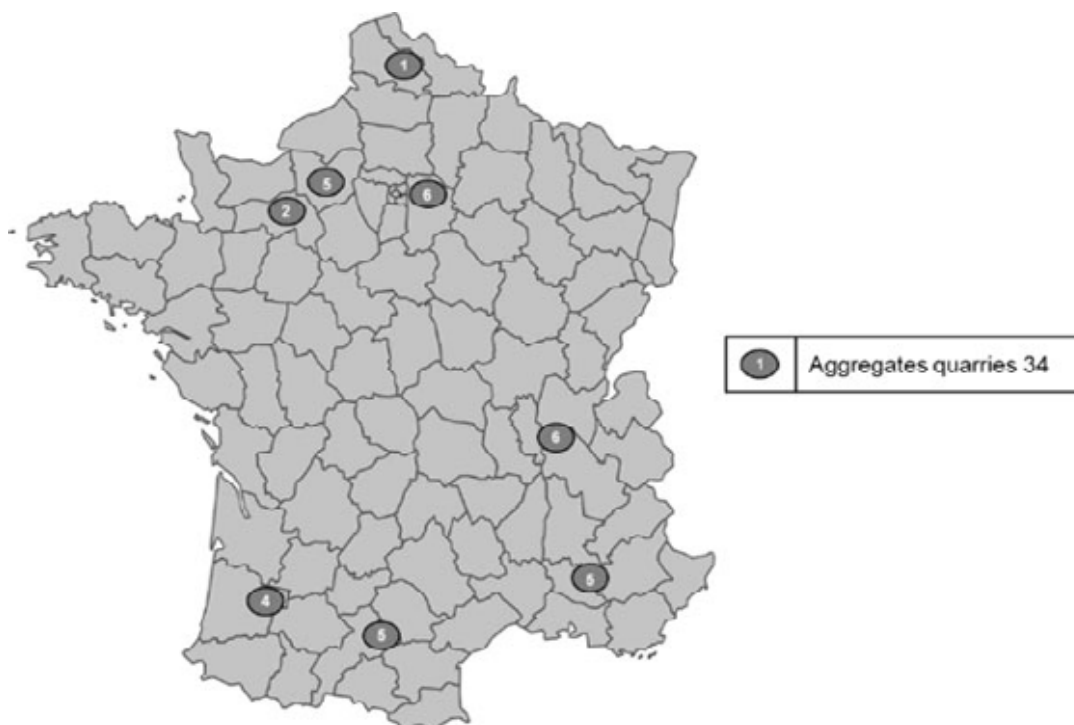
Overview. As of December 31, 2019, we were a leading ready-mix concrete producer and a leading aggregates producer in France. We distribute most of our materials by road and a significant quantity by waterways, seeking to maximize the use of this efficient and sustainable alternative. For the year ended December 31, 2019, our operations in France represented 6% of our revenues in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our operations in France represented 3% of our total assets.

Industry. According to the National Institute of Statistics and Economic Studies, housing starts in the residential sector decreased by 0.9% in 2019 compared to 2018. Non-residential construction investments increased by 3.2% in 2019 compared to 2018 and demand from the public works sector increased by 12.1% over the same period. According to National Union of Quarrying and Building Materials Industries (French Association), ready-mix concrete consumption grew 1.1% in 2019.

Competition. As of December 31, 2019, our main competitors in the ready-mix concrete market in France included LafargeHolcim, Heidelberg, CRH and Vicat SA (“Vicat”), and our main competitors in the aggregates market in France included LafargeHolcim, Heidelberg, Colas (Bouygues) and Eurovia (Vinci). In France, we rely on sourcing cement from third parties, while many of our major competitors in ready-mix concrete are subsidiaries of French cement producers.

Our Operating Network in France





Description of Properties, Plants and Equipment. As of December 31, 2019, we operated 216 ready-mix concrete plants in France, one marine cement terminal located in Le Havre, on the northern coast of France, 21 land distribution centers, 34 aggregates quarries and nine river ports.

Capital Expenditures. We made capital expenditures of \$51 million in 2017, \$44 million in 2018 and \$38 million in 2019 in our operations in France. As of December 31, 2019, we expected to make capital expenditures of \$51 million in our operations in France during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in France during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

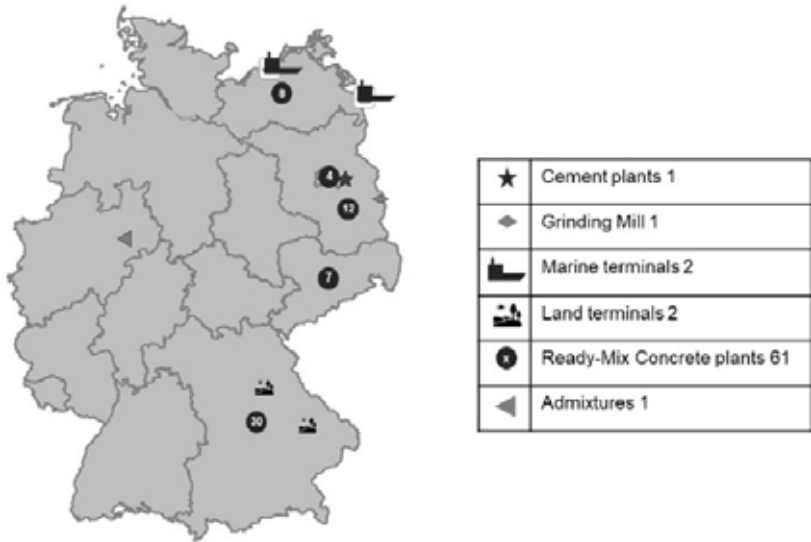
Our Operations in Germany

Overview. For the year ended December 31, 2019, our operations in Germany represented 3% of our revenues in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our operations in Germany represented 1% of our total assets. As of December 3, 2019, we were a leading provider of building materials in Germany, with vertically integrated cement, ready-mix concrete and aggregates businesses.

Industry. According to DESTATIS, the German Federal Statistical Office, total construction investment (Gross Fixed Capital Formation) in Germany increased by 3.9% in 2019, compared to 2018. During 2019, we had certain broad-based growth among segments with the main driver being the civil engineering works, which grew by 5.5%.

Competition. As of December 31, 2019, our primary competitors in the cement market in Germany were Heidelberg, Dyckerhoff (a subsidiary of Buzzi-Unicem), LafargeHolcim, CRH and Schwenk, a local German competitor. These competitors, along with CEMEX in Germany, represented a market share of above 95%, as estimated by us, for 2019. The ready-mix concrete and aggregates markets in Germany are fragmented and regionally heterogeneous, with many local competitors. The consolidation process in the ready-mix concrete and aggregates markets is moderate.

Our Operating Network in Germany



Description of Properties, Plants and Equipment. As of December 31, 2019, we operated one cement plant and one cement grinding mill in Germany and our installed cement capacity was 3.1 million tons per year. We estimate that, as of December 31, 2019, the limestone permitted proven and probable reserves of our operations in Germany had an average remaining life up to 37 years, assuming 2015-2019 average annual cement production levels. As of December 31, 2019, our operations in Germany also included 61 ready-mix concrete plants (two were temporarily inactive), 15 aggregates quarries (two were temporarily inactive), two land distribution centers for cement and two marine terminals.

Capital Expenditures. We made capital expenditures of \$36 million in 2017, \$27 million in 2018 and \$25 million in 2019 in our operations in Germany. As of December 31, 2019, we expected to make capital expenditures of \$26 million in our operations in Germany during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Germany during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Spain

Overview. For the year ended December 31, 2019, our operations in Spain represented 2% of our revenues in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our operating business in Spain represented 4% of our total assets.

On March 29, 2019, we entered into a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest our white cement business outside of Mexico and the U.S. for \$180 million, including our Buñol cement plant in Spain and our white cement customers list. The closing of the transaction is subject to approval by Spanish authorities. As of the date of this annual report, we expect to close the transaction during the first half of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing.

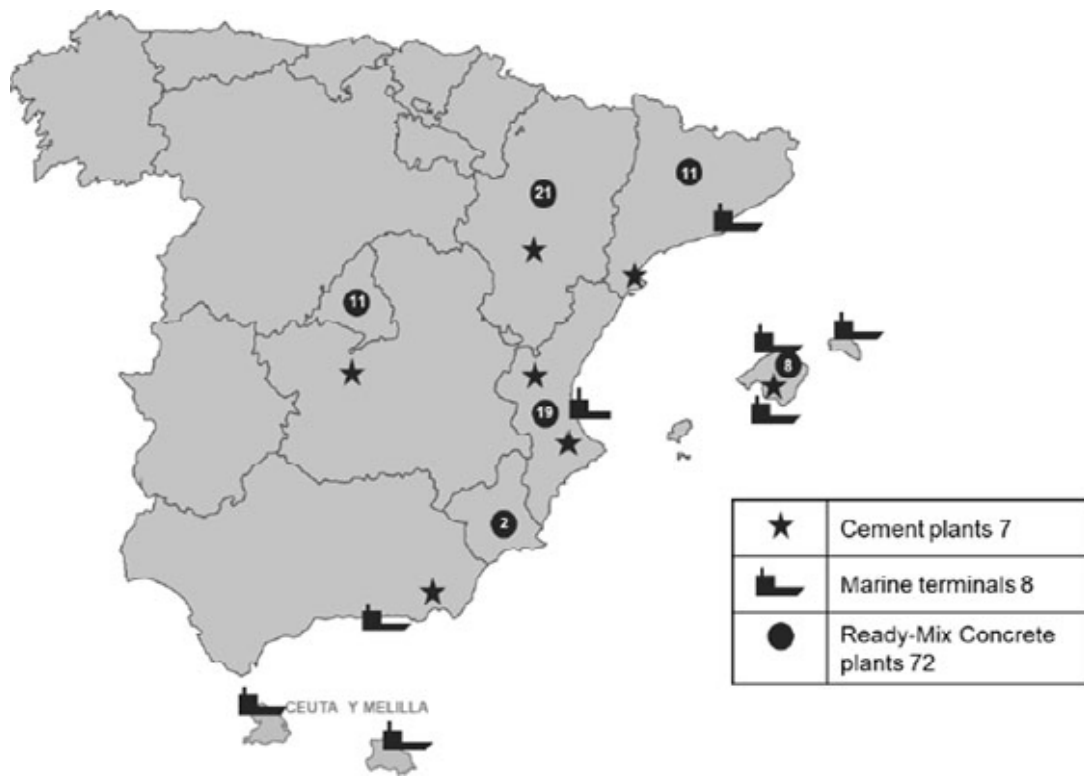
Industry. In 2019, construction investment increased by 0.8% compared to 2018 primarily driven by the residential sector, with a 2.9% growth, while the non-residential sector decreased by 1.7% in the full year 2019.

According to the Spanish Cement Producers Association (*Agrupación de Fabricantes de Cemento de España*) (“OFICEMEN”), cement imports decreased 11% in 2016, increased by 0.3% in 2017 and increased by 29% in 2018. Clinker imports according to OFICEMEN, increased by more than 100% in 2017, decreased 97% in 2018 and, according to our estimates as of the date of this annual report, increased by more than 100% in 2019 compared to 2018.

As of December 31, 2019, cement exports from Spain amounted to three million tons. In recent years, Spanish cement and clinker export volumes have fluctuated, reflecting the rapid changes in demand in the Mediterranean basin as well as the strength of the Euro and changes in the domestic market. According to OFICEMEN, these total export volumes decreased 8% in 2017, decreased 10% in 2018 and, according to our estimates, as of the date of this annual report, decreased by 23% in 2019 compared to 2018.

Competition. According to our estimates, as of December 31, 2019, we were one of the largest multinational producers of clinker and cement in Spain. Competition in the ready-mix concrete industry is intense in large urban areas. The overall high degree of competition in the Spanish ready-mix concrete industry is reflected in the multitude of offerings from a large number of concrete suppliers. We have focused on developing value-added products and attempting to differentiate ourselves in the marketplace. The distribution of ready-mix concrete remains a key component of our business strategy in Spain.

Our Operating Network in Spain





Products and Distribution Channels

Cement. For the year ended December 31, 2019, our cement operations represented 64% of revenues for our operations in Spain before eliminations resulting from consolidation in Dollar terms. We offer various types of cement in Spain, targeting specific products to specific markets and users. In 2019, 16% of the domestic sales volume of our main operating subsidiary in Spain consisted of bagged cement, and the remainder of its domestic sales volume consisted of bulk cement, primarily to ready-mix concrete operators, including sales to our other operations in Spain, as well as industrial customers that use cement in their production processes and construction companies.

Ready-Mix Concrete. For the year ended December 31, 2019, our ready-mix concrete operations represented 24% of revenues for our operations in Spain before eliminations resulting from consolidation in Dollar terms. Our ready-mix concrete operations in Spain in 2019 purchased almost 91% of their cement requirements from our cement operations in Spain and 51% of their aggregates requirements from our aggregates operations in Spain.

Aggregates. For the year ended December 31, 2019, our aggregates operations represented 6% of revenues for our operations in Spain before eliminations resulting from consolidation in Dollar terms.

Exports. Exports of cement and clinker by our operations in Spain, which represented 5% of revenues for our operations in Spain before eliminations resulting from consolidation, decreased 56% in 2019 compared to 2018, primarily as a result of an increase in domestic demand and consequently, a decrease in the volume exported to the U.S., United Kingdom and Guinea. Export prices are lower than domestic market prices, and costs are usually higher for export sales. Of our total exports from Spain in 2019, 21% consisted of gray portland cement and 53% of clinker. Of our total gray cement and clinker export volumes from our operations in Spain during 2019, 54% were to the United Kingdom, 22% were to Colombia, 12% were to Poland and the remaining to Germany, Guinea and Andorra.

Production Costs. We have improved the efficiency of our operations in Spain by introducing technological improvements that have significantly reduced our energy costs, including the use of alternative fuels, in accordance with our cost reduction efforts. In 2019, we used organic waste, tires and plastics as fuel, achieving a 48% substitution rate for pet coke in our gray and white clinker kilns for the year.

Description of Properties, Plants and Equipment. As of December 31, 2019, including the plant we are divesting in Buñol, our operations in Spain included seven cement plants located in Spain with an annual installed cement capacity of 10.0 million tons. As of that date, we also had 28 operative distribution centers, including 20 land and eight marine terminals, 72 ready-mix concrete plants (34 were temporarily inactive), 20 aggregates quarries (11 were temporarily inactive) and eight mortar plants. As of December 31, 2019, we owned 12 limestone quarries located in close proximity to our cement plants and six clay quarries in our cement operations in Spain. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves of our operations in Spain had an average remaining life of 94 and 38 years, respectively, assuming 2015-2019 average annual cement

production levels. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact on our operating facilities as a result of COVID-19.

Capital Expenditures. We made capital expenditures of \$35 million in 2017, \$27 million in 2018 and \$34 million in 2019 in our operations in Spain. As of December 31, 2019, we expected to make capital expenditures of \$21 million in our operations in Spain during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Spain during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Rest of Europe

As of December 31, 2019, our operations in the Rest of Europe segment consisted primarily of our operations in Poland, the Czech Republic and Croatia. These operations represented 5% of our revenues, before eliminations resulting from consolidation in Dollar terms, for the year ended December 31, 2019, and 3% of our total assets as of December 31, 2019. As of December 31, 2019, we expected to make capital expenditures of \$55 million in the Rest of Europe region during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations that make up our Rest of Europe region during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Poland

Overview. As of December 31, 2019, we were a leading provider of building materials in Poland, serving the cement, ready-mix concrete and aggregates markets. As of December 31, 2019, we operated two cement plants and one grinding mill with an installed cement capacity of 3.8 million tons per year. As of December 31, 2019, we also operated 42 ready-mix concrete plants (two were temporarily inactive), six aggregates quarries and two marine terminals in Poland.

Industry. According to our estimates as of the date of this annual report, total cement consumption in Poland reached approximately 19.8 million tons in 2019, increasing 1.4% compared to 2018.

Competition. As of December 31, 2019, our primary competitors in the cement, ready-mix concrete and aggregates markets in Poland were Heidelberg, LafargeHolcim, CRH, Dyckerhoff and Miebach.

Capital Expenditures. We made capital expenditures of \$16 million in 2017, \$36 million in 2018 and \$32 million in 2019 in our operations in Poland. As of December 31, 2019, we expected to make capital expenditures of \$28 million in our operations in Poland during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Poland during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in the Czech Republic

Overview. As of December 31, 2019, we were a leading producer of ready-mix concrete and aggregates in the Czech Republic. We also distribute cement in the Czech Republic. As of December 31, 2019, we operated one cement plant and one grinding mill with annual cement installed capacity of 1.7 million tons, one cement terminal and one admixtures plant in the Czech Republic. As of December 31, 2019, we also operated 73 ready-mix concrete plants (four of which were temporarily inactive) and 15 aggregates quarries in the Czech Republic.

Industry. According to the Czech Statistical Office, total construction output in the Czech Republic increased by 3.9% in 2019 (seasonally adjusted). The increase was mainly driven by a growth in both building development as well as in civil engineering. The main drivers behind the increase were accelerated execution of public infrastructure projects and still relatively strong residential development.

According to the Czech Cement Association, total cement consumption in the Czech Republic reached year-over-year growth of 0.5% in the first half of 2019. As of the date of this annual report, the full-year growth for 2019 is estimated to be around 2%. As of the date of this annual report, the specific full-year data for 2019 will be provided by the Czech Cement Association in July 2020. According to our estimates, in 2019, the decline of total ready-mix concrete production in the Czech Republic is estimated at 2.0% and growth of the aggregates market in the Czech Republic is estimated at 4.0%.

Competition. As of December 31, 2019, our main competitors in the cement, ready-mix concrete and aggregates markets in the Czech Republic were Heidelberg, Buzzi-Unicem, LafargeHolcim, Strabag and Skanska.

Capital Expenditures. We made capital expenditures of \$14 million in 2017, \$14 million in 2018 and \$16 million in 2019, in our operations in the Czech Republic. As of December 31, 2019, we expected to make capital expenditures of \$21 million in our operations in the Czech Republic during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the Czech Republic during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Croatia

Overview. We were the largest cement producer in Croatia based on installed capacity as of December 31, 2019, according to our estimates. As of December 31, 2019, we had three cement plants in Croatia with an annual cement installed capacity of 2.6 million tons. As of December 31, 2019, one cement plant in Croatia was temporarily inactive. As of December 31, 2019, we also operated 12 land distribution centers, three marine cement terminals in Croatia, Bosnia and Herzegovina and Montenegro, six ready-mix concrete facilities in Croatia and Bosnia and Herzegovina and one aggregates quarry in Croatia.

On April 5, 2017, CEMEX announced that the European Commission issued a decision that ultimately did not allow Duna-Dráva Cement Kft to purchase our aforementioned operations in Croatia. Consequently, the transaction did not close and CEMEX decided to maintain its operations in Croatia and continue to operate them for an indefinite time. As of December 31, 2018 and 2019 and for the years ended December 31, 2017, 2018 and 2019, our operations in Croatia are consolidated line-by-line in the financial statements.

Industry. According to our estimates made as of the date of this annual report, total cement consumption in Croatia, Bosnia and Herzegovina and Montenegro was almost 3.5 million tons in 2019, the same as in 2018.

Competition. As of December 31, 2019, our primary competitors in the cement market in Croatia were Nexe and LafargeHolcim.

Capital Expenditures. We made capital expenditures of \$9 million in 2017, \$4 million in 2018 and \$4 million in 2019 in our operations in Croatia. As of December 31, 2019, we expected to make capital expenditures of \$5 million in our operations in Croatia during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Croatia during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

South, Central America and the Caribbean

For the year ended December 31, 2019, our business in SCA&C, which included our operations in Colombia, Panama, Costa Rica, Caribbean TCL, the Dominican Republic and Rest of South, Central America and the Caribbean segments, as described below, represented 13% of our revenues before eliminations resulting from consolidation in Dollar terms. As of December 31, 2019, our operations in SCA&C represented 15% of our total installed capacity and 9% of our total assets.

CLH is the main holding company for CEMEX’s operations in Colombia, Panama, Costa Rica, Guatemala, Nicaragua and El Salvador.

Our Operations in Colombia

Overview. As of December 31, 2019, CEMEX Colombia was the second-largest cement producer in Colombia, based on installed cement capacity of 4.1 million tons per year as of December 31, 2019. For the year ended December 31, 2019, our operations in Colombia represented 4% of our revenues before eliminations resulting from consolidation in Dollar terms.

CEMEX Colombia has a significant market share in the cement and ready-mix concrete market in the “Urban Triangle” of Colombia comprising the cities of Bogotá, Medellín and Cali. During 2019, these three metropolitan areas accounted for approximately 38.0% of Colombia’s cement consumption. CEMEX Colombia’s Ibagué plant, which is strategically located in the Urban Triangle, is CEMEX Colombia’s largest plant as of December 31, 2019. CEMEX Colombia, through its Cúcuta plant and Clemencia grinding facility, is also an active participant in Colombia’s northeastern and coastal markets.

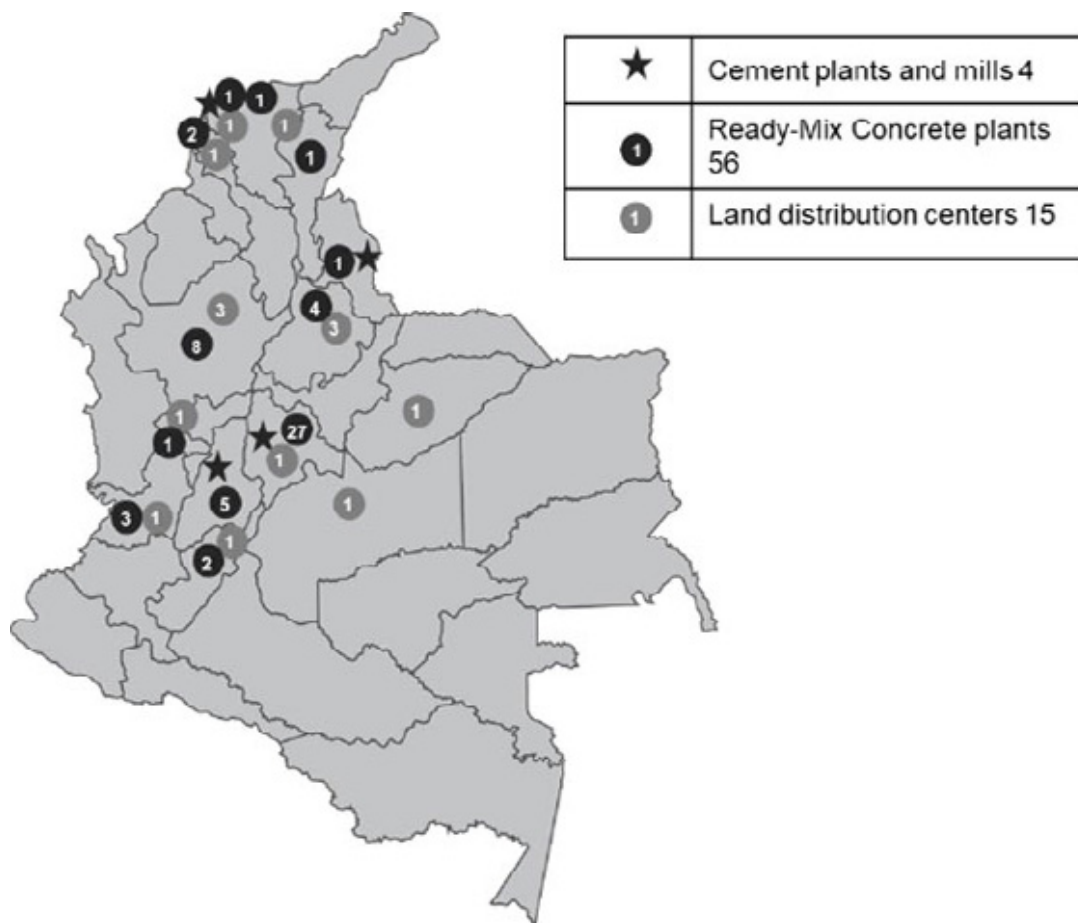
Industry. According to our estimates made as of the date of this annual report, the installed capacity for cement in Colombia was 20.3 million tons in 2019. According to the Colombian National Statistical Administrative Department (*Departamento Administrativo Nacional de Estadística*), total cement consumption in Colombia reached 12.5 million tons during 2019, an increase of 4.0% from 2018, while cement exports from Colombia during 2019 reached 0.4 million tons. We estimate that as of December 31, 2019, close to 60% of cement in Colombia was consumed by the housing and self-construction sector, while the infrastructure sector accounted for approximately 30% of total cement consumption and has been growing in recent years up to December 31, 2019. The other construction segments in Colombia, including the formal housing and commercial sectors, account for the balance of cement consumption in Colombia.

Competition. As of December 31, 2019, our two largest competitors in Colombia were Cementos Argos, which has established a leading position in the Colombian Caribbean coast, Antioquia and Southwest region markets, and LafargeHolcim Colombia. We estimate that as of December 31, 2019 there were eight other local and regional competitors in Colombia.

The ready-mix concrete industry in Colombia was fairly consolidated with the top three producers accounting for approximately 70% of the market as of December 31, 2019. CEMEX Colombia was the second-largest ready-mix concrete producer as of December 31, 2019. The first and third-largest producers were Cementos Argos and LafargeHolcim Colombia, respectively.

The aggregates market in Colombia is highly fragmented and is dominated by the informal market. Approximately 95% of the aggregates market in Colombia was comprised of small independent producers as of December 31, 2019.

Our Operating Network in Colombia





Products and Distribution Channels

Cement. For the year ended December 31, 2019, our cement operations represented 57% of revenues for our operations in Colombia before eliminations resulting from consolidation in Dollar terms.

Ready-Mix Concrete. For the year ended December 31, 2019, our ready-mix concrete operations represented 27% of revenues for our operations in Colombia before eliminations resulting from consolidation in Dollar terms.

Aggregates. For the year ended December 31, 2019, our aggregates operations represented 8% of revenues for our operations in Colombia before eliminations resulting from consolidation in Dollar terms.

Description of Properties, Plants and Equipment. As of December 31, 2019, CEMEX Colombia owned two operating cement plants and two cement grinding mills, having a total installed cement capacity of 4.1 million tons. In 2019, we replaced 11.3% of our total fuel consumed in CEMEX Colombia with alternative fuels, and we had an internal electricity generating capacity of approximately 37 MW as of December 31, 2019. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves of our operations in Colombia had an average remaining life of 75 and 185 years, respectively, assuming 2015-2019 average annual cement production levels. The operating licenses for quarries in Colombia are renewed every 30 years; assuming renewal of such licenses, we estimate having sufficient limestone reserves for our operations in Colombia for over 70 years assuming 2015-2019 average annual cement production levels. As of December 31, 2019, CEMEX Colombia also operated 15 land distribution centers, one mortar plant (temporarily inactive), 56 ready-mix concrete plants (21 were temporarily inactive) and 10 aggregates operations (eight were temporarily inactive). See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary halts in production at our operating facilities to stop the spread of COVID-19.

CEMEX Colombia is also finishing building a new cement plant in the Antioquia department of the Municipality of Maceo, Colombia. See “Regulatory Matters and Legal Proceedings” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for the status of that project.

Capital Expenditures. We made capital expenditures of \$62 million in 2017, \$22 million in 2018 and \$25 million in 2019 in our operations in Colombia. As of December 31, 2019, we expected to make capital expenditures of \$31 million in our operations in Colombia during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Colombia during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Panama

Overview. For the year ended December 31, 2019, our operations in Panama represented 1% of our revenues before eliminations resulting from consolidation in Dollar terms.

Industry. As of the date of this annual report, we estimate that approximately 1.3 million cubic meters of ready-mix concrete were sold in Panama during 2019. Cement consumption in Panama decreased 11.6% in 2019 compared to 2018, mainly due to high levels of inventory in apartments and offices, delays in infrastructure projects as well as increased participation of imported cement.

Competition. As of December 31, 2019, the cement industry in Panama included three cement producers: Cemento Bayano, Argos Panamá, an affiliate of Cementos Argos, and Cemento Interoceánico, S.A., a company in which we were a minority shareholder until mid-November 2019 when we sold our shares to Cemento Progreso, S.A.

Description of Properties, Plants and Equipment. As of December 31, 2019, our operations in Panama through Cemento Bayano operated one cement plant in Panama, with an installed cement capacity of 1.2 million tons. As of that date, Cemento Bayano also operated seven ready-mix concrete plants (one was temporarily inactive), three aggregates quarries (all of which are currently inactive) and four distribution centers (including one location at the cement plant). See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary halts in production at our operating facilities to stop the spread of COVID-19.

Capital Expenditures. We made capital expenditures of \$8 million in 2017, \$12 million in 2018 and \$10 million in 2019 in our operations in Panama. As of the date of this annual report, we expect to make capital expenditures of \$5 million in our operations in Panama during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Panama during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Caribbean TCL

We started consolidating TCL and its subsidiaries for financial reporting purposes on February 1, 2017. In March 2017, TCL de-listed from the Jamaica and Barbados stock exchanges.

As of December 31, 2019, Caribbean TCL was one of the leading producers and marketers of cement and ready-mix concrete products in the Caribbean’s construction sector, with operations strategically located in Jamaica, Trinidad and Tobago, Guyana and Barbados.

As of December 31, 2019, our focus with respect to Caribbean TCL will continue on attempting to maximize further synergies from TCL’s integration with us. As of December 31, 2019, we intended to improve the productivity and capacity of our Caribbean TCL’s cement plants, continue the vertical integration of Caribbean TCL’s business, invest in developing its employees and offer strong value products to our customers in the region and elsewhere.

Capital Expenditures. We made capital expenditures of \$32 million in 2017, \$29 million in 2018 and \$21 million in 2019 in Caribbean TCL. As of December 31, 2019, we expected to make capital expenditures of \$22 million during 2020 in Caribbean TCL. As of the date of this annual report, the expected capital expenditures to be made in our operations in the Caribbean TCL during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Trinidad & Tobago

Description of Properties, Plants and Equipment. As of December 31, 2019, TCL operated one cement plant in Trinidad & Tobago, with a total annual cement installed capacity of 1.0 million tons. As of December 31, 2019, TCL had three operational ready-mix concrete plants (one was temporarily inactive), two aggregates quarries, five land distribution centers and one marine terminal. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary halts in production at our operating facilities to stop the spread of COVID-19.

Our TCL Operations in Jamaica

Overview. As of December 31, 2019, we held an indirect controlling position mainly through TCL in CCCL.

Description of Properties, Plants and Equipment. As of December 31, 2019, CCCL operated one cement plant in Jamaica, with a total cement installed capacity of 1.5 million tons. As of December 31, 2019, CCCL had four land distribution centers and one marine terminal.

Our Operations in Barbados

Overview. As of December 31, 2019, through TCL, we held an indirect controlling position in Arawak in Barbados.

Description of Properties, Plants and Equipment. As of December 31, 2019, Arawak operated one cement plant in Barbados, with a total cement installed capacity of 0.4 million tons. As of that date, Arawak had one ready-mix concrete plant (temporarily inactive), one land distribution center and one marine terminal.

Our Operations in the Dominican Republic

Overview. As of December 31, 2019, CEMEX Dominicana, S.A.'s ("CEMEX Dominicana") sales network covered the country's main consumption areas, which are Santo Domingo, Santiago de los Caballeros, La Altagracia, San Cristobal and San Pedro de Macoris. On May 8, 2000, CEMEX Dominicana entered into a lease agreement with the government of the Dominican Republic related to the exploitation of a gypsum mine located at Las Salinas, Barahona, which has enabled CEMEX Dominicana to supply all local and regional gypsum requirements. The lease agreement expires on May 8, 2025 and may be extended by the parties. For the year ended December 31, 2019, our operations in the Dominican Republic represented 2% of our revenues before eliminations resulting from consolidation in Dollar terms. As of December 31, 2019, our operations in the Dominican Republic represented 1% of our total assets.

Industry. According to figures from the Dominican Cement Producers Association (*Asociación Dominicana de Productores de Cemento Portland*) for the period from January 2019 to November 2019, and taking into account CEMEX Dominicana's estimate for December 2019, as of the date of this annual report we estimate that cement consumption in the Dominican Republic reached 4.7 million tons, in 2019.

Competition. As of December 31, 2019, our principal competitors in the Dominican Republic were: Cementos Cibao, a local producer; Domicem, a mixed Italian/local cement producer; Cementos Argos, a grinding operation of a Colombian cement producer; Cementos Santo Domingo, a cement grinding partnership between a local investor and Cementos La Union from Spain; Cementos Panam, a local cement producer; and Cementos Andino, a grinding operation; and a partially constructed cement kiln of a Colombian cement producer.

Description of Properties, Plants and Equipment. As of December 31, 2019, CEMEX Dominicana operated one cement plant in the Dominican Republic, with an installed cement capacity of 2.4 million tons per year. As of that date, CEMEX Dominicana also owned nine ready-mix concrete plants (four were temporarily inactive), one aggregates quarry, two land distribution centers and leased two marine terminals.

Capital Expenditures. We made capital expenditures of \$9 million in 2017, \$8 million in 2018 and \$8 million in 2019 in our operations in the Dominican Republic. As of December 31, 2019, we expected to make capital expenditures of \$9 million in our operations in the Dominican Republic during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the Dominican Republic during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on our capital expenditures.

Rest of South, Central America and the Caribbean

As of December 31, 2019, our operations in the Rest of South, Central America and the Caribbean segment consisted primarily of our operations in Costa Rica, Puerto Rico, Guatemala, Nicaragua and other countries in the Caribbean, excluding our Caribbean TCL segment. These operations represented 4% of our revenues, in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our business in the Rest of South, Central America and the Caribbean segment represented 1% of our total assets. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" for more information on our capital expenditures.

Our Operations in Costa Rica

Overview. As of December 31, 2019, CEMEX Colombia, a CLH subsidiary, indirectly held a 99.1% interest in CEMEX Costa Rica.

During 2015, we increased the overall capacity in the Colorado de Abangares cement plant (“Colorado Plant”), allowing a then 10% throughput increase that catered to the needs of our operations in Nicaragua during 2016. Since the expansion, the Colorado Plant’s kiln has been operating at the expected capacity with an operational efficiency above 97%. As of December 31, 2019, the majority of our operational requirements in Nicaragua have been consistently provided from our operations in Costa Rica.

Industry. As of the date of this annual report, we estimate that approximately 1.1 million tons of cement were sold in Costa Rica during 2019. In 2019, the market had an estimated ratio of 40/60 in the bulk/bagged mix due to traditional building techniques in the housing segment, which require bagged cement and industrial-and-commercial demand ready-mix which requires bulk.

Competition. As of December 31, 2019, the Costa Rican cement industry included three producers, CEMEX Costa Rica and LafargeHolcim Costa Rica, both of which have integrated lines, and Elementia, which started a cement mill during June 2018 which imports clinker from different sources.

Description of Properties, Plants and Equipment. As of December 31, 2019, CEMEX Costa Rica operated one cement plant and one grinding mill in Costa Rica, with a total installed cement capacity of 0.8 million tons. As of that date, CEMEX Costa Rica operated seven ready-mix concrete plants (four were temporarily inactive), and leased one aggregates quarry and one land distribution center.

Exports. During 2019, clinker exports by our operations in Costa Rica represented 25% of our total production and were made to our operations in Nicaragua.

Capital Expenditures. We made capital expenditures of \$2 million in 2017, \$3 million in 2018 and \$4 million in 2019 in our operations in Costa Rica. As of December 31, 2019, we expected to make capital expenditures of \$4 million in our operations in Costa Rica during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Costa Rica during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Puerto Rico

Overview. As of December 31, 2019, CEMEX de Puerto Rico, Inc. (“CEMEX Puerto Rico”) was our main subsidiary in Puerto Rico.

Industry. In 2019, cement consumption in Puerto Rico reached 0.6 million tons according to the Puerto Rico Economic Development Bank.

Competition. The cement industry in Puerto Rico in 2019 was comprised of two cement producers: CEMEX Puerto Rico and Cementos Argos (formerly Antilles Cement Co (Marine Terminal) and San Juan Cement Co (Cement Plant)).

Description of Properties, Plants and Equipment. As of December 31, 2019, CEMEX Puerto Rico operated one cement plant, which operated as a grinding mill only, with an installed cement capacity of 1.3 million tons per year. As of that date, CEMEX Puerto Rico also operated six ready-mix concrete plants (three were temporarily inactive), two land distribution centers (one was temporarily inactive) and one marine terminal used for fly ash. As of that date, CEMEX Puerto Rico also owned an aggregates quarry, which is currently inactive.

Capital Expenditures. We made capital expenditures of \$1 million in 2017, \$1 million in 2018 and \$4 million in 2019 in our operations in Puerto Rico. As of December 31, 2019, we expected to make capital expenditures of \$2 million in our operations in Puerto Rico during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Puerto Rico during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Nicaragua

Overview. As of December 31, 2019, CEMEX Colombia and CEMEX Costa Rica, both CLH subsidiaries, indirectly and directly owned 100% of CEMEX Nicaragua, S.A. (“CEMEX Nicaragua”), our operating subsidiary in Nicaragua.

Industry. We estimate that 0.7 million tons of cement, 0.1 million cubic meters of ready-mix concrete and 3.5 million tons of aggregates were sold in Nicaragua during 2019.

Competition. As of December 31, 2019, two market participants compete in the Nicaraguan cement industry, CEMEX and LafargeHolcim.

Description of Properties, Plants and Equipment. As of December 31, 2019, we leased and operated one cement plant and owned one grinding mill with a total installed cement capacity of 0.7 million tons, six ready-mix concrete plants (five were temporarily inactive) and two distribution centers in Nicaragua. Since March 2003, CEMEX Nicaragua has also leased a 100,000 ton milling plant in Managua, which has been used exclusively for pet coke milling.

Capital Expenditures. We made capital expenditures of \$6 million in 2017, \$8 million in 2018 and \$5 million in 2019 in our operations in Nicaragua. As of December 31, 2019, we expected to make capital expenditures of \$3 million in our operations in Nicaragua during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Nicaragua during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Guatemala

Overview. As of December 31, 2019, CLH indirectly owned 100% of CEMEX Guatemala, our main operating subsidiary in Guatemala. As of December 31, 2019, we owned and operated one cement grinding mill in Guatemala with an installed cement capacity of 0.5 million tons per year. As of that date, we also owned and operated five land distribution centers, one clinker dome close to our leased marine terminal in the southern part of the country and three ready-mix concrete plants (all of which were active).

Capital Expenditures. We made capital expenditures of \$2 million in 2017, \$1 million in 2018 and \$1 million in 2019 in Guatemala. As of December 31, 2019, we expected to make capital expenditures of \$3 million in our operations in Guatemala during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Guatemala during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Other Rest of South, Central American and Caribbean Countries

Overview. As of December 31, 2019, we held a non-controlling position in National Cement Ltd. in the Cayman Islands, Maxcem Bermuda Ltd. in Bermuda and Societe des Ciments Antillais, a company with cement operations in Guadalupe and Martinique. As of December 31, 2019, CEMEX España additionally indirectly held a 100% interest in CEMEX Jamaica Limited, which operates one calcined limestone plant in Jamaica with a capacity of 120,000 tons per year and one hydrate line with a capacity of 4,800 tons per year.

We believe that the Caribbean region holds considerable strategic importance because of its geographic location. As of December 31, 2019, we operated a network of seven marine terminals in these countries, which facilitated exports from our operations in Mexico, the Dominican Republic, Puerto Rico and the U.S. Two of our marine terminals are in Haiti, and three are in the Bahamas. As of December 31, 2019, we also had a non-controlling interest in two other terminals, one in Bermuda and the other in the Cayman Islands.

Capital Expenditures. In our operations in Rest of SCA&C, we made capital expenditures of \$2 million in 2017, \$1 million in 2018 and \$4 million in 2019. As of December 31, 2019, we expected to make capital expenditures of \$6 million in our operations in other SCA&C countries during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the Rest of SCA&C during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Asia, Middle East and Africa

For the year ended December 31, 2019, our business in Asia, Middle East and Africa, which includes our operations in the Philippines, Israel and the Rest of Asia, Middle East and Africa segment, as described below, represented 10% of our revenues before eliminations resulting from consolidation in Dollar terms. As of December 31, 2019, our operations in Asia represented 13% of our total installed capacity and 5% of our total assets.

Our Operations in the Philippines

Overview. As of December 31, 2019, on a consolidated basis through various subsidiaries, CEMEX España indirectly held 100% of CEMEX Asian South East Corporation (“CASE”), which in turn owned 66.78% of the outstanding share capital of CHP. As of December 31, 2019, CHP directly and indirectly owned 100% of our two principal operating subsidiaries in the Philippines, Solid Cement Corporation (“Solid Cement”) and APO Cement Corporation (“APO”). For the year ended December 31, 2019, our operations in the Philippines represented 3% of our revenues before eliminations resulting from consolidation in Dollar terms. As of December 31, 2019, our operations in the Philippines represented 2% of our total assets. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Other Recent Developments” for the status of the CHP share rights offering (“SRO”) and CASE’s updated equity interest in CHP.

As of December 31, 2019, CHP was investing in a new 1.5 million ton integrated cement production line at CEMEX’s Solid Cement Plant located in Luzon, Philippines (the “Solid Cement Plant”) with an estimated total investment of \$234 million. Upon completion, this new line should double the capacity of the Solid Cement Plant and will represent a 26% increase in our cement capacity in the Philippines. In October 2018, we entered into principal project agreements with CBMI Construction Co., Ltd, an affiliate of Sinoma International Engineering Co., Ltd., for the procurement, construction and installation of the new line. On April 25, 2019, Solid Cement held its ceremonial groundbreaking for the new line. Various works were already ongoing, including the mobilization of equipment and site development. As of the end of 2019, civil works, mainly related to excavation and foundation works for the different buildings and structures of the project, were in progress. In addition, the kiln and vertical cement mill for the new line are already at the plant. As of December 31, 2019, preparatory activities had been underway in connection with the construction of a new power line to provide additional support to the existing power infrastructure servicing our Solid Cement Plant. As of December 31, 2019, the new line was estimated to start operations by the second quarter of 2021. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Competition. As of December 31, 2019, our major competitors in the Philippine cement market were LafargeHolcim, Republic, Eagle, Northern, Goodfound, Taiheiyo, Mabuhay, and Big Boss.

Description of Properties, Plants and Equipment. As of December 31, 2019, our operations in the Philippines included two cement plants with an annual installed cement capacity of 5.7 million tons, exclusive access to four quarries to supply raw materials to our cement plants, 15 land distribution centers and five marine distribution terminals. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves accessed by our operations in the Philippines had an average remaining life of 38 and 14 years, respectively, assuming 2015-2019 average annual cement production levels. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of certain measures being taken by the governments of the countries in which we operate regarding temporary halts in production at our operating facilities to stop the spread of COVID-19.

Cement. For the year ended December 31, 2019, our cement operations represented 100% of revenues for our operations in the Philippines before eliminations resulting from consolidation in Dollar terms.

Capital Expenditures. We made capital expenditures of \$33 million in 2017, \$36 million in 2018 and \$84 million in 2019 in our operations in the Philippines. As of December 31, 2019, we expected to make capital expenditures of \$124 million in our operations in the Philippines during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the Philippines during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in Israel

Overview. We are a leading producer and supplier of raw materials for the construction industry in Israel. In addition to ready-mix concrete and aggregates, we produce a diverse range of building materials and infrastructure products in Israel. As of

December 31, 2019, we operated 63 ready-mix concrete plants, six aggregates quarries, one sand pit, one concrete products plant, one admixtures plant and one limestone factory in Israel. For the year ended December 31, 2019, our operations in Israel represented 5% of our revenues before eliminations resulting from consolidation in Dollar terms and 2% of our total assets.

Capital Expenditures. We made capital expenditures of \$32 million in 2017, \$27 million in 2018 and \$33 million in 2019 in our operations in Israel. As of December 31, 2019, we expected to make capital expenditures of \$28 million in our operations in Israel during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Israel during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Rest of Asia, Middle East and Africa

As of December 31, 2019, our operations in the Rest of Asia, Middle East and Africa consisted primarily of our operations in Egypt and the UAE. These operations represented 2% of our revenues before eliminations resulting from consolidation in Dollar terms, for the year ended December 31, 2019, and 1% of our total assets as of December 31, 2019. As of December 31, 2019, we expected to make capital expenditures of \$14 million in our operations of the Rest of Asia, Middle East and Africa during 2020.

Our Operations in Egypt

Overview. As of December 31, 2019, we operated one cement plant in Egypt with an annual installed cement capacity of 5.4 million tons. This plant is located approximately 280 miles south of Cairo and serves the upper Nile region of Egypt, as well as Cairo and the Delta region, Egypt’s main cement market. We estimate that, as of December 31, 2019, the limestone and clay permitted proven and probable reserves of our operations in Egypt had an average remaining life of 5 and 23 years, respectively, assuming 2015-2019 average annual cement production levels. In addition, as of December 31, 2019, we also operated nine ready-mix concrete plants (of which six are owned and three are rented; and two were temporarily inactive), and eight land distribution centers in Egypt. See “Item 4—Information on the Company—Regulatory Matters and Legal Proceedings—Other Legal Proceedings—Egypt Share Purchase Agreement” for a description of certain legal proceedings relating to the share purchase agreement, signed in November 1999 between CEMEX, S.A.B. de C.V. and state-owned Metallurgical Industries Company, pursuant to which CEMEX, S.A.B. de C.V. acquired a controlling interest in ACC.

Industry. According to the Ministry of Investment official figures and CEMEX’s estimates, based on government data (local and imported cement), the Egyptian market consumed approximately 48.5 million tons of cement during 2019. Cement consumption decreased by approximately 4% in 2019 compared to 2018, which was mainly attributed to lower disposable income effected by subsidies removal. As of December 31, 2019, the cement industry in Egypt had a total of 18 cement producers, with an aggregate annual installed cement production capacity of approximately 84.3 million tons.

Competition. According to the Ministry of Investment official figures, during 2019, LafargeHolcim (Egyptian Cement Company), ACC and Heidelberg (Suez Cement, Torah Cement and Helwan Portland Cement) represented approximately 34% of the total cement production in Egypt. Other significant competitors in Egypt are Arabian (La Union), Titan (Alexandria Portland Cement and BeniSuef Cement), Amreyah (InterCement), National, Sinai (Vicat), South Valley, Nile Valley, El Seweedy, Arish Cement, Aswan Medcom, Misr BeniSuef, Al Nahda and Misr Quena Cement Companies, Building Materials Industries Co. ASEC Cement, Shoura Cement and National Company for Cement (Reni Suef plant).

Cement and Ready-Mix Concrete. For the year ended December 31, 2019, cement represented 88% and ready-mix concrete represented 12% of revenues for our operations in Egypt before eliminations resulting from consolidation in Dollar terms.

Capital Expenditures. We made capital expenditures of \$22 million in 2017, \$9 million in 2018 and \$9 million in 2019 in our operations in Egypt. As of December 31, 2019, we expected to make capital expenditures of \$10 million in our operations in Egypt during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in Egypt during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Our Operations in the UAE

Overview. As of December 31, 2019, CEMEX España held a 49% equity interest (and a 100% economic interest) in all of our main UAE companies: CEMEX Topmix LLC and CEMEX Supermix LLC, ready-mix concrete manufacturing companies, and CEMEX Falcon LLC, which specializes in the production of cement and slag, as well as in other companies in the country. We are not permitted to have a controlling interest in these companies (UAE Commercial Companies Law requires 51% ownership by UAE

nationals). However, through agreements with other shareholders in these companies, we have control over the remaining 51% of the economic benefits in each of the companies. As a result, we own a 100% economic interest in all three companies. CEMEX España also indirectly held a 100% equity stake in CEMEX Arabia FZC, a company dedicated to trading activities (100% ownership is possible as it is in a free zone), which was liquidated on May 14th, 2019 and its activities transferred to CEMEX Falcon LLC. As of December 31, 2019, we owned nine ready-mix concrete plants and one cement and slag grinding facility in the UAE with an annual installed cement capacity of 1.2 million tons, serving the markets of Dubai and Abu Dhabi as well as neighboring countries such as Oman.

Capital Expenditures. We made capital expenditures of \$3 million in 2017, \$6 million in 2018 and \$4 million in 2019 in our operations in the UAE. As of December 31, 2019, we expected to make capital expenditures of \$4 million in our operations in the UAE during 2020. As of the date of this annual report, the expected capital expenditures to be made in our operations in the UAE during 2020 are under review as a result of measures taken by CEMEX to mitigate potential risks posed by the spread of COVID-19. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on our capital expenditures.

Sale of our Operations in Rest of Asia, Middle East and Africa

On May 26, 2016, we closed the sale of our operations in Bangladesh and Thailand to SIAM Cement for \$70 million. In June 2017, we divested our concrete operations in Malaysia through a management buy-out for \$4.6 million.

Our Trading Operations

In 2019, we traded 10.9 million tons of cementitious and non-cementitious materials in 102 countries, including 9.2 million tons of cement and clinker. Slightly more than 4.5 million tons of the traded cement and clinker consisted of exports from our operations in Mexico, Croatia, Germany, Spain, Trinidad & Tobago, the Dominican Republic, Barbados, Costa Rica, Latvia, Poland, Jamaica, Czech Republic, the Philippines, Puerto Rico, Nicaragua and the UAE. Slightly above 4.6 million tons remaining were purchased from third parties in countries such as Spain, Taiwan, Turkey, Thailand, Peru and Vietnam. In 2019, we traded 0.9 million tons of granulated blast furnace slag, a non-clinker cementitious material, and 0.8 million tons of other products. Our trading network enables us to maximize the capacity utilization of our facilities worldwide while reducing our exposure to the inherent cyclicality of the cement industry. We are able to distribute excess capacity to regions around the world where there is demand. In addition, we believe that our worldwide network of strategically located marine terminals allows us to coordinate maritime logistics on a global basis and minimize transportation expenses. Our trading operations also enable us to explore new markets without significant initial capital expenditure.

Freight rates, which account for a large share of the total import supply cost, have been subject to significant volatility in recent years. We estimate, however, that our trading operations have obtained significant savings by contracting maritime transportation in due time and by using our own and chartered fleets, which transported 50% of our cement and clinker traded volume during 2019.

In addition, based on our spare fleet capacity, we provide freight service to third parties, which allows us to generate additional revenues.

Our Cement Plants

The following table provides a summary of our cement plants, including location, used capacity, grinding mill production and years of operation as of and for the year ended December 31, 2019:

Location	Used Capacity	Years of Operation ⁽¹⁾
Atotonilco, Hidalgo, México	963	61
Barrientos, Estado de México, México	793	75
Ensenada, Baja California, México	369	44
Guadalajara, Jalisco, México	395	46
CPN, Sonora, México	-	39
Hidalgo, Nuevo León, México	82	114
Huichapan, Hidalgo, México	3,330	35
Mérida, Yucatán, México	711	66
Monterrey, Nuevo León, México	1,608	100
Tamuín, San Luis Potosí, México	1,531	55
Tepeaca, Puebla, México	2,706	25
Torreón, Coahuila, México	998	53
Valles, San Luis Potosí, México	321	54
Yaqui, Sonora, México	1,971	30
Zapotiltic, Jalisco, México	1,535	52
Balcones, TX, United States	2,028	39
Brooksville, FL (North), United States	-	44
Brooksville, FL (South), United States	1,303	32
Clinchfield, GA, United States	639	45
Demopolis, AL, United States	697	42
Knoxville, TN, United States	587	40
Kosmosdale/Louisville, KY, United States	1,307	19
Miami, FL, United States	992	61
Lyons, CO, United States	302	39
Victorville, CA, United States	2,727	54
Wampum, PA, United States	-	54
Rugby, United Kingdom	1,150	20
Ferriby, United Kingdom	426	53
Rudersdorf, Germany	2,032	54
Alcanar, Spain	720	51
Buñol, Spain	375	52
Castillejo, Spain	554	108
Lloseta, Spain	-	52
Morata, Spain	456	87
San Vicente, Spain	505	44
Gador, Spain	7	43
Chelm, Poland	1,413	59
Rudniki, Poland	701	54
Prachovice, Czech Republic	848	65
Kolovoz, Croatia	8	111
Juraj, Croatia	1,041	107
Kajo, Croatia	239	115
Cucuta, Colombia	316	36
Ibagué, Colombia	2,412	27
Calzada Larga, Panama	591	42
Colorado de Abangares, Costa Rica	504	40
Claxton Bay, Trinidad y Tobago	678	66
Rockport, Jamaica	759	68
St. Lucy, Barbados	272	36
San Pedro de Macoris, Dominican Republic	1,950	29
San Rafael del Sur, Nicaragua ⁽²⁾	305	77
Ponce, Puerto Rico	276	29
APO, Philippines	3,319	21
Solid Cement, Philippines	1,563	26
Assiut, Egypt	3,421	33

(1) Approximate.

(2) Leased.

For the aggregate installed cement production capacity of our cement plants by region, see “Item 4—Information on the Company—Business Overview.”

We have insurance coverage for our cement plants, which we believe is adequate and sufficient, in line with industry practices. However, in some instances our insurance coverage may not be sufficient to cover all of our potential unforeseen losses and liabilities. In addition, our insurance coverage may not cover all the risks to which our cement plants may be exposed. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—Our insurance coverage may not cover all the risks to which we may be exposed.”

Regulatory Matters and Legal Proceedings

A description of material regulatory matters and legal proceedings affecting us as of December 31, 2019 is provided below. Materiality is tested at a CEMEX, S.A.B. de C.V. consolidated level. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for more information.

Antitrust Proceedings

Polish Antitrust Investigation

On January 2, 2007, CEMEX Polska Sp. Z.O.O. (“CEMEX Polska”) received a notification from the Polish Competition and Consumer Protection Office (the “Protection Office”) informing it of the formal initiation of an antitrust proceeding against all cement producers in Poland, including CEMEX Polska and another of our indirect subsidiaries in Poland. The notification alleged that there was an agreement between all cement producers in Poland regarding prices and other sales conditions for cement, an agreed division of the market with respect to the sale and production of cement, and the exchange of confidential information, all of which limited competition in the Polish market with respect to the production and sale of cement. On December 9, 2009, the Protection Office delivered to CEMEX Polska its decision against Polish cement producers related to an investigation which covered a period from 1998 to 2006. The decision imposed fines on a number of Polish cement producers, including CEMEX Polska. The fine imposed on CEMEX Polska was Polish Zloty 115.56 million (\$30.4 million as of December 31, 2019, based on an exchange rate of Polish Zloty 3.7973 to \$1.00), which was 10% of CEMEX Polska’s total revenue in 2008. CEMEX Polska disagreed with the decision, denied that it committed the practices alleged by the Protection Office and, therefore, on December 23, 2009, CEMEX Polska filed an appeal before the Polish Court of Competition and Consumer Protection in Warsaw (the “First Instance Court”). After a series of hearings, on December 13, 2013, the First Instance Court issued its judgment in regard to the appeals filed by CEMEX Polska and other cement producers, which were previously combined into a joint appeal. The First Instance Court reduced the penalty imposed on CEMEX Polska to Polish Zloty 93.89 million (\$24.7 million as of December 31, 2019 based on an exchange rate of Polish Zloty 3.7973 to \$1.00), which was equal to 8.125% of CEMEX Polska’s revenue in 2008. On May 8, 2014, CEMEX Polska filed an appeal against the First Instance Court judgment before the Appeals Court in Warsaw. On March 27, 2018, after different hearings, the Appeals Court issued its final judgment reducing the fine imposed upon CEMEX Polska to Polish Zloty 69.4 million (\$18.3 million as of December 31, 2019 based on an exchange rate of Polish Zloty 3.7973 to \$1.00). This fine, which was equal to 6% of CEMEX Polska’s revenue in 2008, was paid. On November 19, 2018, CEMEX Polska filed before the Polish Supreme Court an extraordinary, narrow based cassation appeal against the Appeal Court’s judgment specifically seeking the reduction of the imposed fine. On August 8, 2019, CEMEX Polska was notified that the Polish Supreme Court accepted its cassation appeal, as well as the cassation appeals of the Protection Office and those of other cement producers. As of December 31, 2019, we expect that the final ruling of the Polish Supreme Court on the cassation appeal of CEMEX Polska will be issued at the date of the court hearing or within next 14 days after the hearing scheduled for January 16, 2020. As of December 31, 2019, a final adverse resolution to this matter should not have a material adverse impact on our results of operations, liquidity and financial condition. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for more information regarding the Polish Antitrust Investigation.

Antitrust Investigation in Spain by the CNMC

On September 16 and 17, 2014, the Competition Directorate (*Dirección de Competencia*) of the Spanish National Commission of Markets and Competition (*Comisión Nacional de los Mercados y la Competencia*) (“CNMC”), in the context of an investigation of the Spanish cement, ready-mix concrete and related products industry regarding alleged anticompetitive practices, inspected one of our facilities in Spain. On January 12, 2015, CEMEX España Operaciones, S.L.U. (“CEMEX España Operaciones”) was notified of the initiation by the CNMC of a disciplinary proceeding for alleged prohibited conducts pursuant to Article 1 of the Spanish Competition Law (*Ley 15/2007, de 3 de Julio, de Defensa de la Competencia*). On November 19, 2015, CEMEX España Operaciones was notified that the alleged anticompetitive practices covered the year 2013 for the cement market and the years 2008, 2009, 2012, 2013 and 2014 for the ready-mix market. On March 8, 2016, the Competition Directorate (*Dirección de Competencia*) notified CEMEX España Operaciones of a resolution proposal (*propuesta de resolución*) which considers that the alleged anti-competitive practices were carried out in the markets and years previously indicated. Thereafter, CEMEX España Operaciones submitted allegations rejecting the resolution proposal. On September 8, 2016, CEMEX España Operaciones was notified of a decision issued by the CNMC pursuant to which CEMEX España Operaciones has been required to pay a fine of €5,865,480 (\$6.57

million as of December 31, 2019, based on an exchange rate of €0.8917 to \$1.00). On November 7, 2016, CEMEX España Operaciones filed an appeal before the National Court (*Audiencia Nacional*) against the CNMC's decision. The National Court has been requested to suspend the sanction, and, by a resolution issued on December 22, 2016, the National Court granted the requested suspension, subject to the issuance of a bank guarantee for the principal amount of the sanction. The CNMC has been notified of both the interposition of the appeal and the request for suspension. As of December 31, 2019, a final adverse resolution to this matter should not have a material adverse impact on our results of operations, liquidity and financial condition.

Antitrust Case in Georgia and South Carolina

On July 24, 2017, two ready-mix concrete producers filed a lawsuit in a U.S. Federal Court in the state of Georgia against certain subsidiaries of CEMEX in the U.S. and other companies alleging customer allocation and price fixing in both the ready-mix concrete and cement markets in the coastal Georgia and southeastern coastal South Carolina areas. As CEMEX does not participate in the ready-mix concrete market in these areas, the lawsuit does not allege any improper actions by CEMEX with respect to ready-mix concrete. On October 2, 2017, we filed a motion to dismiss the lawsuit. This motion to dismiss was denied on August 21, 2018, and, as a result, CEMEX will continue to defend the allegations in the ongoing proceedings with its answer filed at the end of October, 2018. As of December 31, 2019, at this stage of the lawsuit, while we cannot assess with certainty the likelihood of an adverse result in this lawsuit, we believe a final adverse resolution to this lawsuit is not probable; however, if adversely resolved, we believe such adverse resolution should not have a material adverse impact on our results of operations, liquidity and financial condition. See "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings" for more information regarding this antitrust investigation.

United States and its Territories Department of Justice Grand Jury Subpoena

Certain of our subsidiaries in the U.S. were notified of a grand jury subpoena dated March 29, 2018 issued by the DOJ in connection with an investigation of possible antitrust law violations in connection with our sales (and related sales practices) of grey portland cement and slag in the U.S. and its territories. This subpoena does not mean that the DOJ has concluded that we or any of our affiliates or employees have violated the law. Rather, the DOJ issued this grand jury subpoena to gather facts necessary to make an informed decision about whether violations of U.S. law have occurred. As of December 31, 2019, we are cooperating with the DOJ and intend to comply with the subpoena. As of December 31, 2019, given the status of the investigation, we are not able to assess if this investigation will lead to any fines, penalties or remedies against us, or if such fines, penalties or remedies, if any, would have a material adverse effect on our results of operations, liquidity or financial condition.

Antitrust Investigation in Panama

On June 12, 2018, the Authority for Consumer Protection and Competition Defense of Panama (the "Panama Authority") carried out a discovery procedure within the context of an administrative investigation ex officio against CEMEX and other competitors for the alleged commission of absolute and relative monopolistic practices in relation to the gray concrete and the ready-mix concrete markets. During the administrative investigation, the Panama Authority considered there were elements that serve as a basis for considering the possible existence of monopolistic or anticompetitive practices, consisting of (i) price fixing and/or production restriction in the gray cement market sold to ready-mix concrete manufacturing companies in Panama; and (ii) unilateral and/or joint predatory acts and/or cross subsidies in the ready-mix concrete market. On October 16, 2018, the Panama Authority notified us of a new information request in order to continue their investigation. On December 11 and 12, 2018, two executives of CEMEX rendered an affidavit, and on February 14, 2019, CEMEX provided the rest of the information and documentation that was requested by the Panama Authority. This administrative investigation does not mean that the Panama Authority has concluded that we or any of our affiliates or employees in Panama have violated the law, rather, the Panama Authority is gathering facts necessary to make an informed decision about whether violations of Panamanian law have occurred. As of December 31, 2019, we are cooperating with the Panama Authority with regard to this investigation. As of December 31, 2019, given the status of the investigation, we are not able to assess whether this investigation will lead to any fines, penalties or remedies against us, or if such fines, penalties or remedies, if any, would have a material adverse effect on our results of operations, liquidity or financial condition.

Antitrust Investigation in Colombia

On September 5, 2013, CEMEX Colombia was notified of Resolution No. 49141 dated August 21, 2013, issued by the Colombian Superintendency of Industry and Commerce (*Superintendencia de Industria y Comercio*) ("SIC") pursuant to which the SIC opened an investigation and issued a statement of objections (*pliego de cargos*) against five cement companies and 14 directors of those companies, including CEMEX Colombia, for alleged anti-competitive practices. The investigated parties were accused of breaching: (i) Article 1 of Law 155 of 1959, which prohibits any kind of practice, procedure or system designed to limit free competition and determining or maintaining unfair prices; (ii) numeral 1 of Article 47 of Decree 2153 of 1992, which prohibits any agreements designed to directly or indirectly fix prices; and (iii) numeral 3 of Article 47 of Decree 2153 of 1992, which prohibits any market sharing agreements between producers or between distributors. Additionally, 14 executives, including two former executives

of CEMEX Colombia, were also being investigated for breaching paragraph 16 of Article 4 of Decree 2153 of 1992, as amended by Article 26 of Law 1340 of 2009, which provides that the SIC may investigate and sanction any individual who collaborates, facilitates, authorizes, executes or tolerates behavior that violates free competition rules. Although the SIC announced three charges, only two of them were under investigation, namely, price fixing agreements and market sharing agreements.

On December 11, 2017, the SIC's Chief Superintendent decided to impose a sanction against CEMEX Colombia, two other cement companies and six natural persons, for entering into an agreement to fix grey cement prices in Colombia. The fines imposed upon CEMEX Colombia, which were paid on January 5, 2018, amounted to \$73.77 billion Colombian Pesos (\$22.51 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). By means of the same resolution dated December 11, 2017, the Chief Superintendent determined there was not sufficient material evidence and ordered to close the investigation in relation to the other conducts alleged against CEMEX Colombia pursuant to Resolution No. 49141 dated August 21, 2013.

CEMEX Colombia decided not to file a reconsideration request; and, instead, filed an annulment and reestablishment of right claim (*acción de nulidad y restablecimiento de derecho*) before the Administrative Court (*Tribunal Contencioso Administrativo*) on June 7, 2018 requesting that the charges brought forth by the SIC are annulled and the restitution of the fine is paid, with any adjustments provided for by Colombian law. This claim could take up to six years to be resolved. As of December 31, 2019, we are not able to assess the likelihood of an adverse result of this matter, but if such matter is resolved adversely to us, such adverse resolution should not have a material adverse impact on our results of operations, liquidity and financial condition.

Environmental Matters

In the ordinary course of business, we are subject to a broad range of environmental laws and regulations in each of the jurisdictions in which we operate. These laws and regulations impose increasingly stringent environmental protection standards regarding, among other things, air emissions, wastewater discharges, the use and handling of hazardous waste or materials, waste disposal practices and the remediation of environmental damage or contamination. These laws and regulations expose us to the risk of substantial environmental costs and liabilities, including liabilities associated with divested assets and past activities and, in some cases, the acts and omissions of the previous owners or operators of a property or facility that we own or operate. Furthermore, in some jurisdictions, certain environmental laws and regulations impose liability without regard to fault or the legality of the original activity at the time of the actions giving rise to liability. To prevent, control and remediate environmental problems and maintain compliance with regulatory requirements, in line with our global initiatives on environmental management, we maintain an environmental policy designed to monitor and control environmental matters. Our environmental policies require that each of our subsidiaries respect and comply with local laws and meet our own internal standards to minimize the use of non-renewable resources and the generation of hazardous and other wastes. We use processes that are designed to reduce the impact of our operations on the environment throughout all the production stages in all our operations worldwide. In addition, during 2012 we started the implementation of a global EMS at our operating sites that provides a framework to facilitate the consistent and systematic implementation of practical, risk-based environmental management at all sites. As of December 31, 2019, we expect to finish the implementation of the EMS at all of our operating sites by December 31, 2020. It will be used to support sites and businesses across CEMEX globally to document, maintain and continuously improve our environmental performance. We believe that, as of December 31, 2019, a substantial part of our operations already comply with all material environmental laws applicable to us, as the majority of our cement plants already have some kind of EMS (most of which are ISO 14000 certified by the ISO), with the remaining implementation efforts directed mainly towards our aggregates and ready-mix plants.

We regularly incur capital expenditures that have an environmental component or that are impacted by environmental regulations. However, we do not keep separate accounts for such mixed capital and environmental expenditures. Environmental expenditures that extend the life, increase the capacity, improve the safety or efficiency of assets or are incurred to mitigate or prevent future environmental contamination may be capitalized. Other environmental costs are expensed when incurred. For the years ended December 31, 2016, 2017 and 2018 our sustainability capital expenditures (including our environmental expenditures and investments in alternative fuels and cementitious materials) were \$79.9 million, \$83.14 million and \$83 million, respectively.

The following is a discussion of environmental regulations and related matters in our major markets as of December 31, 2019.

Mexico

We were one of the first industrial groups in Mexico to sign an agreement with the Mexican Ministry of Environment and Natural Resources (*Secretaría del Medio Ambiente y Recursos Naturales*) ("SEMARNAT") to carry out voluntary environmental audits in our 15 Mexican cement plants under a government-run program. In 2001, the Mexican Environmental Protection Agency (*Procuraduría Federal de Protección al Ambiente*), which is part of SEMARNAT, completed the audit of our cement plants and

awarded each of them a Clean Industry Certificate (*Certificado de Industria Limpia*) (“CIC”) certifying that our cement plants are in full compliance with applicable environmental laws. The CICs are subject to renewal every two years. As of December 31, 2019, our operating cement plants in Mexico had CICs or were in the process of renewing them.

For almost three decades, the technology for co-processing used alternative fuels into an energy source has been employed in our cement plants in Mexico. By the end of 2019, all our operating cement plants in Mexico were using alternative fuels. Overall, approximately 26.5% of the total fuel used in our operating cement plants in Mexico during 2019 was comprised of alternative fuels. This information is available on a yearly basis.

In 2017, 2018 and 2019 our operations in Mexico invested \$16.15 million, \$8.76 million and \$11.49 million, respectively, in the acquisition of environmental protection equipment and the implementation of the ISO 14001:2004 environmental management standards of ISO, for a total of \$148.9 million since 1999. The audit to obtain the renewal of the ISO 14001:2015 certification took place during 2019 and our operating cement plants in Mexico obtained the renewal of the ISO 14001:2015 certification for environmental management systems, which is valid until February 2021.

On June 6, 2012 the General Law on Climate Change (*Ley General de Cambio Climático*) (the “Climate Change Law”) was published in the Mexican Official Gazette. The Climate Change Law establishes a legal framework to regulate policies for climate change mitigation and adaptation. Important provisions of the Climate Change Law require the development of secondary legislation, and depend on the publication of subsequent implementing regulations. For instance, the Climate Change Law provides, among other things, for (i) the elaboration of a registry of the emissions that are generated by fixed sources, (ii) companies to report their emissions, if required, and (iii) the application of fines to those companies that fail to report or that report false information. In this regard, on October 29, 2014, the Regulations to the General Law on Climate Change Regarding the National Registry of Emissions (*Reglamento de la Ley General de Cambio Climático en Materia del Registro Nacional de Emisiones*) (the “Regulations”) became effective. As of December 31, 2019, CEMEX has been granted the positive dictum on GHG emission reporting by the Mexican environmental agency for all its required plants. The purpose of the Regulations is to govern the Climate Change Law regarding the National Registry of Emissions, identifying the sectors and subsectors, which include among others, the cement industry, that must file the corresponding reports before the National Registry of Emissions. We had previously reported our direct and indirect CO₂ emissions to SEMARNAT under a voluntary scheme. The Climate Change Law also allows for the establishment of specific greenhouse gas reduction targets in accordance with the respective contribution of each economic sector to the national greenhouse gas emissions. As of December 31, 2019, we are not able to determine the impact that any measures related to the Regulations and Climate Change Law may have on our operations in Mexico. Although the Climate Change Law does not establish a program for emissions trading, it does vest on the Mexican federal government the power to create, authorize and regulate such a scheme, which may be voluntary or binding. We are closely observing the development of implementing regulations and, as of December 31, 2019, we cannot estimate the impact, if any, that any measures related to this may have upon our operations in Mexico. A Special Tax on Production and Services (*Impuesto Especial Sobre Producción y Servicios*) on the sale and import of fossil fuels was included in the tax reform that became effective on January 1, 2014. During the year ended December 31, 2019, pet coke, a primary fuel widely used in our kilns in Mexico was taxed at a rate of Ps19.15 (\$1.01 as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) per ton.

On August 12, 2014, a package of energy reform legislation became law in Mexico. The then newly enacted energy reform legislation, which included nine new laws, as well as amendments to existing laws, implemented the December 2013 constitutional energy reform and established a new legal framework for Mexico’s energy industry. One of the new laws that was enacted is the Electric Industry Law (*Ley de la Industria Eléctrica*) (the “Electric Industry Law”), which establishes a legal framework for electricity-related activities in Mexico, which has the effect of structurally changing the national electric industry. On October 31, 2014, certain rules and regulations related to the energy reform legislation, including the regulations of the Electric Industry Law, were published. As part of the Electric Industry Law, a system for tradable clean energy certificates was created and certain clean energy procurement obligations were imposed on consumers. The clean energy procurement obligations for 2019 to 2022 were announced at 5.8%, 7.4%, 10.9% and 13.9%, respectively, and this requirement is expected to increase in subsequent years. CEMEX’s operations in Mexico have ongoing commitments to procure power from renewable projects operating under the “self-supply” framework of the former Electric Energy Public Service Law, and the energy supplied under these contracts is exempted from the clean energy obligation. Nonetheless, since 2018, we are required to acquire clean energy certificates to comply with the clean energy obligations for the fraction of energy supply that does not come from clean generators. Over time, according to the penalty levels set by the Mexican Energy Regulatory Commission (*Comisión Reguladora de Energía*), non-compliance with the clean energy procurement obligations could have a material adverse impact on our business or operations in Mexico, but as of December 31, 2019, we are not able to assess if such impact would in turn have a material adverse impact on our liquidity and financial condition.

On September 8, 2015, the Electricity Market Rules (*Bases del Mercado Eléctrico*) (the “Rules”) were published in the Federal Official Gazette and became effective on September 9, 2015. The Rules, which are an important step forward in the implementation of the reforms enacted regarding Mexico’s energy industry, contain the design and operation principles of the different components of the wholesale electricity market (the “Electricity Market”). As of December 31, 2019, we are authorized

participants in the Electricity Market. Additionally, CEMEX participated as a buyer in the third long-term power auction organized in 2017 by CENACE, the independent national electric system operator, and has been allocated a 20-year contract for 16,129 clean energy certificates per year for compliance starting in 2020 and 14.9 GWh/a of electric power.

During 2016, a new electrical standards code was issued in Mexico (Código de Red) (the “Code”). The Code establishes new standards for electrical operation that will be enforced beginning in 2019 against consumers connected to the national grid. As of December 31, 2019, we estimate that the implementation of the Code will require investments across our operating assets in Mexico, which we expect to amount to \$6 million.

On October 2, 2019, the SEMARNAT published the basis for a trial emissions trading program (*programa de prueba del sistema de comercio de emisiones*). The trial program sets forth an initial 24-month pilot phase for the adoption of the program, beginning January 1, 2020, followed by a 12-month period to transition to the operative stage, which ends on December 31, 2022. The trial program will not have any economic consequences for the participants; but after December 2022, SEMARNAT will establish emission caps per industrial sector in line with Mexico’s greenhouse gas emissions reduction targets. We will have to meet those caps through mitigation measures or acquire emission reduction certificates in the proposed market. We cannot anticipate the impact that this new cap-and-trade scheme and the mandatory emissions caps will have on our operations in Mexico.

United States

Our operating subsidiaries in the U.S. are subject to a wide range of U.S. federal, state and local laws, regulations and ordinances dealing with the protection of human health and the environment that are strictly enforced and can lead to significant monetary penalties for noncompliance. These laws and regulations expose us to the risk of substantial environmental costs and liabilities, including liabilities associated with divested assets and past activities and, in some cases, the acts and omissions of the previous owners or operators of a property or facility. These laws regulate, among other things, water discharges, noise, and air emissions, including dust, as well as the handling, use and disposal of hazardous and non-hazardous waste materials. Certain laws also create a shared liability scheme under which parties are held responsible for the cost of cleaning up releases to the environment of designated hazardous substances. We therefore may have to conduct environmental remediation associated with the disposal or release of hazardous substances at our various operating facilities, or at sites in the U.S. to which we sent hazardous waste for disposal. As of December 31, 2019, we believe that our current procedures and practices for handling and managing materials are generally consistent with industry standards and legal and regulatory requirements, and also believe that we take appropriate precautions designed to protect employees and others from harmful exposure to hazardous materials.

As of December 31, 2019, CEMEX, Inc. and its subsidiaries had accrued liabilities specifically relating to environmental matters in the aggregate amount of \$63.3 million. The environmental matters relate to (i) the disposal of various materials, in accordance with past industry practice, that might be categorized as hazardous substances or waste and (ii) the cleanup of hazardous substances or waste at sites used or operated by CEMEX, Inc. and its subsidiaries including discontinued operations, either individually or jointly with other parties. Most of the proceedings are in the preliminary stages, and a final resolution might take several years. For purposes of recording the provision, CEMEX, Inc. and its subsidiaries consider that it is probable that a liability has been incurred and the amount of the liability is reasonably estimable, whether or not claims have been asserted, and without giving effect to any possible future recoveries. Based on information developed as of December 31, 2019, CEMEX, Inc. does not believe it will be required to spend significant sums on these matters, in excess of the amounts previously recorded. The ultimate cost that might be incurred to resolve these environmental issues cannot be assured until all environmental studies, investigations, remediation work, and negotiations with, or litigation against, potential sources of recovery have been completed.

In 2007, the EPA launched a CAA enforcement initiative against the U.S. cement industry. The primary goal of the initiative is to assess the industry’s historic compliance with the CAA’s New Source Review program and to reduce emissions from the industry through the installation of add-on controls. We have actively engaged with the EPA on its investigations, which involved multiple of our facilities in the U.S., and have entered into four settlements involving a total of \$6.1 million in civil penalties and a commitment to incur certain capital expenditures for pollution control equipment at our Victorville, California; Fairborn, Ohio (divested on February 10, 2017); Lyons, Colorado; Knoxville, Tennessee; Louisville, Kentucky (divestment of this installation is expected to occur around the second quarter of 2020); Demopolis, Alabama; Odessa, Texas (divested on November 18, 2016); and New Braunfels, Texas plants. Based on our past experience with such matters and currently available information, as of December 31, 2019, we believe any further proceedings should not have a material adverse impact on our results of operations, liquidity and financial condition.

In 2002, CEMEX Construction Materials Florida, LLC (formerly Rinker Materials of Florida, Inc.) (“CEMEX Florida”), a subsidiary of CEMEX, Inc., was granted a federal quarry permit and was the beneficiary of another federal quarry permit for the Lake Belt area in South Florida. The permit held by CEMEX Florida covered CEMEX Florida’s SCL and FEC quarries. CEMEX Florida’s Kendall Krome quarry is operated under the permit of which it was a beneficiary. The FEC quarry is the largest of CEMEX Florida’s quarries measured by volume of aggregates mined and sold. CEMEX Florida’s Miami cement mill is located at the SCL quarry and is

supplied by that quarry, while the FEC and Kendall Krome quarries have supplied aggregates to CEMEX and third-party users. In response to litigation brought by environmental groups concerning the manner in which the federal quarry permits were granted, in January 2009, the U.S. District Court for the Southern District of Florida ordered the withdrawal of the federal quarry permits for CEMEX Florida's SCL, FEC and Kendall Krome quarries. The judge ruled that there were deficiencies in the procedures and analysis undertaken by the Army Corps of Engineers ("Corps") in connection with the issuance of the permits. Upon appeal, on January 21, 2010, the Eleventh Circuit Court of Appeals affirmed the district court's ruling withdrawing the federal quarry permits for the three CEMEX Florida quarries as well as other third-party federal quarry permits subject to the litigation. On January 29, 2010, the Corps completed a multi-year review commenced as a result of this litigation and issued a Record of Decision ("ROD") supporting the issuance of new federal quarry permits for the FEC and SCL quarries. Excavation of new aggregates was stopped at the FEC and SCL quarries from January 20, 2009 until new permits were issued. The FEC permit was issued on February 3, 2010, and the SCL permit on February 18, 2010. The ROD also indicated that a number of potential environmental impacts must be addressed at the wetlands located at the Kendall Krome site before a new federal quarry permit may be issued for mining at that quarry. As of December 31, 2019, it is unclear how long it will take to fully address the Corps' concerns regarding mining in the Kendall Krome wetlands. While no new aggregates will be quarried from wetland areas at Kendall Krome pending the resolution of the potential environmental issues, the FEC and SCL quarries will continue to operate. If CEMEX Florida is unable to maintain the new Lake Belt permits, which require various conditions to be met to extend the areas covered by the permits, to the extent available, CEMEX Florida would need to source aggregates from other locations in Florida or import aggregates. This would likely affect operating income from our Florida operations. As of December 31, 2019, any adverse impacts on the Florida economy arising from the cessation or significant restriction of quarrying operations in the Lake Belt area could also have a material adverse impact on our results of operations, liquidity and financial condition.

In June 2010, the EPA proposed regulating Coal Combustion Residuals ("CCRs") generated by electric utilities and independent power producers as a hazardous or special waste under the United States Resource Conservation and Recovery Act. In the U.S., we use CCRs as a raw material in our cement manufacturing process, as well as a supplemental cementitious material in some of our ready-mix concrete products. On December 19, 2014, the EPA issued a final rule on the regulation of CCRs (the "Final Rule"). As of December 31, 2019, we believe that the effects of the Final Rule should not have a material adverse impact on our results of operations, liquidity and financial condition.

Our operations in the U.S. are subject to a number of federal and state laws and regulations addressing climate change. On the federal side, EPA has promulgated a series of regulations pertaining to emissions of GHGs from industrial sources. EPA issued the Mandatory Reporting of GHGs Rule, effective December 29, 2009, which requires certain covered sectors, including cement manufacturing, with GHG emissions above an established threshold to inventory and report their GHG emissions annually on a facility-by-facility basis. In 2010, EPA issued a final rule that establishes GHG thresholds for the New Source Review Prevention of Significant Deterioration ("PSD") and Title V Operating Permit programs ("Title V"). The rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain PSD and Title V permits for GHG emissions. Cement production facilities are included within the categories of facilities required to obtain permits, provided that their GHG emissions exceed the thresholds in the tailoring rule. The PSD program requires new major sources of regulated pollutants and major modifications at existing major sources to secure pre-construction permits that establish, among other things, limits on pollutants based on Best Available Control Technology ("BACT").

According to EPA's rules, stationary sources, such as cement manufacturing, which are already regulated under the PSD program for non-GHG pollutants, need to apply for a PSD permit for any GHG emissions increases above 75,000 tons/year of CO₂ equivalent ("CO₂E"). Therefore, new cement plants and existing plants undergoing modification which are major sources for non-GHG pollutants regulated under the CAA need to acquire a PSD permit for construction or modification activities that increase CO₂E by 75,000 or more tons/year, and would have to determine and install BACT controls for those emissions. Furthermore, any new source that emits 100,000 tons/year of CO₂E or any existing source that emits 100,000 tons/year of CO₂E and undergoes modifications that would increase CO₂E emissions by at least 75,000 tons/year, must comply with PSD obligations. Complying with these PSD permitting requirements can involve significant costs and delay. As of December 31, 2019, the costs of future GHG-related regulation of our facilities through these efforts or others could have a material economic impact on our U.S. operations and the U.S. cement manufacturing industry, which in turn could have a material adverse impact in our results of operations, liquidity and financial condition.

With respect to state efforts to address climate change, in 2006, the State of California adopted the Global Warming Solutions Act (Assembly Bill 32 or "AB32") setting into law a goal to reduce the State's CO₂ emissions to 1990 levels by 2020. As part of the measures derived from AB32, the California Air Resources Board ("CARB") developed a cap-and-trade program, enforced from 2013, that covers most industrial sources of greenhouse gas emissions in the State, including cement production facilities. The program involves allocating a number of allowances free of charge to covered installations, which must subsequently surrender back to the regulator a number of allowances or qualified offset credits matching their verified emissions during the compliance period. Based on the free allowances received, our Victorville cement plant met all of its compliance obligations for the second compliance

period (2015-2017) without a material impact on its operating costs; and, as of December 31, 2019, is expected to meet all of its compliance obligations for the third compliance period (2018-2020) without a material impact on its operating costs. Furthermore, as of December 31, 2019, for our operations in California, we are actively pursuing initiatives to substitute fossil fuels for lower carbon fuels, improve our energy efficiency and utilize renewable power in an effort to economically reduce our direct and indirect GHG emission intensities. However, even with these ongoing efforts and the expected distribution of free allowances, as of December 31, 2019, the measures corresponding to future compliance periods of AB32, which may eventually require us to purchase emission allowances at increased prices due to their reduced availability, and the resulting overall costs of complying with a cap-and-trade program, could have an impact on our operations in California, which in turn could have an adverse impact on our results of operations, liquidity and financial condition.

In 2007, CARB approved a regulation that requires California equipment owners/operators to reduce diesel particulate and nitrogen oxide emissions from in-use off-road diesel equipment and to meet progressively more restrictive emission targets. In 2008, CARB approved a similar regulation for in-use on-road diesel equipment. The emission targets requires us to retrofit our California-based equipment with diesel emission control devices or replace equipment with new engine technology in accordance with certain deadlines. As of December 31, 2019, compliance with the CARB regulations has resulted in equipment related expenses or capital investments, including overhauling engines and purchases of new equipment directly related to the CARB regulations, in excess of \$32.45 million. As of December 31, 2019, we estimate that we may continue to incur substantial expenditures to comply with these requirements.

Europe

General overview of EU industrial regulation

As of December 31, 2019, the EU legal system also operates differently compared to federal systems. The EU legal regime, referred to as supra-national law, sits above the legal systems of the different EU member states (“Member States”), which retain their independence subject to tight oversight from EU institutions, especially the Court of Justice, the European Commission, and the European Parliament. As such, EU law operates (in its many fields of application, including industrial regulation) in order to control and authoritatively interpret the legislation and implementation of law (EU and domestic) in those Member States. One of the key manifestations of this supra-national control are the inter-related doctrines of the supremacy of EU law and of conforming interpretation. Essentially, where an area of legal control in a Member State has its origin in an EU Directive, the Member States must transpose the Directive fully and effectively into their domestic law and every organ of the Member State, including its regulators and its Courts, must interpret (and if necessary change) domestic law in order to conform with the objectives and the letter of the relevant EU Directive. This is of relevance to the cement sector since almost every aspect of its environmental regulation has its origins in EU legislation.

In the EU, the cement sector is subject to a range of environmental laws at EU and national Member States levels. These laws can be very broadly categorized as (1) primary and direct controls placed upon their main operational activities and (2) more general legal regimes which protect different aspects of the environment across many sectors.

The primary examples of the first kind of control are the various laws governing the specific operational activities of the sector, through stringent permitting and emissions controls, which are further explained below; examples of the second, more general, legal controls are the EU Water Framework Directive (2000/60/EC) and the EU Waste Framework Directive (2008/98/EC) which impose various obligations in relation to protection of the surface and underground water environments and the recovery, disposal and overall management of waste. In practice, even these more general laws indirectly impact our industry through permitting emissions control systems.

EU Industrial Permits and Emissions Controls

In the EU, the primary legal environmental controls applied to cement plants have been those EU Directives which control operational activities and emissions from those activities. These controls were primarily derived from two EU Directives: (1) the so-called “IPPC Directive” (as described below) and (2) the Incineration Directive (as defined below). On January 6, 2011, the Industrial Emissions Directive (2010/75/EU) (“IED”) came into force. The IED recasts seven pieces of existing legislation into a single coherent legislative instrument, including the IPPC Directive and the Incineration Directive, both of which it repeals. With some exceptions, the IED retains the essential substance of the earlier Directives.

The primary EU legislative control over the sector (until the transition between 2010-2014 of the IED) was the Directive on Integrated Pollution Prevention and Control (2008/1/EC) (“IPPC Directive”), which was repealed by the IED. The 2008 version of this Directive was in fact an update and consolidation of an earlier Directive first promulgated in 1996. Since 1996, these IPPC Directives have adopted an integrated approach to regulation of various sectors of industrial plant, including cement, by taking into account and controlling/regulating the whole environmental performance of the plant. They required cement works to have a permit which, until recently in England and still in some other states, continues to be referred to as an “IPPC Permit.” These permits contain emission limit values and other conditions based on the application of a legal and technical concept called “best available techniques” (“BAT”).

The concept of BAT is central to the system, and effectively imposes a legal obligation on plant operators to use and apply the best available techniques (as they develop from time to time) in order to prevent or, where this was not practicable, minimize emissions of pollutants likely to be emitted in significant quantities from the plant to air, water or land. Emission limit values, parameters or equivalent technical measures must be based on the best available techniques, without prescribing the use of one specific technique or technology and taking into consideration the technical characteristics of the installation concerned, its geographical location and local environmental conditions. In all cases the permit conditions must ensure a high level of protection for the environment as a whole.

Permit conditions also had to address energy efficiency, waste minimization, prevention of accidental emissions and site restoration. To assist the permitting authorities and companies in determining the BAT, the European Commission organized an exchange of information between experts from the Member States, industry and environmental organizations. This resulted in the adoption and publication by the European Commission of BAT Reference Documents (“BREFs”) for the industry sectors covered by the IPPC Directive. A key element of the BREFs were the conclusions on BAT (“BAT conclusions”) which were used as a reference for setting permit conditions. All of these IPPC Directive requirements have been followed through (and in some respects tightened) by the IED.

The second earlier Directive, which was applied in direct control of cement operations, was the EU Waste Incineration Directive (2000/76/EC) (“Incineration Directive”) which regulated those parts of the cement operation that used recovered waste materials as substitute fuels in cement kilns. Its aim was to prevent or limit, as far as practicable, negative effects on the environment, in particular pollution by emissions in air, soil, surface water and groundwater and the resulting risks to human health, from incineration and co-incineration plants.

Cement and limestone kilns as a primary or secondary source of fuel fall within the definition of “co-incineration plants.” The Incineration Directive sought to achieve its aim by setting and maintaining stringent operational conditions and technical requirements, as well as emission limit values for a range of pollutants including dust, nitrogen oxides, sulfur dioxide, hydrogen chloride, heavy metals and dioxins. Again, the essential substance of the Incineration Directive has been followed through into the IED, which repealed it together with the IPPC Directive.

The IED has applied to new industrial installations since January 7, 2013 and to existing industrial installations (other than large combustion plants) since January 7, 2014. Under the IED, operators of industrial installations, including cement plants, are required to obtain an integrated permit from the relevant permitting authority in the Member States. As with the IPPC Directive, permit conditions, including emission limit values, must be based on BAT and, as of December 31, 2019, a total of 16 BREFs of the existing 32 are being rewritten or revised for the IED. However, there is an important difference between the IPPC Directive and the IED. Under the IPPC Directive, the BREFs were considered as guidance only. This is not the case under the IED. Where BAT conclusions specify emission levels, permitting authorities are required to set emission limit values that do not exceed these levels. They may derogate from this requirement only where the costs associated with the achievement of the emission levels associated with the BAT disproportionately outweigh the environmental benefits due to the geographical location, the local environmental conditions or the technical characteristics of the installation concerned. The permitting authorities must document the reasons for the derogation from the emission limit values in the permit, including the result of the cost-benefit assessment. In April 2013, pursuant to European Commission Decision No. 2013/163/EU, the European Commission published new BAT conclusions under the IED for production of cement, lime and magnesium oxide, together with specific emission levels. This document sets out an extensive list of technical requirements for most aspects of the cement manufacturing process in the EU, with a view to prevention and minimization of all polluting emissions. It is a new requirement under the IED that permitting authorities must review and, if necessary, update permit conditions within four years of the European Commission publishing decisions on BAT conclusions for a particular activity. The European Commission describes review of the BREFs as a continuing process due to ongoing technological advances so updates may be expected. As of December 31, 2019, this has the potential to require our operations in Europe to be adapted to conform to the latest BAT, which in turn could impact our operations.

As of December 31, 2019, we believe that our operations in Member States will be impacted given the change in regulatory approach heralded by the legislation its ongoing revision and the fact that it will be key to the permitting of the cement industry in the EU. As of December 31, 2019, we are not able to assess the degree of impact the requirements that come into effect under the IED will have on our operations in Member States.

Croatia

As a result of a lawsuit filed by the city of Kastela against the Ministry of Environment of the Republic of Croatia, the IPPC Permit issued on behalf of CEMEX Hrvatska d.d. (“CEMEX Croatia”) by the Ministry of Environment was revoked on July 6, 2015 by a final and non-appealable judgment of a first instance court in Split, Croatia. The judgment required the Ministry of Environment to repeat the procedure for the issuance of a new IPPC Permit. On November 23, 2015, the Ministry of Environment issued a new IPPC Permit, which has been challenged by the city of Kastela. On January 7, 2016, CEMEX Croatia received the claim and replied to it in due time. The Ministry of Environment also replied to the claim. At a court hearing held on September 14, 2016, the litigation proceedings concluded. On November 18, 2016, the administrative court in Split, Croatia notified CEMEX Croatia that the decision regarding the IPPC Permit was annulled and the matter was remanded to the Ministry of Environment in order to repeat the procedure. On December 2, 2016, CEMEX Croatia and the Ministry of Environment filed an appeal against such judgment. Regarding the aforementioned appeal, on February 6, 2019, the High Administrative Court ruled in favor of CEMEX Croatia. The Court decided (i) to overrule the annulment of IPPC Permit and (ii) to reject the claim of the city of Kastela. The High Administrative Court’s decision is final. As of December 31, 2019, we do not expect our operations, liquidity and financial condition will suffer materially due to this matter.

In addition, in accordance with Article 21(3) of the IED, within four years of BAT conclusion publications, the competent authority is to reconsider and, if necessary, update all permit conditions and ensure that the installation complies with such permit conditions. Accordingly, on January 3, 2017, the Ministry of Environment invited CEMEX Croatia to submit relevant expert opinions in order to update the existing permit conditions and ensure compliance with permit conditions. On March 20, 2017, CEMEX Croatia submitted expert opinions to the Ministry of Environment. The hearing to determine whether the installation is in compliance with all permit conditions was opened to the public by the Ministry of Environment on June 29, 2018 and was completed 30 days later. If the installation is determined to be in compliance, a permit would be issued within approximately six months of completion of such hearing. Regarding concession permits, there was additional documentation included under water usage in Sy. Jurai and Sy. Kajo plants. The Croatian Water Management had additional requirements which included a detailed calculation of water flows, water consumption and discharges in plants. On September 6, 2019, a draft of the IPPC Permit was announced on the web site of the Ministry of Environment, however, there is a public insight period that lasts 30 days in which any interested member of the public can provide opinions and propose amendments to such permit. The IPPC Permit was issued on December 3, 2019, and such issuance completed the permit process harmonization with BAT from November 2015. The IPPC Permit will be final, should it not be contested before the court within the contestation period prescribed by the local environmental permit regulation and court procedure.

Furthermore, through the issuance of a new permit based on an amendment to the conditions of the IPPC Permit, the main environmental license for CEMEX Croatia will become permanent, and any future changes will be made through an amendment process within the existing IPPC Permit. Therefore, CEMEX Croatia will no longer be required to go through the process of issuing a new IPPC Permit.

EU Emissions Trading

In 1997, as part of the United Nations Framework Convention on Climate Change, the Kyoto Protocol was adopted to limit and reduce GHG emissions. The Kyoto Protocol set legally binding emission reduction targets for 37 industrialized countries and the EU. Under the Kyoto Protocol, industrialized countries agreed to reduce their collective GHG emissions by 5% against 1990 levels over the five-year period 2008-2012; future mandatory targets were expected to be established for commitment periods after 2012. To compensate for the sting of binding targets, the Kyoto Protocol allows three “flexibility” mechanisms to be used by parties in meeting their emission limitation commitments: the Clean Development Mechanism (“CDM”), Joint Implementation (“JI”) and International Emissions Trading.

In 2012, at the United Nations Climate Change Conference in Doha, Qatar, the Doha Amendment to the Kyoto Protocol was adopted. Certain parties, including the United Kingdom and the EU, committed to reduce GHG emissions by at least 18% below 1990 levels in the eight-year period from 2013 to 2020.

Our operations in the United Kingdom, Spain, Germany, Poland, Croatia (since 2013) and Czech Republic, are subject to binding caps on CO₂ emissions imposed pursuant to the EU’s emissions trading system (“ETS”) that was established by Directive 2003/87/EC to implement the Kyoto Protocol. Under the ETS, a cap or limit is set on the total amount of CO₂ emissions that can be emitted by the power plants, energy-intensive installations (including cement plants) and commercial airlines that are covered by the system. The cap is reduced over time so that the total amount of emissions will decrease. Within the cap, companies receive or buy emission allowances. These allowances are tradable so as to enable companies that manage to reduce their emissions to sell their excess allowances to companies that are not reaching their emissions objectives. After each year, a company must surrender enough carbon allowances to cover all its emissions. In general, failure to meet the emissions caps is subject to significant monetary penalties of €100 for each ton of CO₂ equivalent emitted by the installation for which the operator has not surrendered allowances.

In addition to carbon allowances, the ETS also allows the use of Kyoto Protocol units: the Emission Reduction Unit, representing a metric ton of carbon saved by a project under the JI mechanism, and the Certified Emission Reduction unit (“CERs”) under the CDM. The ETS recognizes these units as equivalent to its carbon allowances and allows them to be used by companies for compliance up to a certain limit to offset their carbon emissions in the EU. As of December 31, 2019, we have registered 19 CDM projects with a total potential to, according to our estimates, reduce approximately 2.44 million tons of CO₂e emissions per year. The corresponding CERs from these projects could be used for internal purposes or sold to third parties. Croatia, as a late entrant because of when it joined the EU, has a right to use only 4.5% of its verified carbon emissions in relation to other EU ETS members which have a right to use up to 11% of their free allocation of EU allowances.

The ETS consists of three trading phases: Phase I which lasted from January 1, 2005 to December 31, 2007, Phase II, which lasted from January 1, 2007 to December 31, 2012, and was intended to meet commitments under the Kyoto First Commitment Period, and Phase III which commenced on January 1, 2013 and will end on December 31, 2020. For Phase III of the ETS, there is also a cap on nitrous oxide and perfluorocarbons emissions. Prior to the commencement of each of ETS Phases I and II, each Member State was responsible for publishing its National Allocation Plan (“NAP”), a document which sets out a national cap on the total amount of carbon emissions by all installations during each relevant trading phase and the methodology by which the cap would be allocated to the different sectors in the ETS and their respective installations. Each Member State’s cap contributed to an overall EU cap on emissions, where one carbon allowance must be surrendered to account for one metric ton of carbon emitted. The carbon allowances were mostly distributed for free by each Member State to its ETS installations, although some Member States also used a fraction of their material cap for auctioning, mainly to power generators. Under ETS Phase III, however, the system of NAPs has been replaced by a single EU-wide, top-down, cap on CO₂ emissions, with allocation for all installations made according to harmonized EU rules and set out in each Member State’s National Implementation Measures (“NIM”). Additional restrictions have been introduced on the extent to which Kyoto Protocol units can be used to offset EU carbon emissions, and auctioning, not free allocation, has become the default method for distributing allowances. For those allowances that are still given away free, as discussed below, harmonized rules apply based on EU-wide benchmarks of emissions performance.

EU policymakers see the free allocation of allowances as a principal way to reduce the risk of carbon leakage—that is, the risk that energy-intensive industries, facing higher costs because of the ETS, will move their facilities beyond the EU’s borders to countries that do not have climate change controls, thus resulting in a leakage of CO₂ emissions without any environmental benefits. In 2009, a list of ETS sectors deemed to be at significant risk of carbon leakage was formally adopted by the European Commission, following agreement by Member States and the European Parliament. The list which was valid from 2010 to 2014 included the cement production sector, on the basis that the additional costs imposed by the ETS would lead to a 30% or more increase in production costs as a proportion of the “gross value added.” A decision on the list of sectors deemed to be at significant risk of carbon leakage for the period 2015-2019 was adopted by the European Commission on October 29, 2014 and the cement production sector resulted selected again. Sectors classified as deemed to be at significant risk of carbon leakage will continue to receive 100% of their benchmark allocation of allowances free of charge during Phase III, adjusted by a cross-sectoral correction factor that has been applied uniformly upon all participating facilities in Europe in order to reduce the amount of free allocation that each installation receives so that the total sum does not exceed the authorized EU-wide cap for free allocation. By contrast, sectors that are not considered at risk of carbon leakage received 80% of their benchmark allowances for free in 2013, declining to 30% by 2020.

On April 27, 2011, the European Commission adopted Decision 2011/278/EU that states the rules, including the benchmarks of greenhouse gas emissions performance, to be used by the Member States in calculating the number of allowances to be annually allocated for free to industrial sectors (such as cement) that are deemed to be exposed to the risk of “carbon leakage.” The number of allowances to be allocated to installations for free will be based on a combination of historic activity levels at that installation and an EU benchmark of carbon efficiency for the production of a particular product—for example, clinker. An installation’s historic activity level is calculated by taking the median of its annual production levels during the baseline period, either 2005 to 2008 or, where historic activity levels are higher, 2009/10. The product benchmark is based on the average carbon emissions of the top 10% most “carbon efficient” EU installations for a particular product during 2007/8, where carbon efficiency is measured by carbon intensity or carbon emission per metric ton of product. Preliminary allocation calculations based on the rules were carried out by each Member State and included in a NIM table which was sent for scrutiny to the European Commission. On September 5, 2013, the European Commission adopted Decision 2013/448/EU which approved the NIMs submitted by most Member States and which sets the annual cross-sectoral correction factors for the period 2013-2020. The cross-sectoral correction figure will be used to adjust the levels of product benchmarks used to calculate the free allocation of allowances to each installation. This is to ensure that the total amount handed out for free does not exceed the maximum set in the ETS Directive. Each Member State is required to adjust its national allocation table of free allowances each year and submit this for approval to the European Commission prior to issuing allowances. The application of this cross-sectoral correction factor results in an important decrease in the quantity of allowances that our ETS-participant operations received for free in the 2013-2020 period.

On February 26, 2014, the European Commission adopted a decision on national allocation allowances for the last group of Member States including Croatia, which was granted 5.56 million of free allowances. Since this time, a regularly updated allocation table showing the number of allowances that have been allocated per Member State is published on the European Commission's website. Based on the European Commission approved NIMs that were published in the first quarter of 2014 for Phase III, as of December 31, 2019, we expect that the aggregate amount of allowances allocated for free to CEMEX in Phase III of the ETS should remain sufficient to operate until the completion of Phase III. An important factor in providing such assurance is the European Commission Decision 2014/746/EU (which took effect on January 1, 2015) which, as mentioned, included the manufacture of cement as an industry at significant risk of carbon leakage meaning that the industry will continue to receive 100% of its benchmark allocation of allowances free of charge during Phase III. Although the European Council has indicated that the free allocation of allowances to carbon leakage sectors will continue beyond Phase III, a future decision that the cement industry should no longer be regarded as a significant risk of carbon leakage could have a material impact on our operations and our results of operations, liquidity and financial condition.

An installation can only receive its full allocation of free allowances if it is deemed to have not partially ceased under the "partial cessation rule" of the ETS. Partial cessation applies where a sub-installation which contributes at least 30% of the installation's final annual amount of emissions allocated, or contributes to more than 50,000 allowances or reduces its activity level by at least 50% of its historic activity levels. If activity levels are reduced to between 50% and 75% of the historic activity level, the amount of free carbon allowances the sub-installation will receive will be reduced by half in the following year; if activity levels are reduced by 75% to 90% compared to historic activity levels, the amount of free carbon allowances the sub-installation will receive will reduce by 75% in the following year; and if activity levels are reduced by 90% or more compared to historic activity levels, no allowances shall be allocated free of charge the following year with respect to the sub-installation concerned. This represents a change from ETS Phase II, in which the rules for partial cessation were defined by each Member State's NAP and often did not result in any reduction in the level of free allocation, but an installation was no longer entitled to a free allocation from the following year if it had permanently ceased operating. The new rules are therefore more stringent, and to the extent that they result in our plants foregoing free carbon allowances, as of December 31, 2019, they could represent a significant loss of revenue to us, since carbon allowances are also tradable, which in turn could have a material adverse impact on our results of operations, liquidity and financial condition.

Despite having sold a substantial amount of allowances during Phase II of the ETS, as mentioned, as of December 31, 2019, we believe that the aggregate amount of allowances that have been annually allocated for free to CEMEX in Phase III of the ETS (2013-2020) will be sufficient to operate. This assessment stems from various factors, notably our efforts to reduce emissions per unit of clinker produced, the stream of offset credits coming from our internal portfolio of CDM projects and our expected long position in the initial years of Phase III of the ETS. We are taking measures intended to minimize our exposure to this market, while continuing to supply our products to our customers. The EU Parliament, EU Council and EU Commission (Trilogue) have approved the amendment of the ETS legislation for Phase IV of the ETS (2021-2030). On March 14, 2018, the European Parliament and the Council published Directive (EU) 2018/410, amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814. This new Directive defines the rules for Phase IV of the ETS (2021-2030). During 2019 and 2020, all issues contained in Directive (EU) 2018/410 will be published (i.e. values of the benchmarks for the ETS sectors, productions of reference and the list of leakage sectors which will receive free allocation). The cement sector is included in the list of leakage sectors, which should receive free allocation, therefore, CEMEX should receive free allocation during the 2021-2030 period. The allocation (as defined under Directive (EU) 2018/410) should follow the same procedure that it previously followed. During Phase IV of the ETS (2021-2030), the EU-wide overall cap on emission allowances should be reduced by 2.2% every year from 2021, benchmarks will be updated based on recent data twice during the 2021-2030 period, a more dynamic allocation based on recent production shall replace the "historical activity level" and less emission allowances will be available for auction due to their allocation to the EU's Market Stability Reserve. As of December 31, 2019, it is not possible to predict with certainty how CEMEX will be affected by the reform to the EU ETS in Phase IV; however, we expect that the aggregate amount of allowances that will be annually allocated for free to CEMEX in Phase IV will not be sufficient for our operations, and, therefore, CEMEX will need to purchase emission allowances at some point in time during Phase IV. Such emission allowances will likely be purchased at increased prices due to their reduced availability in auctions, since they would have been allocated to the Market Stability Reserve, which could have a material impact on our results of operations, liquidity and financial condition.

As a result of the 2019 United Nations Climate Change Conference, also known as "COP25" held in Madrid, the EU has published its "Green Deal" with the following changes (among others) that reflects most of Europe's strategy to achieve carbon neutrality by 2050, which are expected to impact our industry in the coming years: (i) implementation of a carbon border adjustment to protect from imports, which shows that our industry will need to lobby intensively to preserve free allocation; (ii) enforcement of the existing legislation on energy performance of buildings; (iii) extension of the ETS to the maritime sector, and possibly also to other sectors, including those related to construction; (iv) implementation of measures to address pollution from industrial activities; (v) development of a new sustainable finance strategy; (vi) a review of regulations that cover construction products, as well as other initiatives.

In addition, 73 other non-EU countries announced they would submit enhanced action plans for reaching carbon zero by 2050. As part of the Paris Agreement calls, countries are invited to deliver new Nationally Determined Contributions (“NDCs”) every five years. During COP25, 41 countries, including the EU, representing 10.1% of global emissions, committed to update their respective NDC by 2020. Furthermore, 80 countries have signaled their intention to enhance ambition or action in an NDC by 2020, representing 10.5% of global emissions. All countries where CEMEX has operations, except for U.S., Egypt, the Philippines and Guatemala, have committed to update and/or enhance their NDC targets at “COP26” scheduled to be held in Glasgow in 2020. According to the World Economic Forum report from September 2019 on “CO2 emissions around the world,” from a total of 36.831 billion tons of CO2 emissions in 2018, China represents 27%, the U.S. 15% and the EU 9%. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our New Climate Strategy” for more information on our CO2 strategy.

Great Britain Landfills

In Great Britain, future expenditure on closed and current landfill sites has been assessed and quantified over the period in which the sites are considered to have the potential to cause environmental harm, generally consistent with the regulatory view of up to 60 years from the date of closure. The assessed expenditure relates to the costs of monitoring the sites and the installation, repair and renewal of environmental infrastructure. The costs have been quantified on a net present value basis in the amount of £131,034,978.70 (\$173.55 million as of December 31, 2019, based on an exchange rate of £0.755 to \$1.00) as of December 31, 2019, and we made an accounting provision for this amount.

Philippines Environmental Class Action

On September 20, 2018, a landslide occurred in Sitio Sindulan, Barangay Tina-an, Naga City, Cebu, Philippines (the “Landslide”), a site located within an area covered by mining rights of ALQC.

CEMEX, S.A.B. de C.V. is an indirect minority shareholder in ALQC, the principal raw material supplier of one of our subsidiaries in the Philippines, APO.

On November 19, 2018, CHP and APO were served summons concerning an environmental class action lawsuit filed by 40 individuals and one legal entity (on behalf of 8,000 individuals allegedly affected by the Landslide) at the Regional Trial Court of Talisay, Cebu (the “Talisay Court”), against CHP, ALQC, APO, the Mines and Geosciences Bureau of the Department of Environment and Natural Resources, the City Government of Naga, and the Province of Cebu, for “Restitution of Damage of the Natural and Human Environment, Application for the Issuance of Environmental Protection Order against Quarry Operations in Cebu Island with Prayer for Temporary Protection Order, Writ of Continuing Mandamus for Determination of the Carrying Capacity of Cebu Island and Rehabilitation and Restoration of the Damaged Ecosystems.”

In the complaint, among other allegations, plaintiffs claim that the Landslide occurred as a result of the defendants’ gross negligence; and seek, among other relief, (i) monetary damages in the amount of 4.3 billion Philippine Pesos (\$84.92 million as of December 31, 2019, based on an exchange rate of 50.635 Philippine Pesos to \$1.00), (ii) the establishment of a 500 million Philippine Pesos (\$9.87 million as of December 31, 2019, based on an exchange rate of 50.635 Philippine Pesos to \$1.00) rehabilitation fund, and (iii) the issuance of a Temporary Environment Protection Order against ALQC aiming to prevent ALQC from performing further quarrying activities while the case is still pending.

As of December 31, 2019, among other defenses and based on a report by the Mines and Geosciences Bureau of the Department of Environment and Natural Resources, CHP, APO and ALQC (individually, each a “Private Defendant” and collectively, the “Private Defendants”) deny liability and hold the position that the Landslide occurred due to natural causes.

In an Order dated August 16, 2019, the Talisay Court denied plaintiffs’ Application for Temporary Environment Protection Order. Plaintiffs moved for reconsideration, but the Talisay Court also denied plaintiffs’ Motion in an Order dated September 30, 2019. Plaintiffs may appeal this ruling to the Court of Appeal but only on ground of grave abuse of discretion.

Likewise, in a separate Order also dated September 30, 2019, the Talisay Court partially granted the affirmative defenses raised by the Private Defendants in their respective answers, and ruled, among others, that the subject case against CHP and APO is dismissed for failure to state a cause of action. The Talisay Court also ruled that: (i) the 22 plaintiffs who failed to sign the verification and certification against forum shopping are dropped as party-plaintiffs; (ii) the subject case is not a proper class suit, and that the remaining 17 plaintiffs can only sue for their respective claims, but not as representatives of the more than 8,000 alleged victims of the landslide incident; (iii) plaintiffs’ cause of action against ALQC for violation of Section 19 (a) of Republic Act No. 10121 is dismissed; (iv) there is a misjoinder of causes of action between the environmental suit and the damage suit; and (v) the damage suit of the remaining plaintiffs will proceed separately upon payment of the required docket fees within 30 days from receipt of Order, otherwise, the case for damages will be dismissed. This Court Order is not yet final and may be still be appealed by the parties thereto. A motion for reconsideration was filed on November 26, 2019 by the plaintiffs, such motion is yet to be heard by the Talisay Court.

In the event that the latter Order is reconsidered and a final adverse resolution is issued in this matter, plaintiffs will have the option to proceed against any one of ALQC, APO or CHP for satisfaction of the entirety of the potential judgement award, without the need to proceed against any other Private Defendant beforehand. Thus, ALQC's, APO's or CHP's assets alone could be exposed to execution proceedings. As of December 31, 2019, because of the status and preliminary stage of the lawsuit, considering all possible defenses available, we cannot assess with certainty the likelihood of an adverse result in this lawsuit, and, in turn, we cannot assess if a final adverse resolution, if any, would have a material adverse impact on our results of operations, liquidity and financial condition.

Tariffs

The following is a discussion of tariffs on imported cement in some of the countries and regions in which we operate.

Mexico

Mexican tariffs on imported goods vary by product and have historically been as high as 100%. Over the years, import tariffs have been substantially reduced and currently range from none at all for raw materials to over 20% for finished products. As a result of the North American Free Trade Agreement ("NAFTA"), starting January 1, 1998, the tariff on cement imported into Mexico from the U.S. or Canada was eliminated. As of December 31, 2019, Mexico, the U.S. and Canada had reached an agreement with respect to NAFTA's renegotiation which would not have any impact on tariffs on cement imported from the U.S. or Canada into Mexico. The new agreement was signed on November 30, 2018, and is called the "USMCA" and is intended to supersede NAFTA, but has not yet been ratified by Canada and is therefore not in full force and effect. Meanwhile, NAFTA will remain in effect. The USMCA treaty was passed by the U.S. Congress on December 19, 2019 and by the U.S. Senate on January 16, 2020, and the U.S. President signed the USMCA into law on January 29, 2020. The USMCA will become effective 90 days after it is ratified by Canada.

While the lack of existence or reduction in tariffs could lead to increased competition from imports in the markets in Mexico in which we operate, it is possible that other factors, such as the cost of transportation incurred from most producers outside Mexico to central Mexico, traditionally the region of highest demand in Mexico, could be seen as a barrier to enter certain of the regions in Mexico in which we operate.

United States

Cement imported into the U.S. from Cuba and North Korea is subject to custom duties depending on the specific type of cement. Imports into the U.S. from Cuba and North Korea are generally prohibited due to the U.S. import/export controls and economic sanctions. In order to import cement and other products into the U.S. from Cuba or North Korea, an importer would be required to obtain a license from the U.S. government or otherwise establish the existence of a license exception.

On September 18, 2018, the United States Trade Representative released a list of approximately \$200 billion worth of Chinese imports that were to be subject to additional tariffs. This list included cement, clinker, slag cement and granulated slag from the manufacture of iron or steel. These additional tariffs were effective starting September 24, 2018 and initially were in the amount of 10%. The U.S. was expected to increase the additional tariffs to 25% starting January 1, 2019, but this increase was postponed for 90 days starting on December 1, 2018, to allow time for the U.S. and China to negotiate their trade disputes. Accordingly, absent a resolution of the trade disputes, the rate of additional duty for the products covered by the September 2018 tariff action increased to 25% on May 10, 2019. On August 23, 2019, the U.S. announced that the current 25% import tariff would be increased to 30% by October 1, 2019. On September 11, 2019, the U.S. announced that implementation of this increase would be delayed to October 15, 2019, however, the implementation of this increase has not yet occurred as of December 31, 2019, and the tariff remains at 25%.

As of December 31, 2019, cement imports from countries other than Cuba, China and North Korea into the U.S. were duty free, however, certain individuals and entities on U.S. government lists of specially designated nationals and prohibited parties, may be subject to U.S. import/export controls and other sanctions that prohibit transactions (including import transactions) with such persons without a license.

Europe

Member countries of the EU are subject to the uniform EU commercial policy. There is no tariff on cement imported into a country that is a member of the EU from another member country or on cement exported from an EU country to another member country. As of December 31, 2019, for cement imported into a member country from a non-member country, the tariff was 1.7% of the customs value. Any country with preferential treatment with the EU is subject to the same tariffs as members of the EU. As of December 31, 2019, most Eastern European producers exporting cement into EU countries paid no tariff.

Tax Matters

Mexico

In November 2009, the Mexican Congress approved a general tax reform, effective as of January 1, 2010 (the “2010 Tax Reform”). Specifically, the 2010 Tax Reform included changes to the tax consolidation regime that required CEMEX, among others, to determine and retroactively pay taxes at a current rate on items in past years that were eliminated in consolidation or that reduced consolidated taxable income (“Additional Consolidated Taxes”). The 2010 Tax Reform required CEMEX to pay taxes on certain previously exempted intercompany dividends, certain other special tax items and operating losses generated by members of the consolidated tax group not recovered by the individual company generating such losses within the succeeding ten-year period.

Additional Consolidated Taxes arising after the 2004 tax year are taken into account in the sixth fiscal year after such year and are payable over the succeeding five years in the same proportions (25%, 25%, 20%, 15% and 15%). Applicable taxes payable as a result of this tax reform are increased by inflation adjustments as required by the Mexican Income Tax Law (*Ley del Impuesto Sobre la Renta*). In connection with these changes in the tax consolidation regime in Mexico, as of December 31, 2009, we recognized a liability of Ps10.5 billion (\$554.96 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00), of which Ps8.2 billion (\$433.40 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) was recognized under “Other non-current assets” in connection with the net liability recognized under the new tax law and that we expect to realize in connection with the payment of this tax liability, and Ps2.2 billion (\$116.27 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) was recognized against “Retained earnings” upon adoption of IFRS according to the new law, related to: (i) the difference between the sum of the equity of the controlled entities for tax purposes and the equity for tax purposes of the consolidated entity, (ii) dividends from the controlled entities for tax purposes to CEMEX, S.A.B. de C.V., and (iii) other transactions among the companies included in the tax consolidation group that represented the transfer of resources within such group.

As of December 31, 2019, we have paid an aggregate amount of Ps7.3 billion (\$385.83 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) of Additional Consolidated Taxes.

In December 2010, pursuant to certain additional rules, the tax authorities granted the option to defer the calculation and payment of certain items included in the law in connection with the taxable amount for the difference between the sum of the equity of controlled entities for tax purposes and the equity of the consolidated entity for tax purposes. As a result, CEMEX reduced its estimated tax payable by Ps2.9 billion (\$153.27 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) against a credit to the income statement when the new tax enactment took place. As of December 31, 2019, after accounting for (i) cash payments, (ii) income tax from subsidiaries paid to the parent company, (iii) effects of tax deconsolidation, and (iv) other adjustments that took place from 2010 to 2019, as of December 31, 2019, the estimated tax payable for tax consolidation in Mexico decreased to Ps1 billion (\$52.85 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00).

In addition, as a result of the enactment of the new Income Tax Law (*Ley del Impuesto Sobre la Renta*) in Mexico approved in December 2013 and effective as of January 1, 2014 (the “2014 Tax Reform”), the statutory income tax rate for 2014 and beyond will remain at 30%, and the tax consolidation regime that was in effect up until December 31, 2013, was replaced prospectively by a new integration regime, which will not apply to CEMEX. Consequently, as of 2014, each company in Mexico will determine its income taxes based solely on its individual results, and a period of up to ten years has been established for the settlement of the liability for income taxes related to the tax consolidation regime accrued until December 31, 2013 (“Deconsolidation Taxes”).

On April 30, 2014, CEMEX paid Ps2.3 billion (\$121.56 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). On April 30, 2015, CEMEX paid Ps3.7 billion (\$195.56 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). On April 29, 2016, CEMEX paid Ps728 million (\$38.47 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). On April 28, 2017, CEMEX paid Ps924 million (\$48.83 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). On April 30, 2018, CEMEX paid Ps970 million (\$51.26 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). On April 30, 2019, CEMEX paid Ps592 million (\$31.28 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00). This sixth payment, together with the five prior payments represented 100% of the Deconsolidation Taxes for the period that corresponds to the 2008 tax year, 100% of the Deconsolidation Taxes for the period that corresponds to the 2009 tax year, 85% of the Deconsolidation Taxes for the period that corresponds to the 2010 tax year, 70% of the Deconsolidation Taxes for the period that corresponds to the 2011 tax year, 50% of the Deconsolidation Taxes for the period that corresponds to the 2012 tax year and 25% of the Deconsolidation Taxes for the period that corresponds to the 2013 tax year.

In October 2015, the Mexican Congress approved a tax reform, effective as of January 1, 2016 (the “2016 Tax Reform”). Specifically, the 2016 Tax Reform granted Mexican companies two tax credits to offset part of the Deconsolidation Taxes payable as a result of the elimination of the group taxation regime: (i) 50% of the taxes due as a result of unamortized losses used to compute the consolidated tax could be settled with individual accumulated losses adjusted for inflation using a factor of 0.15 multiplied by such

losses, and (ii) tax credit against Deconsolidation Taxes related to intercompany dividends that were paid without having sufficient tax profits. CEMEX applied both tax credits against its remaining Deconsolidation Taxes through the filing of amended tax returns regarding the year ending on December 31, 2015 and upon the withdrawal of the constitutional challenge (*juicio de amparo*) against the 2014 Tax Reform filed by us on February 12, 2015. Additionally, the 2016 Tax Reform granted Mexican companies the option not to pay the remaining asset tax payments included in the Deconsolidation Tax liability. CEMEX also applied this option.

As of December 31, 2019, taking into account the effects of the 2016 Tax Reform, our estimated payment schedule of Deconsolidation Taxes (which includes the Additional Consolidated Taxes) is as follows: Ps417 million (\$22.04 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) in 2020; Ps368 million (\$19.45 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) in 2021; Ps120 million (\$6.34 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) in 2022 and Ps104 million (\$5.49 million as of December 31, 2019, based on an exchange rate of Ps18.92 to \$1.00) in 2023.

Property Tax Matter in the State of Hidalgo, Mexico

During the last quarter of 2017, the municipality of Atotonilco de Tula, Hidalgo, Mexico issued new valuations regarding our operating facility in that municipality to assess the corresponding property tax payable by CEMEX México starting in 2017. CEMEX México contended that the valuation by the municipality is contrary to the Cadastral Law of the State of Hidalgo (*Ley de Catastro del Estado de Hidalgo*) and had twice tried to effect payment of the property tax corresponding to the years 2017 and 2018 in accordance with its calculations made pursuant to the Revenue Law of the Municipality of Atotonilco de Tula, Hidalgo (*Ley de Ingresos del Municipio de Atotonilco de Tula, Hidalgo*) and the Cadastral Law of the State of Hidalgo (*Ley de Catastro del Estado de Hidalgo*) in effect as of September 30, 2019. The municipality refused to accept such payment based on an alleged difference in the property tax to be paid, which had not been formally determined by the municipality. The municipality's refusal to accept payment could have resulted in CEMEX México failing to obtain a municipal license required for the operation of CEMEX México's Atotonilco operating facility pursuant to municipal regulations published in the Official Gazette of the State of Hidalgo (*Periódico Oficial del Estado de Hidalgo*) on February 12, 2018, since payment of the corresponding property tax is a requirement for obtaining the municipal license.

On November 14, 2019, the municipality of Atotonilco de Tula, Hidalgo received from CEMEX México the payment of the property tax for the years 2017, 2018 and 2019. On November 21, 2019, the 2018 and 2019 municipal licenses required for the operation of the Atotonilco facility were issued by the municipality and we withdrew the actions we had initiated. As of December 31, 2019, this matter has been closed.

United States

As of December 31, 2019, the United States Internal Revenue Service ("IRS") concluded its audits for the years 2014, 2015, 2016 and 2017. The final findings did not alter the originally filed CEMEX returns in the U.S., which had no reserves set aside for any potential tax issues. On March 29, 2018, the IRS commenced its audits of the 2018 tax year under the compliance assurance process. As of December 31, 2019, we have not identified any material audit issues and, as such, no reserves are recorded for the 2018 tax year audit in our financial statements.

Colombia

On April 1, 2011, the Colombian Tax Authority notified CEMEX Colombia of a proceeding notice in which the Colombian Tax Authority rejected certain deductions taken by CEMEX Colombia in its 2009 year-end tax return. The Colombian Tax Authority assessed an increase in taxes to be paid by CEMEX Colombia in the amount of 90 billion Colombian Pesos (\$27.46 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00) and imposed a penalty in the amount of 144 billion Colombian Pesos (\$43.94 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). The aforementioned penalty was equivalent to 160% of the additional amount paid by CEMEX Colombia. However, in 2017, Law 1819 of 2016 became effective. The inaccuracy penalty under such law is 100%. Therefore, CEMEX Colombia requested of the State Council in April 2017 that the arguments of the Colombian Tax Authority be sustained, and that a penalty of 100%, be applied pursuant to the principle of favorability. This would translate to an amount of \$89 billion Colombian Pesos (\$27.15 million as of December 31, 2019, based on an exchange rate of \$3,277.14 Colombian Pesos to \$1.00). The Colombian Tax Authority argues that certain expenses are not deductible for fiscal purposes because they are not linked to direct revenues recorded in the same fiscal year, without taking into consideration that future revenue will be taxed with income tax in Colombia. CEMEX Colombia responded to the proceeding notice on June 25, 2011. On December 15, 2011, the Colombian Tax Authority issued its final determination, which confirmed the information in the special proceeding. CEMEX Colombia appealed the final determination on February 15, 2012. On January 17, 2013, the Colombian Tax Authority notified CEMEX Colombia of the resolution confirming the initial payment notice. CEMEX Colombia appealed the final determination on May 10, 2013 which was admitted on June 21, 2013. On July 3, 2013, the appeal was notified to the Colombian Tax Authority, and hearings took place on February 18, 2014 and March 11, 2014. An adverse

resolution to the appeal was notified to CEMEX Colombia on July 14, 2014 and on July 22, 2014, CEMEX Colombia filed an appeal before the Colombian *Consejo de Estado* against such adverse resolution. As of December 31, 2019, if the appeal before the Colombian *Consejo de Estado* is adversely resolved against CEMEX Colombia, in addition to any amounts to be paid in confirmation of the initial payment notice, CEMEX Colombia would, as of the payment date, be required to pay interest on the amounts that would be declared due as of the dates they would have had to be paid. As of December 31, 2019, at this stage of the proceeding and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result in this special proceeding, we believe a final adverse resolution to this special proceeding is not probable. However, if adversely resolved, we believe such adverse resolution could have a material adverse impact on our results of operations, liquidity and financial condition.

On April 6, 2018, the Colombian Tax Authority notified CEMEX Colombia of a proceeding notice in which the Colombian Tax Authority rejected certain deductions taken by CEMEX Colombia in its 2012 year-end income tax return. The Colombian Tax Authority assessed an increase in taxes to be paid by CEMEX Colombia in the amount of 124.79 billion Colombian Pesos (\$38.07 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00) and imposed a penalty in the amount of 124.79 billion Colombian Pesos (\$38.07 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). On June 22, 2018, CEMEX Colombia responded to the proceeding notice, and, on December 28, 2018, CEMEX Colombia was notified of the issuance of the official notice which confirmed the information in the proceeding notice. CEMEX Colombia filed an appeal for reconsideration on February 21, 2019 within the legal term. The Colombian Tax Administration has one year as of the filing date to resolve this matter. As of December 31, 2019, if a final resolution adverse to CEMEX Colombia is reached in this matter, in addition to any amounts to be paid in confirmation of the official payment notice, CEMEX Colombia would, as of the payment date, be required to pay interest on the amounts that would be declared due as of the dates they would have had to be paid. As of December 31, 2019, at this stage of the proceeding and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result in this special proceeding, we believe a final adverse resolution to this special proceeding is not probable. However, if adversely resolved, we believe such adverse resolution could have a material adverse impact on our results of operations, liquidity and financial condition. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for more information regarding this matter.

On September 5, 2018, the Colombian Tax Authority notified CEMEX Colombia of a proceeding notice in which the Colombian Tax Authority rejected certain deductions taken by CEMEX Colombia in its 2011 year-end income tax return. The Colombian Tax Authority assessed an increase in taxes to be paid by CEMEX Colombia in the amount of 85.17 billion Colombian Pesos (\$25.98 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00) and imposed a penalty in the amount of 85.17 billion Colombian Pesos (\$25.98 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). On November 30, 2018, CEMEX Colombia responded to the proceeding notice. On May 15, 2019, CEMEX Colombia was notified of the issuance of a tax assessment maintaining the initial rejection of the deductions taken by CEMEX Colombia in its 2011 year-end income tax return. CEMEX Colombia filed an appeal on July 11, 2019. If a final resolution adverse to CEMEX Colombia is reached in this matter, in addition to any amounts to be paid in confirmation of the initial payment notice, CEMEX Colombia would, as of the payment date, be required to pay interest on the amounts that would be declared due as of the dates they would have had to be paid. As of December 31, 2019, at this stage of the proceeding and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result in this special proceeding, we believe a final adverse resolution to this special proceeding is not probable. However, if adversely resolved, we believe such adverse resolution could have a material adverse impact on our results of operations, liquidity and financial condition.

Spain

On July 7, 2011, the tax authorities in Spain notified CEMEX España of a tax audit process in Spain covering the tax years from and including 2006 to 2009. The tax authorities in Spain have challenged part of the tax losses reported by CEMEX España for such years. CEMEX España has been formally notified of fines in the aggregate amount of €456 million (\$511.38 million as of December 31, 2019, based on an exchange rate of €0.8917 to \$1.00) resulting from the July 7, 2011 tax audit process in Spain. The laws of Spain provide a number of appeals that can be filed against such fines without CEMEX España having to make any payment until such appeals are finally resolved. On April 22, 2014, CEMEX España filed appeals against such fines before the Tribunal Economico Administrativo Central (“TEAC”) of the Spanish Tax Authorities. On September 20, 2017, CEMEX España was notified by the TEAC about an adverse resolution to such appeals. CEMEX España filed a recourse against such resolution on November 6, 2017 before the National Court (Audiencia Nacional) and applied for the suspension of the payment of the fines. The National Court (Audiencia Nacional) admitted the recourse; and, on January 31, 2018, it notified CEMEX España of the granting of the suspension of the payment, subject to the provision of guarantees on or before April 2, 2018. In this regard, CEMEX España provided the respective guarantees in the form of a combination of a liability insurance policy and a mortgage of several assets in Spain owned by its Spanish subsidiary CEMEX España Operaciones, S.L.U. On November 6, 2018, the National Court (Audiencia Nacional) confirmed the acceptance of the guarantees by the Spanish Tax Office, which ensures the suspension of the payment until the recourses are definitively resolved. As of December 31, 2019, at this stage of the matter and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result in this matter, we believe a final adverse resolution to this matter is not probable. However, if adversely resolved, we believe such adverse resolution could have a material adverse impact on our results of operations, liquidity and financial condition.

Egypt

On February 9, 2014, ACC was notified of the decision of the Egyptian Ministry of Finance's Appeals Committee (the "Appeals Committee") pursuant to which ACC has been required to pay a development levy on clay (the "Levy on Clay") applied to the Egyptian cement industry in the amount of: (i) 322 million Egyptian Pounds (\$20.07 million as of December 31, 2019, based on an exchange rate of Egyptian Pounds 16.0431 to \$1.00) for the period from May 5, 2008 to August 31, 2011; and (ii) 50,235 Egyptian Pounds (\$3,131 as of December 31, 2019, based on an exchange rate of Egyptian Pounds 16.0431 to \$1.00) for the period from September 1, 2011 to November 30, 2011. On March 10, 2014, ACC filed a claim before the North Cairo Court requesting the nullification of the Appeals Committee's decision and requesting that the North Cairo Court rule that the Egyptian tax authority is not entitled to require payment of the aforementioned amounts. In parallel, ACC has filed a request before the Ministerial Committee for Resolution of Investment Disputes (the "Ministerial Committee") claiming non-entitlement of the Egyptian tax authority to the Levy on Clay used in the production of cement from the date of enforceability of Law No. 114/2008 up until issuance of Law No. 73/2010, and from cement produced using imported clinker. On September 28, 2015, ACC was notified by the Egyptian Cabinet that on September 2, 2015, it ratified an August 10, 2015 decision by the Ministerial Committee (the "Ministerial Committee's Decision") pursuant to which the Egyptian tax authority is instructed to cease claiming payment of the Levy on Clay from ACC. The Ministerial Committee's Decision applies to the years from 2008 up to the issuance date of Law No. 73/2010. It was further decided that the Levy on Clay should not be imposed on imported clinker. At this stage, as of December 31, 2019, the Ministerial Committee's Decision strongly supports ACC's position in this dispute, given the fact that the Ministerial Committee's Decision is legally binding on the Egyptian tax authority. The Ministerial Committee's Decision was submitted to the Egyptian tax authority and, accordingly, the Egyptian tax authority issued a settlement memorandum (the "Settlement Memorandum"), whereby it confirmed and recognized the Ministerial Committee's Decision. Furthermore, in application of the Settlement Memorandum and the Ministerial Committee's Decision, the Egyptian tax authority issued a new claim to ACC for an adjusted amount of 55,586 Egyptian Pounds (\$3,465 as of December 31, 2019, based on an exchange rate of Egyptian Pounds 16.0431 to \$1.00). On a March 7, 2016 session of the North Cairo Court, ACC submitted the Settlement Memorandum and the Ministerial Committee's Decision. At a May 28, 2016 session before the North Cairo Court, the expert's office appointed to review the case file submitted its report that confirmed and recognized the Ministerial Committee's Decision and at this session this case was reviewed jointly with the Egyptian tax authority case which was filed to challenge ACC's right to cancel the Levy on Clay. On December 27, 2016, the North Cairo Court ruled for referring the two jointly reviewed cases to the Cairo Administrative Judiciary Court for the former's lack of jurisdiction to review the same. We do not expect that such referral will prejudice what we believe is ACC's favorable legal position in this dispute. In parallel and in order to expedite the proceedings, ACC submitted, on December 27, 2018, a request to the Committee for Resolution of Tax Disputes to ratify the settlement. The two joint cases have been adjourned by the Commissioners of the Cairo Administrative Judiciary Court to April 13, 2020, until the request submitted to the Committee for Resolution of Tax Disputes is resolved. As of December 31, 2019, we do not expect our operations, liquidity and financial condition to suffer a material adverse impact because of this matter.

Other Legal Proceedings

Colombian Construction Claims

On August 5, 2005, the Urban Development Institute (*Instituto de Desarrollo Urbano*) ("UDI"), and an individual filed a lawsuit in the Fourth Anti-Corruption Court of Bogotá (*Fiscalía Cuarta Anticorrupción de Bogotá*) against a subsidiary of CEMEX Colombia claiming that it was liable, along with the other members of the *Asociación Colombiana de Productores de Concreto* ("ASOCRETO"), an association formed by the ready-mix concrete producers in Colombia, for the premature distress of the concrete slabs of the *Autopista Norte* trunk line of the TransMilenio bus rapid transit system of Bogotá in which ready-mix concrete and flowable fill supplied by CEMEX Colombia and other ASOCRETO members was used. The plaintiffs alleged that the base material supplied for the road construction failed to meet the quality standards offered by CEMEX Colombia and the other ASOCRETO members and/or that they provided insufficient or inaccurate information in connection with the product. The plaintiffs were seeking the repair of the concrete slabs in a manner which guarantees their service during the 20-year period for which they were originally designed, and estimate that the cost of such repair could have been 100 billion Colombian Pesos (\$30.51 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). The lawsuit was filed within the context of a criminal investigation against a former director and two officers of the UDI, the contractor, the inspector and two ASOCRETO officers. On January 21, 2008, a court issued an order, sequestering the El Tunjuelo quarry, as security for payment of a possible future money judgment against CEMEX Colombia. The court determined that in order to lift this attachment and prevent further attachments, CEMEX Colombia was required to deposit 337.8 billion Colombian Pesos (\$103.07 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00) in cash instead of posting an insurance policy to secure such recovery. CEMEX Colombia appealed this decision and the Superior Court of Bogotá (*Tribunal Superior de Bogotá*) allowed CEMEX to present an insurance policy in the amount of 20 billion Colombian Pesos (\$6.1 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). CEMEX gave the aforementioned security, and, on July 27, 2009, the court lifted the attachment on the quarry.

On October 10, 2012 the court issued a first instance judgment pursuant to which the accusation made against the ASOCRETO officers was nullified. The judgment also convicted a former UDI director, the contractor's legal representatives and the inspector to a prison term of 85 months and a fine of 32 million Colombian Pesos (\$9,765 as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). As a consequence, of the nullification, the judge ordered a restart of the proceeding against the ASOCRETO officers. The UDI and other parties to the legal proceeding appealed the first instance judgment and on August 30, 2013 the Superior Court of Bogotá resolved to reduce the prison term imposed to the former UDI director and the UDI officers to 60 months and imposed a fine equivalent to 8.8 million Colombian Pesos (\$2,685 as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00). Additionally, the UDI officers were sentenced to severally pay the amount of 108 billion Colombian Pesos (\$32.95 million as of December 31, 2019, based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00) for the purported damages in the concrete slabs of the TransMilenio bus rapid transit system. Additionally, the Superior Court of Bogotá overturned the penalty imposed to the contractor's legal representatives and inspector because the criminal action against them was barred due to the passage of time. Furthermore, the Superior Court of Bogotá revoked the annulment in favor of the ASOCRETO officers and ordered the first instance judge to render a judgment regarding the ASOCRETO officers' liability or lack thereof. On June 25, 2014, the Supreme Court of Colombia's Penal Cassation Chamber (*Sala de Casación Penal de la Corte Suprema de Justicia de Colombia*) dismissed the cassation claim filed by the former UDI director and the UDI officers against the Superior Court of Bogotá's judgment. Dismissal of the cassation claim has no effect on CEMEX Colombia's or the ASOCRETO officers' interests in these proceedings. On January 21, 2015, the Penal Circuit Court of Bogotá issued a resolution agreeing with the arguments presented by CEMEX Colombia regarding the application of the statute of limitations to the criminal investigation against the ASOCRETO officers and acknowledging that the ASOCRETO officers were not public officers, and as a consequence, finalizing the process against the ASOCRETO officers and the civil responsibility claim against CEMEX Colombia. On July 28, 2015, the Superior Court of Bogotá (*Tribunal Superior de Bogotá*) upheld this resolution and as such the action brought against CEMEX Colombia for the premature distress of the concrete slabs of the *Autopista Norte* trunk line has ended. In addition, six legal actions related to the premature distress of the concrete slabs of the *Autopista Norte* trunk line of the TransMilenio bus rapid transit system were brought against CEMEX Colombia. The Cundinamarca Administrative Court (*Tribunal Administrativo de Cundinamarca*) nullified five of these actions and, as of December 31, 2019, only one remains outstanding. In addition, the UDI filed another action alleging that CEMEX Colombia made misleading advertisements on the characteristics of the flowable fill used in the construction of the concrete slabs. CEMEX Colombia participated in this project solely and exclusively as supplier of the ready-mix concrete and flowable fill, which were delivered and received to the satisfaction of the contractor, complying with all the required technical specifications. CEMEX Colombia neither participated in nor had any responsibility for the design, sourcing of materials or their corresponding technical specifications or construction. On May 24, 2016, the Civil Court of Bogota settled the action filed by the UDI against CEMEX Colombia. The court accepted the arguments in defense of CEMEX Colombia, ruling that the flowable fill is not what caused the damage to the slabs and that the damages were caused by design changes when executing the road without consulting the original designer and the lack of drains. The UDI filed an appeal against the court's ruling. On December 7, 2016, the Superior Court of Bogota (*Tribunal Superior de Bogotá*) upheld the Civil Court of Bogota's decision. On June 17, 2019, an administrative court, in the first instance, ruled against CEMEX Colombia and other concrete producers because the judge found that there was a violation of consumer rights for alleged faults in the roads. Consequently, the judge ordered CEMEX Colombia to issue a public statement acknowledging the alleged violation and commit to not incur such violation in the future. This first decision did not contemplate any economic consequence for CEMEX Colombia. CEMEX Colombia filed an appeal against this decision within the legal term. At this stage of the proceedings, as of December 31, 2019, regarding the remaining pending action filed before the Cundinamarca Administrative Court, if adversely resolved, we do not expect that such adverse resolution should have a material adverse impact on our results of operations, liquidity and financial condition.

Croatian Concession Litigation

After an extended consultation period, in April 2006, the cities of Kastela and Solin in Croatia published their respective Master (physical) Plans defining the development zones within their respective municipalities, adversely impacting the mining concession granted to CEMEX Croatia by the Government of Croatia in September 2005. During the consultation period, CEMEX Croatia submitted comments and suggestions to the Master Plans intended to protect and preserve the rights of CEMEX Croatia's mining concession, but these were not taken into account or incorporated into the Master Plans by Kastela and Solin. Immediately after publication of the Master Plans, CEMEX Croatia filed a series of lawsuits and legal actions before the local and federal courts to protect its acquired rights under the mining concessions, including: (i) on May 17, 2006, a constitutional appeal before the constitutional court in Zagreb, seeking a declaration by the court concerning CEMEX Croatia's constitutional claim for decrease and obstruction of rights earned by investment and seeking prohibition of implementation of the Master Plans; and (ii) on May 17, 2006, an administrative proceeding before an administrative court seeking a declaration from the Government of Croatia confirming that CEMEX Croatia acquired rights under the mining concessions. The administrative court subsequently ruled in favor of CEMEX Croatia, validating the legality of the mining concession granted to CEMEX Croatia by the Government of Croatia, in September

2005. On June 15, 2012, we were notified that the case had been transferred from the constitutional court to the administrative court as a result of a new law that places the administrative courts in charge of disputes relating to environmental planning. In February 2014, the administrative court requested CEMEX Croatia to declare if it was still interested in proceeding with the concession litigation and if so, to provide additional clarification and documentation to support such claims. On March 3, 2014, CEMEX Croatia submitted the clarification and required documentation and on April 4, 2014, CEMEX Croatia was notified that the administrative court rejected its claims and found that its acquired rights or interests under the mining concessions had not been violated as a result of any act or decision made by the cities of Solin or Kastela or any other governmental body.

On April 29, 2014, CEMEX Croatia filed two claims before the Constitutional Court of the Republic of Croatia alleging that CEMEX Croatia's constitutional rights to a fair trial and judicial protection had been violated. On August 1, 2014, CEMEX Croatia also filed an application before the European Court of Human Rights alleging that CEMEX Croatia's constitutional rights to a fair trial, property rights, concession rights and investment had been violated due to irregularities in a general act, which has been denied. The European Court of Human Rights found the application to be inadmissible pursuant to articles 34 and 35 of the Convention for the Protection of Human Rights and Fundamental Freedoms, meaning that CEMEX Croatia did not exhaust all its domestic legal remedies, thus stipulating the Constitutional Court of the Republic of Croatia's jurisdiction in this matter. On February 6, 2015, the decision of the European Court of Human Rights was sent to the Constitutional Court of the Republic of Croatia. The Constitutional Court of the Republic of Croatia granted the claim, annulled the decision of the administrative court and remanded the case to the administrative court for a new trial. On June 9, 2017, the administrative court issued a decision rejecting CEMEX Croatia's request. CEMEX will not file an appeal, thus the administrative court's decision is final. During May 2015, CEMEX Croatia obtained a new location permit from the Croatian Ministry of Construction and Physical Planning for CEMEX Croatia's Sveti Juraj-Sveti Kajo quarry. On August 2, 2016, CEMEX Croatia obtained a decision pursuant to which a right of way was granted on land owned by the Republic of Croatia and located in Sveti Juraj-Sveti Kajo quarry. The period of such right of way will be compatible with the location permit previously granted. On December 5, 2018, CEMEX Croatia was notified of a decision issued by the Ministry of Economy granting CEMEX Croatia a mining concession that will expire on May 31, 2053; and, as a result, this proceeding has ended. As of December 31, 2019, we do not expect our operations, liquidity and financial condition to suffer a material adverse impact because of this matter.

Israeli Class Action Litigation

On June 21, 2012, one of our subsidiaries in Israel was notified about an application for the approval of a class action suit against it. The application was filed by a homeowner who built his house with concrete supplied by our Israeli subsidiary in October 2010 (a same application was filed against three other companies by the same legal representative). According to the application, the plaintiff claims that the concrete supplied to him did not meet with the "Israel Standard for Concrete Strength No. 118" and that, as a result, our Israeli subsidiary acted unlawfully toward all of its customers who requested a specific type of concrete but that received concrete that did not comply with Israeli standard requirements. As per the application, the plaintiff claims that the supply of the alleged non-conforming concrete has caused financial and non-financial damages to those customers, including the plaintiff. We presume that the class action would represent the claim of all the clients who purchased the alleged non-conforming concrete from our Israeli subsidiary during the past seven years, the limitation period according to applicable laws in Israel. The damages that could be sought amount to 276 million Israeli Shekels (\$79.86 million as of December 31, 2019, based on an exchange rate of 3.456 Israeli Shekels to \$1.00).

Our Israeli subsidiary submitted a formal response to the corresponding court. Both parties presented their preliminary arguments. In a hearing held on December 20, 2015, the preliminary proceeding was completed, and the court set dates for hearing evidence on May 8, 10 and 16, 2016. In addition, the court decided to join together all claims against all four companies, including our subsidiary in Israel, in order to simplify and shorten court proceedings, however, it should be mentioned that the court had not formally decided to join together all claims. On the hearing dates, the applicants in all four claims presented evidence, including expert testimony. An abandonment of action has been submitted to the court with respect to two of the four defendant companies, but our Israeli subsidiary and another company remain as defendants. Our subsidiary in Israel and the applicant already submitted their summations with regards to the application for the approval of the class action. On July 9, 2019, the application for approval of the class action against CEMEX Holdings (Israel) Ltd. was dismissed. No appeals were submitted prior to the October 10, 2019 deadline for appealing the judgment. As of December 31, 2019, following the dismissal of the class action and considering that no appeals were submitted prior to the deadline, this case is closed.

Egypt Share Purchase Agreement

On April 7, 2011 and March 6, 2012, lawsuits seeking, among other things, the annulment of the share purchase agreement entered into by and between CEMEX and state owned Metallurgical Industries Company (the "Holding Company") in November 1999 pursuant to which CEMEX acquired a controlling interest in ACC (the "Share Purchase Agreement"), were filed by different plaintiffs, including 25 former employees of ACC, before the 7th and 8th Circuits of Cairo's State Council Administrative Judiciary

Court, respectively. Hearings in both cases were adjourned in order for the State Commissioner Authority (“SCA”) to prepare the corresponding reports to be submitted for the consideration of the 7th and 8th Circuits of Cairo’s State Council Administrative Judiciary Court. During March 2015, the SCA submitted the relevant reports recommending, in both cases, that the 7th and 8th Circuits of Cairo’s State Council Administrative Judiciary Court stays the proceedings until the High Constitutional Court pronounces itself with regards to the challenges against the constitutionality of the Presidential Decree on Law No. 32 of 2014 (“Law 32/2014”). A hearing was held on October 13, 2015 before the 8th Circuit of Cairo’s State Council Administrative Judiciary Court in which the SCA’s report was reviewed and the case was adjourned to January 26, 2016 for passing judgment. At the session held on January 26, 2016, the 8th Circuit of Cairo’s State Council Administrative Judiciary Court issued a judgment ruling for the dismissal of this case considering the plaintiff’s lack of standing. The legal prescription period for the plaintiff to challenge the judgment before the High Administrative Court of 60 calendar days from the date of issuance of the judgment expired without the plaintiff filing a challenge to the judgment. Accordingly, the January 26, 2016 judgment issued by the 8th Circuit of Cairo’s State Council Administrative Judiciary Court is final and definitive. At a session held on September 3, 2015, the 7th Circuit of Cairo’s State Council Administrative Judiciary Court accepted the SCA’s report recommendation and ruled for staying the proceedings until the High Constitutional Court pronounces itself with regards to the challenges against the constitutionality of Law 32/2014. As of December 31, 2019, at this stage of the proceedings and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result regarding this lawsuit filed before the 7th Circuit of Cairo’s State Council Administrative Judiciary Court, we believe a final adverse resolution to this special proceeding is not probable, but if adversely resolved, we do not believe the resolution in the first instance would have an immediate material adverse impact on our results of operations, liquidity and financial condition as there are different legal recourses that we could take. However, if we exhaust all legal recourses available to us, a final adverse resolution of this matter could have a material adverse impact on our operations, liquidity and financial condition.

Regarding a different lawsuit submitted to a First Instance Court in Assiut, Egypt and notified to ACC on May 23, 2011, on September 13, 2012, the first instance court of Assiut, Egypt issued a judgment (the “First Instance Judgment”) to (i) annul the Share Purchase Agreement; and (ii) reinstate former employees to their former jobs at ACC. The First Instance Judgment was notified to ACC on September 19, 2012. On October 18, 2012, ACC filed an appeal against the First Instance Judgment, which was followed by the Holding Company’s appeal filed on October 20, 2012 before the Appeal Court in Assiut, Egypt (the “Appeal Court”). At a November 17, 2013 hearing, the Appeal Court decided to join the appeals filed by ACC and the Holding Company and adjourned the session to January 20, 2014 to render judgment. On January 20, 2014, the Appeal Court issued a judgment (the “Appeal Judgment”) accepting both appeals, revoking the First Instance Judgment, ruling for non-qualitative jurisdiction of the first instance court to review the case and referred the matter to the administrative court in Assiut, Egypt (the “Assiut Administrative Court”) for a hearing to be held on March 16, 2014. This hearing was subsequently rescheduled to May 17, 2014 and ultimately was not held because the case file had not been completed on time in order for it to be referred to the Assiut Administrative Court. The SCA submitted a report recommending that the Assiut Administrative Court to declare itself incompetent to review this case and to refer it to the Assiut Administrative Judiciary Court (the “Assiut Administrative Judiciary Court”). The Assiut Administrative Court scheduled a new hearing for October 11, 2014 to review the case. On October 15, 2014, the Assiut Administrative Court ruled for its non-jurisdiction to review the case and referred the case to the Assiut Administrative Judiciary Court. On December 11, 2014, ACC filed an appeal against the Assiut Administrative Court ruling (the “Appeal”), requesting that its enforcement be suspended until a judgment is issued on the appeal filed before the Cassation Court on March 12, 2014. Additionally, another appeal substantially on the same terms as the Appeal was filed on March 10, 2014 by the Holding Company against the same ruling (the “Parallel Appeal”). On February 10, 2015 and March 17, 2015, hearings were held before the Assiut Administrative Judiciary Court’s SCA in which the SCA decided to adjourn in order to prepare the corresponding report to be submitted for the consideration of the Assiut Administrative Judiciary Court. On October 2015, the SCA issued a report recommending mainly that due to the absence of geographical jurisdiction to review the case, it should be referred to the 7th Circuit of “Economic and Investment Disputes” of Cairo’s State Council Administrative Judiciary Court. The Assiut Administrative Judiciary Court held a hearing for the case on February 24, 2016, in which it decided to refer the case to the First Circuit (formerly 7th Circuit) of “Economic and Investment Disputes” of Cairo’s State Council Administrative Judiciary Court. Cairo’s State Council Administrative Judiciary Court held a hearing on March 28, 2017 to notify the parties of the procedures, whereupon the court adjourned the hearing until June 13, 2017 in order for the parties to submit their memoranda. On June 13, 2017 the court decided to refer the case back to SCA to prepare and submit a complementary report on the merits. The SCA shall notify ACC with a new hearing date before the SCA if it deems necessary, or after the SCA finishes the preparation of the complementary report a new hearing will be scheduled before Cairo’s State Council Administrative Judiciary Court. In a session held on February 11, 2016 in order to review the Appeal, the Assiut Administrative Judiciary Court decided to refer the case to the First Circuit of Cairo’s State Council Administrative Judiciary Court, which in turn decided to refer the Appeal to the Assiut Administrative Judiciary Court. On November 9, 2016, the Assiut Administrative Judiciary Court held a session in order to review the referred Appeal, and adjourned the Appeal to February 8, 2017. On February 8, 2017, the court adjourned the hearing until June 14, 2017 in order for the parties to submit their final memoranda. On June 14, 2017 the court postponed the hearing until November 23, 2017 in order for the parties to review the submitted documents. At the hearing held on November 23, 2017, the Assiut Administrative Judiciary Court referred the Appeal to the Commissioner’s Division for the Commissioner to render the corresponding opinion. On May 9, 2019, the Commissioner’s Division to which the Appeal had been referred by the Assiut Administrative Judiciary Court issued an advisory opinion recommending that the Assiut Administrative Judiciary Court’s judgment of October 15, 2014 be vacated and that a hearing

on the case be adjourned until a judgment is issued on an appeal filed before the Cassation Court on March 12, 2014 by ACC. The Court adjourned the Appeal to the hearing session of September 24, 2019 for parties to submit memoranda, and then adjourned to the hearing session of October 23, 2019, for perusal of submitted documents and commenting. On August 27, 2018, the Assiut Administrative Judiciary Court decided to refer the Parallel Appeal to the Cairo Administrative Judiciary Court. As of December 31, 2019, ACC has not been notified of a session before the Cairo Administrative Judiciary Court. We expect a similar ruling on the Appeal filed by ACC. As of December 31, 2019, at this stage of the proceedings and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result regarding this lawsuit filed before the First Circuit of Cairo's State Council Administrative Judiciary Court, we believe a final adverse resolution to this special proceeding is not probable, but if adversely resolved, we do not believe the resolution in the first instance would have an immediate material adverse impact on our results of operations, liquidity and financial condition as there are different legal recourses that we could take. However, if we exhaust all legal recourses available to us, a final adverse resolution of this matter could have a material adverse impact on our operations, liquidity and financial condition.

On March 12, 2014, ACC filed a challenge before the Cassation Court against the part of the Appeal Judgment that refers to the referral of the case to the Assiut Administrative Court and payment of the appeal expenses and attorney fees, and requested a suspension of the Appeal Judgment execution with respect to these matters until the Cassation Court renders its judgment (the "Challenge"). A hearing was held on April 12, 2016 in order to review the Challenge's summary request only, which requested the Cassation Court to stay the execution of part of the Appeal Judgment regarding the referral of the case to the Assiut Administrative Court and payment of the appeal expenses and attorney fees. At this hearing the Cassation Court rejected the summary request. As of December 31, 2019, ACC has not been notified of a session before the Cassation Court in order to review the subject matter of the Challenge. As of December 31, 2019, at this stage of the proceedings and considering all possible defenses available, while we cannot assess with certainty the likelihood of an adverse result regarding the Challenge, we believe a final adverse resolution to this special proceeding is not probable, but if adversely resolved, we do not believe the resolution would have an immediate material adverse impact on our results of operations, liquidity and financial condition as there are different recourses that we could take. However, if we exhaust all legal recourses available to us, a final adverse resolution of this matter could have a material adverse impact on our operations, liquidity and financial condition.

Also, on February 23, 2014, three plaintiffs filed a lawsuit before the Assiut Administrative Judiciary Court requesting the cancellation of the resolutions taken by the Holding Company's shareholders during the extraordinary general shareholders meeting pursuant to which it was agreed to sell ACC's shares and enter into the Share Purchase Agreement in 1999. A hearing held on May 17, 2014 was adjourned in order for the SCA to prepare a report to be submitted for the consideration of the Assiut Administrative Judiciary Court. On September 4, 2014, ACC received the report issued by the SCA which is non-binding to the Assiut Administrative Judiciary Court. On December 11, 2014, the Assiut Administrative Judiciary Court resolved to refer the case to the 7th Circuit of Cairo's State Council Administrative Judiciary Court. The 7th Circuit of Cairo's State Council Administrative Judiciary Court decided to adjourn to July 25, 2015 in order to review the parties' pleadings. On this hearing held on July 25, 2015, the 7th Circuit of Cairo's State Council Administrative Judiciary Court adjourned the case to September 3, 2015 for passing judgment. At the session held on September 3, 2015, the 7th Circuit of Cairo's State Council Administrative Judiciary Court ruled for staying the proceedings until the High Constitutional Court pronounces itself with regards to the challenges against the constitutionality of Law No.32/2014. As of December 31, 2019, we still do not have sufficient information to assess the likelihood of the 7th Circuit of Cairo's State Council Administrative Judiciary Court cancelling the resolutions adopted by the Holding Company's shareholders, or, if such shareholders' resolutions are cancelled, how would such cancellation would affect us. However, if adversely resolved, we do not believe the resolution in this first instance would have an immediate material adverse impact on our results of operations, liquidity and financial condition as there are different legal recourses that we could take. However, if we exhaust all legal recourses available to us, a final adverse resolution of this matter could have a material adverse impact on our operations, liquidity and financial condition.

On April 22, 2014, Law 32/2014, which regulates legal actions to challenge agreements entered into by the Egyptian State (including its ministries, departments, special budget entities, local administrative units, authorities and state-participated companies) and third parties, was published in the Official Gazette, becoming effective as of April 23, 2014, subject to its presentation, discussion and approval by the House of Representatives 15 days after it holds its first session. As per the provisions of Law 32/2014, and considering certain exceptions, only the parties to these agreements have standing to challenge the validity of an agreement. During October and November 2015, parliamentary elections to the House of Representatives took place and the elected House of Representatives started to hold its sessions on January 10, 2016, as expected, and Law 32/2014 was discussed and ratified on January 20, 2016, as legally required. As of December 31, 2019, a constitutional challenge has been filed by a third party against Law 32/2014 before the High Constitutional Court. The High Constitutional Court scheduled a hearing for May 6, 2017 to proceed with the constitutional challenge that was filed against Law 32/2014 after the SCA had submitted its report with respect to the case. On May 6, 2017 the court decided to refer the case back to SCA to prepare and submit a complementary report on the merits. The SCA, if it deems it necessary, may schedule a hearing for reviewing the case before the SCA. After the SCA finishes the preparation of the complementary report, a new hearing will be scheduled before the High Constitutional Court. As of December 31, 2019, we are still not able to assess if the High Constitutional Court will dismiss Law 32/2014, but if the High Constitutional Court dismisses Law 32/2014, this could adversely impact the ongoing matters regarding the Share Purchase Agreement, which could have a material adverse impact on our operations, liquidity and financial condition.

Maceo, Colombia—Legal Proceedings in Colombia

On August 28, 2012, CEMEX Colombia entered into a memorandum of understanding (the “MOU”) with CI Calizas y Minerales S.A. (“CI Calizas”) to acquire land, a mining concession, an environmental license, free trade zone benefits and related assets necessary to carry out the construction by CEMEX Colombia of a new integrated cement plant in the Antioquia department near the municipality of Maceo, Colombia (the “Maceo Project”). In connection with the MOU, CI Calizas was represented by a non-governmental individual (the “Representative”).

After the execution of the MOU, one of CI Calizas’ former shareholders was linked to an expiration of the property proceeding by the Colombian Attorney General’s Office (the “Attorney General’s Office”) that, among other measures, suspended CI Calizas’ ability to transfer certain assets to CEMEX Colombia as required by the MOU (the “Affected Assets”). In order to protect its interests in the Affected Assets, CEMEX Colombia joined the expiration of the property proceeding, attended each procedural stage and cooperated with the Attorney General’s Office. CEMEX Colombia also requested the dismissal of the expiration of the property proceeding against the Affected Assets. On May 2, 2016, in order to collect further evidence, the Attorney General’s Office denied CEMEX Colombia’s request for the dismissal of the expiration of the property proceeding. The expiration of the property proceeding is in its investigative phase, pending the appointment of the *ad litem* curators by the Attorney General’s Office. Upon appointment of the *ad litem* curators, the evidentiary phase will commence, and the relevant evidence will be presented and studied. We expect that the Attorney General’s Office’s final decision as to whether it will proceed with the expiration of the property proceeding with respect to the Affected Assets could take five to ten years.

In July 2013, CEMEX Colombia entered into a five-year lease agreement (the “Lease Agreement”) with a depository that had been designated by the Colombian National Narcotics Directorate (*Dirección Nacional de Estupefacientes*) with respect to the Affected Assets. The Lease Agreement, along with an accompanying governmental mandate, authorized CEMEX Colombia to continue the work necessary for the construction and operation of the Maceo Project during the expiration of the property proceeding. The Lease Agreement expired on July 15, 2018. Notwithstanding the expiration of the Lease Agreement, CEMEX Colombia is entitled to continue using the Affected Assets pursuant to the terms of the accompanying mandate until the conclusion of the expiration of the property proceeding.

On April 12, 2019, CEMEX Colombia reached a conciliatory agreement with the Attorney General’s Office allowing CEMEX Colombia to operate its Maceo cement plant in the region of Antioquia (the “Maceo Plant”), pursuant to which the signing of a mining operation, the provision of manufacturing services and dispatch and leasing of real estate for cement production (the “New Lease Agreement”) was endorsed. CEMEX Colombia, under the terms of the New Lease Agreement, will lease the land portion of the Affected Assets for a duration of 21 years, which can be extended by another 10 years. The New Lease Agreement will remain in full force and effect regardless of the outcome following the expiration of the property proceeding over the Affected Assets unless the criminal judge grants CEMEX Colombia (and of one of its subsidiaries) the ownership rights related to the Affected Assets. In such case, the New Lease Agreement will be terminated given that CEMEX Colombia and its subsidiary would be the owners of the Affected Assets and the New Lease Agreement would no longer be required to operate and manage them. As of the date of this annual report, it is expected that the Maceo Plant will begin operating when the following main applications and procedures that are being processed with the competent authorities are positively resolved: (i) the partial discharge of the Maceo Plant from the Integrated Management District (*Distrito de Manejo Integrado*) of the Alicante River Canyon (*Cañón de Río Alicante*), (ii) the amendment to the environmental license that allows the production of at least 950,000 tons of cement per year, (iii) the land usage amendment to allow for industrial and mining use and (iv) the procurement of permits to complete the construction of several sections of the access road to the Maceo Plant. Once these permits are obtained, CEMEX Colombia is expected to complete construction of the access road to the Maceo Plant.

Assuming that CEMEX Colombia conducted itself in good faith, and taking into account that its investments in the Maceo Project were incurred with the consent of the Colombian Administrator of Special Assets (*Sociedad de Activos Especiales S.A.S*) (the “SAE”) and CI Calizas under the Lease Agreement and the accompanying mandate, we believe the value of such investments is protected by Colombian law. Colombian law provides that, if a person builds on another person’s property with the knowledge of such other person, the person that built on the property shall be compensated with the value of what was built or otherwise be transferred the property in the event the owner of the property decides to recover possession. We also believe that, during the term of the New Lease Agreement, CEMEX Colombia may use the Affected Assets in order to operate the Maceo Project. In the event that CEMEX Colombia’s right to the Affected Assets is extinguished in favor of the government of Colombia, which we believe is unlikely, the SAE may decide not to sell the Affected Assets to CEMEX Colombia. In either case, under Colombian law, CEMEX Colombia would be entitled to compensation for the value of the investments made in the Maceo Project. As of December 31, 2019, at this stage of the proceedings, we believe that the likelihood of an adverse result in this matter is not probable as we are not able to assess the likelihood

of CEMEX Colombia receiving an adverse decision relating to the expiration of property proceedings or if the ownership of the assets subject to the MOU will be extinguished in favor of the Republic of Colombia. However, as of December 31, 2019, we believe that an adverse resolution in which CEMEX Colombia is not compensated for the value of its investments in the Maceo Project could have a material adverse effect on our results of operations, liquidity or financial condition.

On December 30, 2013, CEMEX Colombia and the Representative entered into a different memorandum of understanding (the “Land MOU”), pursuant to which the Representative would represent CEMEX Colombia in the acquisition of lands adjacent to the Maceo Project. In connection with the Maceo Project, CEMEX Colombia conveyed to the Representative \$13 million, including cash payments and interest (based on an exchange rate of 3,277.14 Colombian Pesos to \$1.00 as of December 31, 2019). Due to the expiration of property proceeding against the Affected Assets described above, the acquisition of the Affected Assets was not finalized.

During 2016, CEMEX, S.A.B. de C.V. received reports through its anonymous reporting hotline regarding potential misconduct by certain employees, including with regard to the Maceo Project. CEMEX, S.A.B. de C.V. initiated an investigation and internal audit pursuant to its corporate governance policies and its code of ethics.

On September 23, 2016, CLH disclosed that it had identified irregularities in the process for the purchase of the land related to the Maceo Project in an accusation with the Attorney General’s Office so that the Attorney General’s Office may take the actions it deems appropriate. Further, on December 20, 2016, CLH enhanced such filing with additional information and findings obtained as of such date. On June 1, 2017 the Attorney General’s Office petitioned a hearing for imputation of charges (*audiencia de imputación de cargos*) against two former employees of CEMEX and a representative of CI Calizas. The hearing took place from June 7, 2018 to June 29, 2018 and finished with the imposition of precautionary measures against the former executives and representative of CI Calizas. The hearing process will continue during 2020.

On September 23, 2016, CLH and CEMEX Colombia terminated the employment of the Vice President of Planning of CLH, who was also CEMEX Colombia’s Director of Planning, and the Legal Counsel of CLH, who was also the General Counsel of CEMEX Colombia. In addition, effective as of September 23, 2016, the Chief Executive Officer of CLH, who was also the President of CEMEX Colombia, resigned from both positions. On October 4, 2016, in order to strengthen levels of leadership, management and corporate governance practices, the Board of Directors of CLH resolved to split the roles of Chairman of the Board of Directors of CLH, Chief Executive Officer of CLH and Director of CEMEX Colombia, and appointed a new Chairman of the Board of Directors of CLH, a new Chief Executive Officer of CLH, a new Director of CEMEX Colombia and a new Vice President of Planning of CLH and CEMEX Colombia. A new legal counsel for CLH and CEMEX Colombia was also appointed during the fourth quarter of 2016.

Additionally, pursuant to the requirements of CEMEX, S.A.B. de C.V.’s and CLH’s audit committees, CEMEX Colombia retained external counsel to assist CLH and CEMEX Colombia to collaborate as necessary with the Attorney General’s Office, as well as to assist on other related matters. A forensic investigator in Colombia was engaged, as well.

The Attorney General’s Office is investigating the irregularities in connection with the transactions conducted pursuant to the MOU, the Land MOU, as well as other matters regarding our business in Colombia. Such investigations are running their due course but have not been concluded, and, as such, we cannot predict what actions, if any, the Attorney General’s Office may implement. Any actions by the Attorney General’s Office and any actions taken by us in response to the aforementioned irregularities regarding the Maceo Project, including, but not limited to, the departure of the aforementioned executives and further investigations in Colombia, could have a material adverse effect on our results of operations, liquidity or financial condition.

Investigations related to ongoing matters in Colombia and certain other countries

In December 2016, CEMEX, S.A.B. de C.V. received subpoenas from the SEC seeking information to determine whether there have been any violations of the U.S. Foreign Corrupt Practices Act stemming from the Maceo Project. These subpoenas do not mean that the SEC has concluded that CEMEX, S.A.B. de C.V. or any of its affiliates violated the law. As discussed in “—Maceo, Colombia—Legal Proceedings in Colombia,” internal audits and investigations by CEMEX, S.A.B. de C.V. and CLH had raised questions about payments relating to the Maceo Project. The payments made to the Representative in connection with the Maceo Project did not adhere to CEMEX, S.A.B. de C.V.’s and CLH’s internal controls. As announced on September 23, 2016, the CLH and CEMEX Colombia officers responsible for the implementation and execution of the above referenced payments were terminated and the then Chief Executive Officer of CLH resigned. CEMEX, S.A.B. de C.V. has been cooperating with the SEC and the Attorney General’s Office and intends to continue cooperating fully with the SEC and the Attorney General’s Office. We previously disclosed that it was possible that the DOJ and other investigatory entities in other jurisdictions could also open investigations into this matter. In this regard, aside from ongoing investigations in Colombia, on March 12, 2018, the DOJ issued a grand jury subpoena to CEMEX, S.A.B. de C.V. relating to its operations in Colombia and other jurisdictions. CEMEX, S.A.B. de C.V. intends to cooperate fully with the SEC, the DOJ and any other investigatory entity. As of December 31, 2019, CEMEX, S.A.B. de C.V. is unable to predict the

duration, scope, or outcome of either the SEC investigation or the DOJ investigation, the investigations in Colombia, or any other investigation that may arise, or, because of the current status of the SEC investigation and the preliminary nature of the DOJ investigation, the potential sanctions which could be borne by CEMEX, S.A.B. de C.V., or if such sanctions, if any, would have a material adverse impact on CEMEX, S.A.B. de C.V.'s consolidated results of operations, liquidity or financial position.

Maceo, Colombia—Operational Matters

On October 27, 2016, CLH decided to postpone the commencement of operations of the cement plant in Maceo, Colombia. This decision was mainly due to the following circumstances: CEMEX Colombia had not received permits required to finalize road access to such cement plant. The only existing access to such cement plant cannot guarantee safety or operations and could limit the capacity to transport products from the cement plant. As of December 31, 2019, the process to obtain the permits required to finalize the road access to such cement plant in Maceo, Colombia, is ongoing. CEMEX Colombia has provided all information that the authorities have requested in order to grant such permits, but CEMEX Colombia is not able to assess if and when such permits will be received.

CEMEX Colombia had not received a final response to the request to expand the free trade zone that covers the Maceo Project in order to commission a new clinker line at such cement plant. Failure to obtain such expansion would jeopardize CEMEX Colombia's capability to consolidate the benefits that would otherwise be available for CEMEX Colombia in the area. CEMEX Colombia had requested the Colombian Ministry of Trade, Industry and Tourism (*Ministerio de Comercio, Industria y Turismo*) for an expansion of the free trade zone, for which CEMEX Colombia did not receive a final decision. CEMEX Colombia believes the delay in such decision could have been related to the expiration of property proceeding against the Affected Assets. During the third quarter of 2017, at the request of CEMEX Colombia, the Colombian Tax Authority (*Dirección de Impuestos y Aduanas Nacionales*) ("DIAN") granted the suspension of the expansion process of the free trade zone that CEMEX Colombia had previously requested.

CEMEX Colombia determined that the area covered by the environmental license related to the Maceo Project partially overlapped with a District of Integrated Management (*Distrito de Manejo Integrado*), which could limit the granting of the environmental license modification. On October 9, 2017, CEMEX Colombia filed a petition with Corantioquia in order to subtract from the District of Integrated Management the zoning area covered by the environmental license related to the construction by CEMEX Colombia of the Maceo Project, in order to avoid any overlap between them. On January 12, 2018, CEMEX Colombia was notified of Corantioquia's decision to admit such petition and initiate the proceedings; and CEMEX Colombia had not received authorizations for the modification of land use in order to carry out industrial and mining activities at the site of the cement plant in Maceo, Colombia. As of December 31, 2019, the process to obtain the authorizations required to modify the land use of the site of the cement plant in Maceo, Colombia, is ongoing.

On September 3, 2019, CEMEX Colombia was notified of the favorable decision issued by the Corantioquia Board of Directors to approve, through Agreement No. 567, the removal from the Integrated Management District of the Renewable Natural Resources Alicante River Canyon, of an area of 169.2 hectares of the municipality of Maceo. CEMEX Colombia will be responsible for managing the execution of the environmental compensations requested by the Corantioquia Board of Directors, reaffirming its commitment to generate development, employment and community welfare, by preserving the ecosystem and the environment, contributing, in this case, to the economic and social development of an area historically impacted by violence, such as the municipality of Maceo.

The environmental license and the mining concession related to the Maceo Project were held by different legal entities, which is contrary to typical procedure in Colombia. The environmental license related to the Maceo Project is held by Central de Mezclas S.A. ("Central de Mezclas"), a subsidiary of CEMEX Colombia. However, the mining permit related to the Maceo Project was remanded back to CI Calizas as a result of the revocation of such mining concession by the Mining Secretariat (*Secretaría de Minas*) of Antioquia in December 2013. In connection with the environmental license that had been issued for the Maceo Project, during the second half of 2016, Corantioquia, the regional environmental agency with jurisdiction over the Maceo Project environmental license, requested authorization and consent from Central de Mezclas to reverse the assignment of the environmental license for the Maceo Project back to CI Calizas, which also holds the corresponding mining title. On February 22, 2018, Central de Mezclas granted such authorization. CEMEX Colombia had requested a modification to the environmental license, and on December 13, 2016, Corantioquia notified Central de Mezclas that it had decided to deny the request for modification of the environmental license related to the Maceo Project to 950,000 tons per annum on the basis of the overlap of the project area with the District of Integrated Management. On December 14, 2016, Central de Mezclas appealed the decision. On March 28, 2017, Central de Mezclas was notified of Corantioquia's decision, which affirmed the decision that had previously denied the modification of the environmental license for a 950,000 per annum project. As a result, as of December 31, 2019, CEMEX Colombia was actively working on the zoning and compatibility of the District of Integrated Management, as well as analyzing alternatives for a partial adjustment to the District of Integrated Management, to avoid future discussions regarding feasibility of expanding the proposed production in the Maceo Project beyond 950,000 tons per annum. Once these alternatives are implemented, CEMEX Colombia will reconsider submitting a new request pursuing the modification of the environmental license to expand its production of 950,000 tons per annum as initially planned;

CEMEX Colombia and Central de Mezclas plan to continue to work on solving the issues causing the postponement of the commissioning of the Maceo Project cement plant in order to capture, as soon as reasonably possible, the full operating benefits of this facility in Colombia. CEMEX Colombia believes some of these issues could be related to the expiration of property proceeding against the Affected Assets. As of December 31, 2019, we do not expect to suffer a material adverse impact to our results of operations, liquidity or financial condition as a result of the Maceo Project cement plant not being commissioned to operate pending resolution of these issues.

Quarry matter in France

One of our subsidiaries in France, CEMEX Granulats Rhône Méditerranée (“CEMEX Granulats”), is a party to a contract executed in 1990 (the “Quarry Contract”) with SCI La Quinoniere (“SCI”), pursuant to which CEMEX Granulats has drilling rights to extract reserves and conduct quarry remediation at a quarry in the Rhone region of France. In 2012, SCI filed a claim against CEMEX Granulats for breach of the Quarry Contract, requesting the rescission of the Quarry Contract and damages plus interest, totaling an aggregate amount of €55 million (\$61.68 million as of December 31, 2019 based on an exchange rate of €0.8917 to \$1.00), resulting from CEMEX Granulats having partially filled the quarry allegedly in breach of the terms of the Quarry Contract. On May 18, 2016, CEMEX Granulats was notified about an adverse judgment in this matter by the corresponding court in Lyon, France, primarily ordering the rescission of the Quarry Contract and damages plus interest, totaling an aggregate amount of €55 million (\$61.68 million as of December 31, 2019, based on an exchange rate of €0.8917 to \$1.00). This judgment is not enforceable. CEMEX Granulats filed the notice of appeal with the appeal court in Lyon, France. SCI updated its claim for damages to an aggregate amount of €67 million (\$75.13 million as of December 31, 2019, based on an exchange rate of €0.8917 to \$1.00). The judgment of the appeal court was notified to CEMEX Granulats on March 13, 2018. It overrules the first instance judgment but orders the rescission of the Quarry Contract. It also appoints a judicial expert to (i) determine the volume of both excavated materials and backfilling materials and (ii) give their opinion on the potential damages suffered by SCI. This judgment is enforceable. CEMEX Granulats has filed the notice of appeal with the Court of Cassation. The decision was handed down on May 23, 2019. Our appeal was dismissed, and the Court of Cassation declared that CEMEX Granulats breached the Quarry Contract. In connection with this matter, judicial experts were appointed by the Lyon Court of Appeal to (i) determine the volume of both excavated materials and backfilling materials at issue and (ii) provide their assessment of the potential damages suffered by SCI, a process that is expected to end by February 28, 2020. Proceedings on any actions CEMEX Granulats has initiated regarding this matter are expected to be finalized during the first half of 2020. At this stage of the proceedings, as of December 31, 2019, we are not able to determine the final amount that we would pay in relation to this matter, but we expect that any amounts to be paid would not have a material adverse impact on our results of operations, liquidity and financial condition. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for more information regarding this matter.

Federal Securities Class Action

On March 16, 2018, a putative securities class action complaint was filed against us: one of our members of the board of directors and certain of our officers (CEO and CFO) in the U.S. District Court for the Southern District of New York, on behalf of investors who purchased or otherwise acquired securities of ours between August 14, 2014 to March 13, 2018, inclusive. The complaint alleged violations of Sections 10(b) and 20(a) of the Exchange Act based on purportedly issuing press releases and SEC filings that included materially false and misleading statements in connection with alleged misconduct relating to the Maceo Project and the potential regulatory or criminal actions that might arise as a result. On September 14, 2018, we filed a motion to dismiss this lawsuit. During the fourth quarter of 2018, plaintiffs filed an opposition brief to this motion to dismiss and we filed a response to such opposition brief. On July 12, 2019, the competent judge granted our motion to dismiss the action but permitted plaintiffs an opportunity to re-plead. On August 1, 2019, plaintiffs filed a Second Amended Class Action Complaint, again based on purported false and misleading statements in connection with alleged misconduct relating to the Maceo Project and the potential regulatory or criminal actions that might arise as a result. The Second Amended Class Action Complaint altered the class period to now start on April 23, 2015, and added CLH as a party, as well as a cause of action under Section 20(b) of the Exchange Act against CLH. All of the defendants moved to dismiss the action on September 5, 2019, the plaintiffs filed an opposition brief on October 11, 2019, and the defendants filed reply briefs on November 1, 2019. As of December 31, 2019, at this stage of the proceedings, we are not able to assess the likelihood of an adverse result to this lawsuit because of its current status and its preliminary nature, and for the same reasons we are also not able to assess if a final adverse result in this lawsuit would have a material adverse impact on our results of operations, liquidity and financial condition. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Regulatory Matters and Legal Proceedings” for more information regarding this matter.

General

As of December 31, 2019, we are involved in various legal and administrative proceedings as well as investigations involving, but not limited to, product warranty claims, commercial claims, environmental claims, claims regarding the procurement

and supply of products and services, patent and copyright infringement claims, claims and disputes regarding the transportation of goods and services, indemnification claims relating to divestments and acquisitions and similar types of claims brought against us that have arisen in the ordinary course of business. We, and different organizations or associations to which we belong, also receive various information requests from various governmental and administrative authorities when such authorities are conducting periodic or general reviews of the markets in which we operate. We believe we have made adequate provisions to cover both current and contemplated general and specific litigation risks, and we believe these matters will be resolved without any significant effect on our operations, financial position and results of operations. We are sometimes able to make and disclose reasonable estimates of the expected loss or range of possible loss, as well as disclose any provision accrued for such loss. However, for a limited number of ongoing legal proceedings, we may not be able to make a reasonable estimate of the expected loss or range of possible loss or may be able to do so but believe that disclosure of such information on a case-by-case basis would seriously prejudice our position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in these cases, we have disclosed qualitative information with respect to the nature and characteristics of the contingency, but have not disclosed the estimate of the range of potential loss.

Item 4A—Unresolved Staff Comments

Not applicable.

Item 5—Operating and Financial Review and Prospects

Cautionary Statement Regarding Forward-Looking Statements

This annual report contains, and the reports we will file or furnish in the future may contain, forward-looking statements within the meaning of the U.S. federal securities laws. We intend for these forward-looking statements to be covered by the safe harbor provisions for forward-looking statements within the meaning of the U.S. federal securities laws. In some cases, these statements can be identified by the use of forward-looking words such as “may,” “assume,” “might,” “should,” “could,” “continue,” “would,” “can,” “consider,” “anticipate,” “estimate,” “expect,” “envision,” “plan,” “believe,” “foresee,” “predict,” “potential,” “target,” “strategy,” “intend” or other similar words. These forward-looking statements reflect, as of the date such forward-looking statements are made, or unless otherwise indicated, our current expectations and projections about future events based on our knowledge of present facts and circumstances and assumptions about future events. These statements necessarily involve risks and uncertainties that could cause actual results to differ materially from our expectations. Some of the risks, uncertainties and other important factors that could cause results to differ, or that otherwise could have an impact on us or our consolidated entities, include, among other things:

- the cyclical activity of the construction sector;
- our exposure to other sectors that impact our and our clients’ businesses, such as, but not limited to, the energy sector;
- availability of raw materials and related fluctuating prices;
- competition in the markets in which we offer our products and services;
- general political, social, health, economic and business conditions in the markets in which we operate or that affect our operations and any significant economic, health, political or social developments in those markets, as well as any inherent risks to international operations;
- the regulatory environment, including environmental, tax, antitrust, and acquisition-related rules and regulations;
- our ability to satisfy our obligations under our material debt agreements, the indentures that govern our outstanding Senior Secured Notes (as defined under “Results of Operations—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes”) and our other debt instruments and financial obligations;
- the availability of short-term credit lines or working capital facilities, which can assist us in connection with market cycles;
- the impact of our below investment grade debt rating on our cost of capital;
- loss of reputation of our brands;
- our ability to consummate asset sales, fully integrate newly acquired businesses, achieve cost-savings from our cost-reduction initiatives, implement our global pricing initiatives for our products and generally meet our “A Stronger CEMEX” plan’s initiatives (as further described in this annual report);

- the increasing reliance on information technology infrastructure for our sales invoicing, procurement, financial statements and other processes that can adversely affect our sales and operations in the event that the infrastructure does not work as intended, experiences technical difficulties or is subjected to cyber-attacks;
- changes in the economy that affect demand for consumer goods, consequently affecting demand for our products and services;
- the impact of pandemics, epidemics or outbreaks of infectious diseases and the response of governments and other third parties, including with respect to COVID-19, which have affected and may continue to adversely affect, among other matters, supply chains, international operations, availability of liquidity, investor confidence and consumer spending, as well as availability of, and demand for, our products and services;
- weather conditions, including but not limited to, excessive rain and snow, and disasters such as earthquakes and floods;
- trade barriers, including tariffs or import taxes and changes in existing trade policies or changes to, or withdrawals from, free trade agreements, including the USMCA, if it comes into effect, and NAFTA, while it is in effect, both of which Mexico is a party to;
- terrorist and organized criminal activities as well as geopolitical events;
- declarations of insolvency or bankruptcy, or becoming subject to similar proceedings;
- natural disasters and other unforeseen events (including global health hazards such as COVID-19); and
- other risks and uncertainties described under “Item 3—Key Information—Risk Factors” and elsewhere in this annual report.

Readers are urged to read this annual report and carefully consider the risks, uncertainties and other factors that affect our business. The information contained in this annual report is subject to change without notice, and we are not obligated to publicly update or revise forward-looking statements after the date hereof or to reflect the occurrence of anticipated or unanticipated events or circumstances. Readers should review future reports filed or furnished by us with the SEC.

This annual report also includes statistical data regarding the production, distribution, marketing and sale of cement, ready-mix concrete, clinker and aggregates. We generated some of this data internally, and some was obtained from independent industry publications and reports that we believe to be reliable sources. We have not independently verified this data nor sought the consent of any organizations to refer to their reports in this annual report.

Overview

The following discussion and analysis should be read in conjunction with, and are qualified in their entirety by reference to our audited consolidated financial statements for the years ended as of December 31, 2018 and 2019, and for each of the three years ended December 31, 2017, 2018 and 2019, included elsewhere in this annual report. Our financial statements have been prepared in accordance with IFRS.

As previously described, our audited consolidated financial statements for the years ended December 31, 2018 and 2019, and for each of the three years ended December 31, 2017, 2018 and 2019 included elsewhere in this annual report include the following:

- Our change in presentation currency from the Mexican Peso as of December 31, 2018 to the Dollar as of December 31, 2019,
- Our full retrospective adoption of IFRS 16 as of January 1, 2017, and
- Our presentation of several incurred and projected sales of assets as discontinued operations.

In connection with the changes described above, the previously issued comparative financial statements as of December 31, 2018 and for the years ended December 31, 2017 and 2018 were re-presented. See note 2.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The regulations of the SEC do not require foreign private issuers that prepare their financial statements based on IFRS (as published by IASB) to reconcile such financial statements to U.S. GAAP.

The percentage changes in cement sales volumes described in this annual report for our operations in a particular country or region include the number of tons of cement and/or the number of cubic meters of ready-mix concrete sold to our operations in other countries and regions. Likewise, unless otherwise indicated, the revenues financial information presented in this annual report for our operations in each country or region includes the Dollar amount of revenues derived from sales of cement and ready-mix concrete to our operations in other countries and regions, which have been eliminated in the preparation of our 2019 audited consolidated financial statements included elsewhere in this annual report.

The following table sets forth selected consolidated financial information as of December 31, 2018 and 2019 and for each of the three years ended December 31, 2017, 2018 and 2019 by principal geographic segment expressed as an approximate percentage of our total consolidated group. We operate in countries and regions with economies in different stages of development and structural reform and with different levels of fluctuation in exchange rates, inflation and interest rates. These economic factors may affect our results of operations, liquidity and financial condition, depending upon the depreciation or appreciation of the exchange rate of each country and region in which we operate compared to the Dollar and the rate of inflation of each of these countries and regions.

	Revenues For the Year Ended December 31,			Operating Earnings Before Other Expenses, Net For the Year Ended December 31,			Total Assets at December 31,	
	2017 ⁽¹⁾	2018 ⁽¹⁾	2019 ⁽¹⁾	2017 ⁽²⁾	2018 ⁽²⁾	2019 ⁽²⁾	2018 ⁽²⁾	2019 ⁽²⁾
Mexico	23%	23%	21%	60%	63%	61%	12%	14%
U.S.	24%	25%	27%	13%	19%	18%	49%	49%
Europe								
United Kingdom	6%	5%	5%	5%	3%	4%	6%	5%
France	6%	6%	6%	1%	2%	3%	3%	3%
Germany	3%	3%	3%	1%	1%	3%	2%	1%
Spain	2%	2%	2%	(1)%	(1)%	(1)%	4%	4%
Rest of Europe	4%	5%	5%	1%	4%	5%	4%	3%
SCA&C								
Colombia	4%	4%	4%	5%	4%	5%	4%	4%
Panama	2%	2%	1%	5%	3%	2%	1%	1%
Caribbean TCL	2%	2%	2%	1%	2%	2%	2%	2%
Dominican Republic	2%	1%	2%	3%	3%	6%	1%	1%
Rest of SCA&C	4%	4%	4%	7%	7%	7%	2%	1%
AMEA								
Philippines	3%	3%	3%	3%	3%	6%	2%	2%
Israel	4%	4%	5%	4%	4%	5%	2%	2%
Rest of AMEA	2%	2%	2%	2%	1%	(1)%	2%	1%
Corporate and Other Operations	9%	9%	8%	(10)%	(18)%	(25)%	4%	7%
Continuing operations	13,731	14,570	13,922	1,735	1,703	1,333	29,074	28,524
Assets held for sale and related liabilities	—	—	—	—	—	—	107	839
Eliminations	(805)	(1,039)	(792)	—	—	—	—	—
Consolidated information	<u>12,926</u>	<u>13,531</u>	<u>13,130</u>	<u>1,735</u>	<u>1,703</u>	<u>1,333</u>	<u>29,181</u>	<u>29,363</u>

(1) Percentages by reporting segment are determined from continuing operations before eliminations resulting from consolidation.

(2) Percentages by reporting segment are determined from continuing operations after eliminations resulting from consolidation.

Critical Accounting Policies

The preparation of financial statements in accordance with IFRS requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported amounts of revenues and expenses during the period. These assumptions are reviewed on an ongoing basis using available information. Actual results could differ from these estimates.

The main items subject to significant estimates and assumptions by our management include impairment tests of long-lived assets, recognition of deferred income tax assets, the measurement of financial instruments at fair value, the assets and liabilities related to employee benefits, as well as the analyses of contingent liabilities. Significant judgment by our management is required to appropriately assess the amounts of these assets and liabilities.

As of December 31, 2018 and 2019, and for the years ended December 31, 2017, 2018 and 2019, identified below are the accounting policies we have applied under IFRS that are critical to understanding our overall financial reporting.

Presentation currency

Beginning March 31, 2019, and for all subsequent periods, as permitted by IAS 21 under IFRS and with the authorization of CEMEX, S.A.B. de C.V.'s board of directors, considering the previous favorable opinion of its audit committee, we changed our presentation currency from the Mexican Peso to the Dollar considering the following factors:

- For a consolidated group that comprises operations with a number of functional currencies, it is a decision of each entity to select its presentation currency under IAS 21, which may be the currency that management uses when controlling and monitoring the performance and financial position of the group. In our case, management uses the Dollar for these purposes;
- We believe that presenting our consolidated financial information using the Dollar improves and facilitates the analysis to a broad range of users (rating agencies, analysts, investors and lenders, among others) of our consolidated financial statements; and
- The use of the Dollar as presentation currency also improves the comparison of our consolidated financial statements with those of other global entities.

Our consolidated financial statements, including comparative amounts and the accompanying notes to the audited consolidated financial statements, are presented as if the new presentation currency had always been our presentation currency. All currency translation adjustments were set to zero as of January 1, 2010, which was the date of our transition to IFRS. Translation adjustments and currency translation results of foreign subsidiaries recognized in other comprehensive income have been presented as if we had used Dollar as the presentation currency from that date. Comparative financial statements and their related notes were re-presented for the change in presentation currency by applying the methodology set out in IAS 21, using the closing exchange rates for the consolidated statements of financial position and the closing exchange rates of each month within the respective periods for consolidated income statements, consolidated statements of comprehensive income and consolidated statements of cash flows. Historic equity transactions were translated at the foreign exchange rate on the date of the transactions and were subsequently carried at historical value. In addition, as a result of this change in presentation currency and in compliance with IAS 1, *Presentation of Financial Statements*, CEMEX includes a third statement of financial position as of January 1, 2018, which incorporates the effects for the adoption of IFRS 16 described below.

Leases

Beginning January 1, 2019, IFRS 16 superseded all existing guidance related to lease accounting including IAS 17, *Leases*, and introduced a single lessee accounting model that requires a lessee to recognize, for all leases, allowing exemptions in the case of leases with a term of less than 12 months or when the underlying asset is of low value, assets for the right-of-use of the underlying asset against a corresponding financial liability, representing the net present value ("NPV") of future contractual fixed payments under the contract. Under this model, the lessee recognizes in the income statement depreciation of the asset for the right-of-use and interest on the lease liability. After concluding the inventory and measurement of its leases, we adopted IFRS 16 using the full retrospective approach by means of which we determined an opening cumulative effect in its statement of financial position as of January 1, 2017, which is the beginning of the oldest comparative period. At the inception of a lease contract, we assess whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an unidentified asset for a period in exchange for consideration.

As mentioned above, based on IFRS 16, financial liabilities related to lease contracts are recognized against assets for the right-of-use, measured at their commencement date as the NPV of the future contractual fixed payments, using the interest rate implicit in the lease or, if that rate cannot be readily determined, our incremental borrowing rate. We determine our incremental borrowing rate by obtaining interest rates from our external financing sources and making certain adjustments to reflect the term of the lease, the type of the asset leased and the economic environment in which the asset is leased.

We do not separate the non-lease component from the lease component included in the same contract. Lease payments included in the measurement of the lease liability comprise contractual rental fixed payments, less incentives, fixed payments of non-lease components and the value of a purchase option, to the extent that option is highly probable to be exercised or is considered a bargain purchase option. Interest incurred under the financial obligations related to lease contracts is recognized as part of the line item "Interest expense" in the income statement.

At the commencement date or on modification of a contract that contains a lease component, we allocate the consideration in the contract to each lease component based on their relative stand-alone prices. We apply the recognition exception for lease terms of 12 months or less and contracts of low-value assets and recognize the lease payment of these leases as rental expense in the income statement over the lease term. We defined the lease contracts related to office and computer equipment as low-value assets.

The lease liability is amortized using the effective interest method as payments are incurred and is remeasured when: (a) there is a change in future lease payments arising from a change in an index or rate, (b) if there is a change in the amount expected to be payable under a residual guarantee, (c) if we change our assessment of whether we will exercise a purchase, extension or termination option, or (d) if there is a revised in-substance fixed lease payment. When the lease liability is remeasured, an adjustment is made to the carrying amount of the asset for the right-of-use or is recognized within "Financial income and other items, net" if such asset has been reduced to zero.

The effects of IFRS 16 in our opening balance sheet as of January 1, 2017 were as follows:

Condensed Consolidated Statement of Financial Position	As of January 1, 2017 Original	IFRS 16 adoption adjustment	As of January 1, 2017 Re- presented
Total current assets	\$ 4,273	\$ –	\$ 4,273
Property, machinery and equipment, net and assets for the right-of-use, net	11,107	851	11,958
Deferred income tax assets	751	23	774
Other items of non-current assets	12,813	–	12,813
Total non-current assets	24,671	874	25,545
Total Assets	\$ 28,944	\$ 874	\$ 29,818
Short-term other financial obligations	\$ 562	\$ 163	\$ 725
Other items of current liabilities	3,571	–	3,571
Total current liabilities	4,133	163	4,296
Long-term other financial obligations	1,253	815	2,068
Deferred income tax liabilities	946	–	946
Other items of non-current liabilities	13,118	–	13,118
Total non-current liabilities	15,317	815	16,132
Total Liabilities	19,450	978	20,428
Retained earnings ⁽¹⁾	933	(104)	829
Other items of controlling interest	7,002	–	7,002
Total controlling interest	7,935	(104)	7,831
Non-controlling interest and perpetual debentures	1,559	–	1,559
Total Stockholders' Equity	9,494	(104)	9,390
Total Liabilities And Stockholders' Equity	\$ 28,944	\$ 874	\$ 29,818

(1) The initial effect refers to a temporary difference between the straight-line amortization expense of the right-of-use asset against the amortization of the financial liability under the effective interest rate method since origination of the contracts. This difference will reverse over the remaining term of the contracts.

Resulting from the adoption of IFRS 16, CEMEX re-presented its previously reported statement of financial position as of December 31, 2018, as follows:

Condensed Consolidated Statement of Financial Position	As of December 31, 2018 Original	IFRS 16 adjustment	As of December 31, 2018 Re-presented
Total current assets	\$ 3,421	\$ –	\$ 3,421
Property, machinery and equipment, net and assets for the right-of-use, net	11,423	1,031	12,454
Deferred income tax assets	592	26	618
Other items of non-current assets	12,688	–	12,688
Total non-current assets	24,703	1,057	25,760
Total Assets	\$ 28,124	\$ 1,057	\$ 29,181
Short-term other financial obligations	\$ 648	\$ 207	\$ 855
Other items of current liabilities	3,940	–	3,940
Total current liabilities	4,588	207	4,795
Long-term other financial obligations	612	980	1,592
Deferred income tax liabilities	758	(10)	748
Other items of non-current liabilities	10,993	–	10,993
Total non-current liabilities	12,363	970	13,333
Total Liabilities	16,951	1,177	18,128
Retained earnings	1,742	(120)	1,622

Condensed Consolidated Statement of Financial Position	As of December	IFRS 16 adjustment	As of December
	31, 2018 Original		31, 2018 Re-presented
Other items of controlling interest	7,859	–	7,859
Total controlling interest	9,601	(120)	9,481
Non-controlling interest and perpetual debentures	1,572	–	1,572
Total Stockholders' Equity	11,173	(120)	11,053
Total Liabilities And Stockholders' Equity	\$ 28,124	\$ 1,057	\$ 29,181

In addition, resulting from the adoption of IFRS 16, CEMEX re-presented its previously reported income statements for the years ended December 31, 2017 and 2018, as follows:

Condensed consolidated income statements	For the years ended December 31,					
	2018 Original	IFRS 16 effects	2018 Re-presented	2017 Original	IFRS 16 effects	2017 Re-presented
Revenues	\$ 13,531	\$ –	\$ 13,531	\$ 12,926	\$ –	\$ 12,926
Cost of sales	(8,883)	34	(8,849)	(8,397)	32	(8,365)
Operating expenses	(3,003)	24	(2,979)	(2,846)	20	(2,826)
Other expenses, net	(296)	–	(296)	(205)	–	(205)
Financial expense	(653)	(69)	(722)	(1,023)	(63)	(1,086)
Financial income and other items, net	35	(3)	32	219	(2)	217
Earnings before income tax	731	(14)	717	674	(13)	661
Income tax	(226)	2	(224)	(10)	(6)	(16)
Net income from continuing operations	505	(12)	493	664	(19)	645
Discontinued operations	77	–	77	222	–	222
Consolidated Net Income	582	(12)	570	886	(19)	867
Non-controlling interest net income	42	–	42	75	–	75
Controlling Interest Net Income	\$ 540	\$ (12)	\$ 528	\$ 811	\$ (19)	\$ 792

Moreover, resulting from the adoption of IFRS 16, CEMEX re-presented its previously reported statements of cash flows for the years ended December 31, 2017 and 2018, as follows:

Condensed consolidated statements of cash flows	For the years ended December 31,					
	2018 Original	IFRS 16 effects	2018 Re-presented	2017 Original	IFRS 16 effects	2017 Re-presented
OPERATING ACTIVITIES						
Net income from continuing operations	\$ 513	\$ (20)	\$ 493	\$ 673	\$ (28)	\$ 645
Non-cash items:						
Depreciation and amortization of assets	763	219	982	787	176	963
Other non-cash items	896	67	963	759	61	820
Changes in working capital, excluding income taxes	(55)	–	(55)	431	–	431
Operating cash flows from continuing operations before financial expense, coupons on perpetual debentures and income taxes	2,117	266	2,383	2,650	209	2,859
Interest on debt and coupons on perpetual debentures paid	(672)	(69)	(741)	(836)	(63)	(899)
Income taxes paid	(208)	1	(207)	(240)	(6)	(246)
Operating cash flows from continuing operations	1,237	198	1,435	1,574	140	1,714
Operating cash flows from discontinued operations	132	–	132	131	–	131
Net cash flows provided by operating activities	1,369	198	1,567	1,705	140	1,845
INVESTING ACTIVITIES						
Property, machinery and equipment and assets for the right-of-use, net	(601)	–	(601)	(567)	–	(567)
Other items of investing activities	(214)	–	(214)	1,120	–	1,120
Net cash flows provided by (used in) investing activities	(815)	–	(815)	553	–	553
FINANCING ACTIVITIES						
Other financial obligations, net	(388)	(190)	(578)	(78)	(112)	(190)
Other items of financing activities	(585)	–	(585)	(2,200)	–	(2,200)
Net cash flows used in financing activities	(973)	(190)	(1,163)	(2,278)	(112)	(2,390)

Decrease in cash and cash equivalents from continuing operations	(551)	8	(543)	(151)	28	(123)
Increase in cash and cash equivalents from discontinued operations	132	–	132	131	–	131
Foreign currency translation effect on cash	29	(8)	21	158	(28)	130
Cash and cash equivalents at beginning of period	699	–	699	561	–	561
Cash and Cash Equivalents at End of Period	<u>\$ 309</u>	<u>\$ –</u>	<u>\$ 309</u>	<u>\$ 699</u>	<u>\$ –</u>	<u>\$ 699</u>

Income Taxes

Our operations are subject to taxation in many different jurisdictions throughout the world. The effects reflected in the income statement for income taxes include the amounts incurred during the period and the amounts of deferred income taxes, determined according to the income tax law applicable to each subsidiary, reflecting uncertainty in income tax treatments, if any. Consolidated deferred income taxes represent the addition of the amounts determined in each subsidiary by applying the enacted statutory income tax rate to the total temporary differences resulting from comparing the book and taxable values of assets and liabilities, considering tax loss carryforwards and other recoverable tax credits, to the extent that it is probable that future taxable profits will be available against which they can be utilized. The measurement of deferred income taxes at the reporting period reflects the tax consequences that follow the manner in which we expect to recover or settle the carrying amount of its assets and liabilities. Deferred income taxes for the period represent the difference between balances of deferred income taxes at the beginning and the end of the period. Deferred income tax assets and liabilities relating to different tax jurisdictions are not offset. According to IFRS, all items charged or credited directly in stockholders' equity or as part of other comprehensive income or loss for the period are recognized net of their current and deferred income tax effects. The effect of a change in enacted statutory tax rates is recognized in the period in which the change is officially enacted. Our worldwide tax position is highly complex and subject to numerous laws that require interpretation and application and that are not consistent among the countries in which we operate. Significant judgment is required to appropriately assess the amounts of tax assets and liabilities.

Deferred tax assets, mainly related to tax loss carryforwards, are reviewed at each reporting date and are reduced when it is not deemed probable that the related tax benefit will be realized, considering the aggregate amount of self-determined tax loss carryforwards that we believe will not be rejected by the tax authorities based on available evidence and the likelihood of recovering them prior to their expiration through an analysis of estimated future taxable income. If it is probable that the tax authorities would reject a self-determined deferred tax asset, we would decrease such asset. When it is considered that a deferred tax asset will not be recovered before its expiration, we would not recognize such deferred tax asset. Both situations would result in additional income tax expense for the period in which such determination is made. In order to determine whether it is probable that deferred tax assets will ultimately be recovered, we take into consideration all available positive and negative evidence, including factors such as market conditions, industry analysis, expansion plans, projected taxable income, carryforward periods, current tax structure, potential changes or adjustments in tax structure, tax planning strategies and future reversals of existing temporary differences. Likewise, we analyze our actual results versus our estimates, and adjust, as necessary, our tax asset valuations. If actual results vary from our estimates, the deferred tax asset and/or valuations may be affected and necessary adjustments will be made based on relevant information in our income statement for such period.

Based on IFRIC 23, *Uncertainty over income tax treatments* ("IFRIC 23"), the income tax effects from an uncertain tax position are recognized when it is probable that the position will be sustained based on its technical merits and assuming that the tax authorities will examine each position and have full knowledge of all relevant information. The probability of each position has been considered on its own, regardless of its relation to any other broader tax settlement. The probability threshold represents a positive assertion by management that we are entitled to the economic benefits of a tax position. If it is improbable for a tax position to be sustained, no benefits of the position are recognized. Our policy is to recognize interest and penalties related to unrecognized tax benefits as part of the income tax in the consolidated income statements.

Our overall tax strategy is to structure our worldwide operations to reduce or defer the payment of income taxes on a consolidated basis. Many of the activities we undertake in pursuing this tax reduction strategy are highly complex and involve interpretations of tax laws and regulations in multiple jurisdictions and are subject to review by the relevant taxing authorities. It is possible that the taxing authorities could challenge our application of these regulations to our operations and transactions. The taxing authorities in the past have challenged interpretations that we have made and have assessed additional taxes. Although we have, from time to time, paid some of these additional assessments, in general, we believe that these assessments have not been material and that we have been successful in sustaining our positions. No assurance can be given, however, that we will continue to be as successful as we have been in the past or that pending appeals of current tax assessments will be judged in our favor.

Our effective income tax rate is determined by dividing the line item "Income tax" in our consolidated income statements into the line item "Earnings before income tax." This effective tax rate is further reconciled to our statutory tax rate applicable in Mexico and is presented in note 19.3 to our 2019 audited consolidated financial statements included elsewhere in this annual report. A significant effect on our effective tax rate, and consequently on the reconciliation of our effective tax rate, relates to the difference between the statutory income tax rate in Mexico of 30% against the applicable income tax rates of each country where we operate. For the years ended December 31, 2017, 2018 and 2019, the statutory tax rates in our main operations were as follows:

Country	2017	2018	2019
Mexico	30.0%	30.0%	30.0%
United States	35.0%	21.0%	21.0%
United Kingdom	19.3%	19.3%	19.3%

Country	2017	2018	2019
France	34.4%	34.4%	34.4%
Germany	28.2%	28.2%	28.2%
Spain	25.0%	25.0%	25.0%
Philippines	30.0%	30.0%	30.0%
Colombia	40.0%	37.0%	33.0%
Egypt	22.5%	22.5%	22.5%
Others	7.8% - 39.0%	7.8% - 39.0%	7.8% - 35.0%

Our current and deferred income tax amounts included in our consolidated income statements are highly variable and are subject, among other factors, to the amounts of taxable income determined in each jurisdiction in which we operate. Such amounts of taxable income depend on factors such as sale volumes and prices, costs and expenses, exchange rates fluctuations and interest on debt, among others, as well as on the estimated tax assets at the end of the period due to the expected future generation of taxable gains in each jurisdiction. See our discussion of operations included elsewhere in this “Item 5—Operating and Financial Review and Prospects.”

Financial instruments

Effective January 1, 2018, we adopted IFRS 9, *Financial Instruments: classification and measurement* (“IFRS 9”), which sets forth the guidance relating to the classification and measurement of financial assets and financial liabilities, the accounting for expected credit losses of financial assets and commitments to extend credits, as well as the requirements for hedge accounting. IFRS 9 replaced IAS 39, *Financial instruments: recognition and measurement* (“IAS 39”). We applied IFRS 9 prospectively. The accounting policies were changed to comply with IFRS 9. The changes required by IFRS 9 are described as follows:

- Among other things, IFRS 9 changed the classification categories for financial assets under IAS 39 and replaced them with categories that more closely reflect the measurement method, the contractual cash flow characteristics and the entity’s business model for managing the financial asset.
- Cash and cash equivalents, trade and other accounts receivable and other financial assets, which were classified as “Loans and receivables” and measured at amortized cost under IAS 39, are now classified as “Held to collect” under IFRS 9 and continue to be measured at amortized cost.
- Investments and non-current accounts receivable that were classified as “Held to maturity” and measured at amortized cost under IAS 39 are now classified as “Held to collect” under IFRS 9 and continue to be measured at amortized cost.
- Investments that were classified as “Held for trading” and measured at fair value through profit or loss under IAS 39 are now classified as “Other investments” under IFRS 9 and are measured at fair value through profit or loss.
- Certain investments that were classified as “Held for sale” and measured at fair value through other comprehensive income under IAS 39 are now considered strategic investments under IFRS 9 and continue to be measured at fair value through other comprehensive income.

Debt instruments and other financial obligations continue to be classified as “Loans” and measured at amortized cost under IFRS 9 and derivative financial instruments continue to be measured at fair value through profit or loss under IFRS 9.

We assessed which business models applied to our financial assets and liabilities as of the date of initial application of IFRS 9 and classified our financial instruments into the appropriate IFRS 9 categories. As of January 1, 2018, the changes due to the classification and measurement requirements under IFRS 9 did not impact either the measurement or carrying amount of financial assets and liabilities and there was no effect on our retained earnings.

Derivative financial instruments

In compliance with the guidelines established by our Risk Management Committee and the restrictions in our debt agreements and our hedging strategy, we use derivative financial instruments with the objectives of: (i) changing the risk profile or setting a fixed the price of fuels and electric energy; (ii) foreign exchange hedging; (iii) hedging forecasted transactions; and (iv) accomplishing other corporate objectives.

Derivative financial instruments are recognized as assets or liabilities in the balance sheet at their estimated fair values, and changes in such fair values are recognized in the income statements within “Financial income and other items, net” for the period in which they occur, except for changes in the fair value of derivative instruments associated with cash flow hedges, in which case, such changes in fair value are recognized in stockholders’ equity, and are reclassified to earnings as the interest expense of the related debt

is accrued, in the case of interest rate swaps, or when the underlying products are consumed in the case of contracts on the price of raw materials, fuel and commodities. Likewise, in hedges of the net investment in foreign subsidiaries, changes in fair value are recognized in stockholders' equity as part of the foreign currency translation result, which reversal to earnings would take place upon disposal of the foreign investment. During the reported periods, we have not designated any derivative instruments in fair value hedges. Derivative instruments are negotiated with institutions with significant financial capacity; therefore, we believe the risk of non-performance of the obligations agreed to by such counterparties to be minimal. See note 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The estimated fair value under IFRS represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, considering the counterparty's credit risk in the valuation, that is, an exit price or a market-based measurement.

In connection with hedge accounting under IFRS 9, among other changes, there is a relief for entities in performing: (a) the retrospective effectiveness test at inception of the hedging relationship and (b) the requirement to maintain a prospective effectiveness ratio between 0.8 and 1.25 at each reporting date for purposes of sustaining the hedging designation, both requirements under IAS 39. Under IFRS 9, a hedging relationship can be established to the extent the entity considers, based on the analysis of the overall characteristics of the hedging and hedged items, that the hedge will be highly effective in the future and the hedge relationship at inception is aligned with the entity's reported risk management strategy. IFRS 9 maintains the same hedge accounting categories of cash flow hedge, fair value hedge and hedge of a net investment established in IAS 39, as well as the requirement of recognizing the ineffective portion of a cash flow hedge immediately in the income statement. We performed an analysis of our derivative financial instruments upon adoption of IFRS 9 on January 1, 2018 and determined that the changes in hedge accounting described above did not impact either the measurement or carrying amount of the assets and liabilities related to our derivative financial instruments and there was no effect on our retained earnings.

The concept of exit value is premised on the existence of a market and market participants for the specific asset or liability. When there is no market and/or market participants willing to make a market, IFRS establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1—It represents quoted prices (unadjusted) in active markets for identical assets or liabilities that we have the ability to access at the measurement date. A quoted price in an active market provides the most reliable evidence of fair value and is used without adjustment to measure fair value whenever available.
- Level 2—These are inputs other than quoted prices in active markets that are observable for the asset or liability, either directly or indirectly, and are used mainly to determine the fair value of securities, investments or loans that are not actively traded. Level 2 inputs included equity prices, certain interest rates and yield curves, implied volatility, credit spreads and other market corroborated inputs, including inputs extrapolated from other observable inputs. In the absence of Level 1 inputs, we determined fair values by iteration of the applicable Level 2 inputs, the number of securities and/or the other relevant terms of the contract, as applicable.
- Level 3—These are unobservable inputs for the asset or liability. We use unobservable inputs to determine fair values, to the extent there are no Level 1 or Level 2 inputs, in valuation models such as Black-Scholes, binomial, discounted cash flows or multiples of Operating EBITDA, including risk assumptions consistent with what market participants would use to arrive at fair value.

Significant judgment and estimates by management are required to appropriately identify the corresponding level of fair value applicable to each derivative financing transaction, as well as to assess the amounts of the resulting assets and liabilities, mainly in respect of Level 2 and Level 3 fair values, in order to account for the effects of derivative financial instruments in the financial statements. See note 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Impairment of financial assets

Impairment losses of financial assets, including trade accounts receivable, are recognized using the expected credit loss model for the entire lifetime of such financial assets on initial recognition, and at each subsequent reporting period, even in the absence of a credit event or if a loss has not yet been incurred, considering for their measurement past events and current conditions, as well as reasonable and supportable forecasts affecting collectability.

Allowances for credit losses were established until December 31, 2017 based on incurred loss analyses over delinquent accounts considering aging of balances, the credit history and risk profile of each customer and legal processes to recover accounts receivable. Beginning in 2018, with the adoption of IFRS 9, such allowances are determined and recognized upon origination of the trade accounts receivable based on a model that calculates the expected credit loss (“ECL”) of the trade accounts receivable. See notes 2.1 and 9 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Under this ECL model, we segment our accounts receivable in a matrix by country, type of client or homogeneous credit risk and days past due and determine for each segment an average rate of ECL, considering actual credit loss experience over the last 24 months and analyses of future delinquency, that is applied to the balance of accounts receivable. The average ECL rate increases in each segment of days past due until the rate is 100% for the segment of 365 days or more past due. See note 9 to our 2019 audited consolidated financial statements included elsewhere in this annual report. The effects of the adoption of IFRS 9 on January 1, 2018, related to the expected credit loss model, represented an increase in our allowance for expected credit losses of \$29 million recognized against retained earnings, net of a deferred income tax asset of \$8 million. The balances of such allowance and deferred tax assets increased from the reported amounts as of December 31, 2017, of \$109 million and \$754 million, respectively, to \$138 million and \$762 million as of January 1, 2018, respectively, after the adoption effects. Significant judgment and estimates by management are required to appropriately assess expected credit losses under IFRS 9.

Impairment of long-lived assets

Our statement of financial position reflects significant amounts of long-lived assets (including property, machinery and equipment, goodwill, intangible assets of definite life and other investments) associated with our operations throughout the world. Many of these amounts have resulted from past acquisitions, which have required us to reflect these assets at their fair market values at the dates of acquisition. According to their characteristics and the specific accounting rules related to them, we assess the recoverability of our long-lived assets at least once a year, normally during the fourth quarter, as is the case for goodwill, or whenever events or circumstances arise that we believe trigger a requirement to review such carrying values, as is the case with property, machinery and equipment and intangible assets of definite life.

Property, machinery and equipment, assets for the right-of-use, intangible assets of definite life and other investments are tested for impairment upon the occurrence of factors such as the occurrence of internal or external indicators of impairment, such as changes in our operating business model or in technology that affects the asset, as well as expectations of lower operating results for each cash generating unit, in order to determine whether their carrying amounts may not be recovered. In such cases, an impairment loss is recorded in the income statements for the period when such determination is made within “Other expenses, net.” The impairment loss of an asset results from the excess of the asset’s carrying amount over its recoverable amount, corresponding to the higher of the fair value of the asset, less costs to sell such asset, and the asset’s value in use, the latter represented by the net present value of estimated cash flows related to the use and eventual disposal of the asset.

As a result of impairment tests conducted on several CGUs considering certain triggering events, mainly: (a) the closing and/or reduction of operations of cement and ready-mix concrete plants resulting from adjusting the supply to current demand conditions, such as the further adjustment in Puerto Rico in the last quarter of 2019 due to the continued adverse outlook and the overall uncertain economic conditions in such country after hurricane “Maria” in 2017; (b) change of operating model of certain assets or the transferring of installed capacity to more efficient plants; as well as (c) for certain equipment, remaining idle for several periods. For the years ended December 31, 2019, 2018 and 2017, we adjusted the related fixed assets to their estimated value in use in those circumstances in which the assets would continue in operation based on estimated cash flows during the remaining useful life, or to their realizable value, in case of permanent shut down, and recognized impairment losses within the line item of “Other expenses, net.” See note 14.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

During 2017, 2018 and 2019, the breakdown of impairment losses of fixed assets by country was as follows:

	For the Year Ended December 31,		
	2017	2018	2019
	(in millions of Dollars)		
Puerto Rico	\$ –	\$ –	\$ 52
United States	8	13	6
Colombia	–	2	3
France	3	–	1
Poland	–	5	–
Spain	24	2	–
Mexico	2	1	–
Czech Republic	8	–	–
Panama	3	–	–
Others	1	–	2
	<u>\$ 49</u>	<u>\$ 23</u>	<u>\$ 64</u>

See note 14.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

We do not have intangible assets of indefinite life other than goodwill. As mentioned above, goodwill is tested for impairment when required due to significant adverse changes or at least once a year, during the last quarter of such year, by determining the recoverable amount of the group of CGUs to which goodwill balances have been allocated, which consists of the higher of such group of CGUs fair value, less cost to sell and its value in use, represented by the discounted amount of estimated future cash flows to be generated by such CGUs to which goodwill has been allocated. Other intangible assets of indefinite life may be tested at the CGU or group of CGUs level, depending on their allocation. We determine discounted cash flows generally over periods of five years. In specific circumstances, when, according to our experience, actual results for a given cash-generating unit do not fairly reflect historical performance and most external economic variables provide us with confidence that a reasonably determinable improvement in the mid-term is expected in their operating results, management uses cash flow projections over a period of up to ten years, to the point in which future expected average performance resembles the historical average performance and to the extent we have detailed, explicit and reliable financial forecasts. If the value in use of a group of CGUs to which goodwill has been allocated is lower than its corresponding carrying amount, we determine the fair value of our reporting units using methodologies generally accepted in the market to determine the value of entities, such as multiples of Operating EBITDA and by reference to other market transactions, among others. An impairment loss under IFRS is recognized within other expenses, net, if the recoverable amount is lower than the net book value of the group of CGUs to which goodwill has been allocated. Impairment charges recognized on goodwill are not reversed in subsequent periods.

For the years ended December 31, 2017, 2018 and 2019, the reportable segments we presented in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report represent our groups of CGUs to which goodwill has been allocated for purposes of testing goodwill for impairment. In arriving at this conclusion, we considered: (i) that after the acquisition, goodwill was allocated at the level of the reportable operating segment; (ii) that the operating components that comprise the reported segment have similar economic characteristics; (iii) that the reported segments are used by us to organize and evaluate its activities in its internal information system; (iv) the homogenous nature of the items produced and traded in each operative component, which are all used by the construction industry; (v) the vertical integration in the value chain of the products comprising each component; (vi) the type of clients, which are substantially similar in all components; (vii) the operative integration among components; and (viii) whether the compensation system of the specific country is based on the consolidated results of the reportable segment and not on the particular results of the components. In addition, the country level represents the lowest level within us at which goodwill is monitored for internal management purposes.

Significant judgment by management is required to appropriately assess the fair values and values in use of these assets. Impairment tests are significantly sensitive to, among other factors, the estimation of future prices of our products, the development of operating expenses, local and international economic trends in the construction industry, the long-term growth expectations in the different markets as well as the discount rates and the growth rates in perpetuity applied. For purposes of estimating future prices, we use, to the extent available, historical data plus the expected increase or decrease according to information issued by trusted external sources, such as national construction or cement producer chambers and/or in governmental economic expectations. Operating expenses are normally measured as a constant proportion of revenues, following past experience. However, such operating expenses are also reviewed considering external information sources in respect to inputs that behave according to international prices, such as gas and oil. We use specific pre-tax discount rates for each group of CGUs to which goodwill is allocated, which are applied to pre-tax cash flows. The discount rates are determined using the approach of the weighted average cost of capital (WACC formula). The amounts of estimated undiscounted cash flows are significantly sensitive to the growth rate in perpetuity applied. The higher the growth rate in perpetuity applied, the higher the amount obtained of undiscounted future cash flows by group of CGUs obtained. Moreover, the amounts of discounted estimated future cash flows are significantly sensitive to the weighted average cost of capital (discount rate) applied. The higher the discount rate applied, the lower the amount obtained of discounted estimated future cash flows by group of CGUs obtained. Additionally, we monitor the useful lives assigned to these long-lived assets for purposes of depreciation and amortization, when applicable. This determination is subjective and is integral to the determination of whether impairment has occurred.

During the last quarter of each of 2017, 2018 and 2019, we performed our annual goodwill impairment test. Based on these analyses, during 2017, in connection with the operating segment in Spain, considering the uncertainty over the improvement indicators affecting the country's construction industry, and consequently in the expected consumption of cement, ready-mix concrete and aggregates, partially a result of the country's complex prevailing political environment, which has limited expenditure in infrastructure projects, as well as the uncertainty in the expected price recovery and the effects of increased competition and imports, our management determined that the net book value of such operating segment in Spain exceeded the amount of the net present value of projected cash flows by \$98 million. As a result, we recognized an impairment loss of goodwill in 2017 for the aforementioned amount as part of "Other expenses, net" in the income statement against the related goodwill balance. During 2018 and 2019, we did not determine impairment losses of goodwill. See note 15.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Pre-tax discount rates and long-term growth rates used to determine the discounted cash flows in the group of CGUs with the main goodwill balances in 2017, 2018 and 2019 are as follows:

Groups of CGUs	Discount rates			Growth rate		
	2017	2018	2019	2017	2018	2019
United States	8.8%	8.5%	7.8%	2.5%	2.5%	2.5%
Spain	9.5%	8.8%	8.3%	1.7%	1.7%	1.6%
Mexico	10.2%	9.4%	9.0%	2.7%	3.0%	2.4%
Colombia	10.5%	9.5%	8.9%	3.7%	3.6%	3.7%
France	9.0%	8.4%	8.0%	1.8%	1.6%	1.4%
United Arab Emirates	10.4%	11.0%	8.8%	3.1%	2.9%	2.5%
United Kingdom	9.0%	8.4%	8.0%	1.7%	1.6%	1.5%
Range of rates in other countries	9.1% - 11.8%	8.5% - 13.3%	8.1% - 11.5%	2.3% - 6.8%	2.3% - 6.9%	1.6% - 6.5%

As of December 31, 2019, the discount rates we used in our cash flows projections to determine the value in use of our operating segments generally decreased in 2019 as compared to 2018 in a range of 0.6% up to 2.6%, mainly as a result of a decrease in 2019 in the funding cost observed in the industry that changed from 7.3% in 2018 to 5.4% in 2019. The risk-free rate associated to us remained significantly flat in the level of 2.9%, while the country risk-specific rates decreased slightly in 2019 in most cases. These reductions were partially offset by a slight increase in the public comparable companies' stock volatility (beta) that changed from 1.06 in 2018 to 1.08 in 2019 and the decrease in the weighing of debt in the calculation of the discount rates that changed from 33.5% in 2018 to 31.7% in 2019. As of December 31, 2018, such discount rates decreased slightly in most cases in a range of 0.3% up to one percentage point, except for UAE and the Caribbean, as compared to 2017. This reduction was mainly attributable to a decrease in the public comparable companies' stock volatility (beta) and general decreases in the country specific sovereign yields in the majority of the countries where CEMEX operates and the weighing of debt in the calculation, effects that were partially offset for increases during 2018 in the funding cost observed in the industry that changed from 6.1% in 2017 to 7.3% in 2018 and the risk free rate associated with CEMEX which increased from 2.8% in 2017 to 2.9% in 2018. With respect to long-term growth rates, CEMEX uses country specific rates, which are mainly obtained from economic data released by the International Monetary Fund.

In connection with our assumptions included in the table above, we perform sensitivity analyses to changes in assumptions, affecting the value in use of all groups of cash-generating units with an independent reasonably possible increase of 1% in the pre-tax discount rate and an independent possible decrease of 1% in the long-term growth rate. In addition, we perform cross-check analyses for reasonableness of our results using multiples of Operating EBITDA. In order to arrive at these multiples, which represent a reasonableness check of our discounted cash flow models, we determine a weighted average of multiples of Operating EBITDA to enterprise value observed in the industry and/or in recent mergers and acquisitions in the industry. The average multiple is then applied to a stabilized amount of Operating EBITDA and the result is compared to the corresponding carrying amount for each group of cash-generating units to which goodwill has been allocated. We considered an industry weighted average Operating EBITDA multiple of 9.0x for 2017, 11.1x for 2018 and 11.5x for 2019.

As of December 31, 2017, 2018 and 2019, except for our operating segment in Spain described above, in which we determined an impairment loss of goodwill in 2017, none of our sensitivity analyses resulted in a potential impairment risk in our operating segments. Nonetheless, we continually monitor the evolution of the specific CGUs to which goodwill has been allocated and, in the event that the relevant economic variables and the related cash flows projections would be negatively affected, it may result in a goodwill impairment loss in the future.

As of December 31, 2018 and 2019, goodwill allocated to the U.S. accounted in both years for 78% of our total amount of consolidated goodwill. In connection with our determination of value in use relative to our groups of CGUs in the U.S. in the reported periods, we have considered several factors, such as the historical performance of such operating segment, including operating results in recent years, the long-term nature of our investment, the recent signs of recovery in the construction industry, the significant economic barriers for new potential competitors considering the high investment required and the lack of susceptibility of the industry to technology improvements or alternate construction products, among other factors. To improve our assurance, as mentioned above, we verified our conclusions using sensitivity analyses using Operating EBITDA multiples of recent sale transaction within the industry occurred in such country, as well as macroeconomic information regarding gross domestic product and cement consumption over the projected periods issued by the IMF and the U.S. Portland Cement Association, respectively.

Assets and liabilities related to employee benefits

The costs associated with our employees' benefits for: (i) defined benefit pension plans and (ii) other post-employment benefits, primarily comprised of health care benefits, life insurance and seniority premiums, granted by us and/or pursuant to applicable law, are recognized as services rendered, based on actuarial estimations of the benefits' present value with the advice of external actuaries. For certain pension plans, we have created irrevocable trust funds to cover future benefit payments ("plan assets"). These plan assets are valued at their estimated fair value at the statement of financial position date. The actuarial assumptions and

accounting policy consider: (i) the use of nominal rates; (ii) a single rate is used for the determination of the expected return on plan assets and the discount of the benefits obligation to present value; (iii) a net interest is recognized on the net defined benefit liability (liability minus plan assets); and (iv) all actuarial gains and losses for the period, related to differences between the projected and real actuarial assumptions at the end of the period, as well as the difference between the expected and real return on plan assets, are recognized as part of “Other items of comprehensive income, net” within stockholders’ equity.

The service cost, corresponding to the increase in the obligation for additional benefits earned by employees during the period, is recognized within operating costs and expenses. The net interest cost, resulting from the increase in obligations for changes in net present value and the change during the period in the estimated fair value of plan assets, is recognized within “Financial income and other items, net.”

The effects from modifications to the pension plans that affect the cost of past services are recognized within operating costs and expenses over the period in which such modifications become effective to the employees or without delay if changes are effective immediately. Likewise, the effects from curtailments and/or settlements of obligations occurring during the period, associated with events that significantly reduce the cost of future services and/or reduce significantly the population subject to pension benefits, respectively, are recognized within operating costs and expenses.

Contingent liabilities

We recognize provisions when there is a legal or constructive obligation to do so resulting from past events, where resolution would require cash outflows, or when required due to the delivery of other resources owned by us.

We conduct significant activities in all the countries we operate, and we are exposed to events that may create possible obligations that must be analyzed at each reporting period, in order to conclude whether we have a present obligation that could lead to an outflow of resources embodying economic benefits; or present obligations that do not meet the recognition criteria, according to IAS 37 Provisions, Contingent Liabilities and Contingent Assets.

We are involved in various legal proceedings that have arisen in the ordinary course of business. These proceedings include (1) antitrust proceedings; (2) product warranty claims; (3) claims for environmental damages; (4) indemnification claims relating to acquisitions or divestitures; (5) claims to revoke permits and/or concessions; (6) tax matters; and (7) other diverse civil, administrative, commercial and legal actions. Some of the cases require significant judgment and estimates from management to appropriately assess the likelihood of the outcomes and whether a present obligation exists. We maintain regional, country and centralized in-house legal departments which follow up on each of these cases and assist with the evaluation of the likelihood of the outcomes. In certain circumstances, external legal advice is also engaged.

Obligations or losses resulting from past events are recognized as liabilities in the statement of financial position only when present obligations exist, are probable to result in an outflow of resources and the amount can be measured reliably. We do not recognize a provision when a loss is less than probable or when it is considered probable but it is not possible to estimate the amount of the outflow. In such cases, the entity discloses a contingent liability in the notes to the financial statements, unless the possibility of an outflow of resources is remote.

We are sometimes able to make and disclose reasonable estimates of the expected loss or range of possible loss, as well as disclose any provision accrued for such loss. However, for a limited number of ongoing legal proceedings, we may not be able to make a reasonable estimate of the expected loss or range of possible loss, or may be able to do so but believe that disclosure of such information on a case-by-case basis would seriously prejudice our position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in such cases, we disclose qualitative information with respect to the nature and characteristics of the contingency but do not disclose our estimate of the range of potential loss.

Revenue Recognition

We adopted IFRS 15, *Revenues from contracts with customers* (“IFRS 15”) on January 1, 2018, using the retrospective approach without any significant effects on our operating results and financial situation. See notes 2.15 and 3 to our 2019 audited consolidated financial statements included in elsewhere in this annual report.

Under IFRS 15, an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services, following a five-step model: Step 1: Identify the contract (s) with a customer (agreement that creates enforceable rights and obligations); Step 2: Identify the different performance obligations (promises) in the contract and account for those separately; Step 3: Determine the transaction price (amount of consideration to which an entity expects to be entitled in exchange for transferring promised goods or services); Step 4: Allocate the transaction price to each performance obligation based on the relative stand-alone selling prices of each distinct good or

service; and Step 5: Recognize revenue when (or as) the entity satisfies a performance obligation by transferring control of a promised good or service to the customer. A performance obligation may be satisfied at a point in time (typically for the sale of goods) or over time (typically for the sale of services and construction contracts).

Our policies under IFRS 15 are as follows:

Revenue is recognized at a point in time or over time in the amount of the price, before tax on sales, expected to be received by our subsidiaries for goods and services supplied as a result of their ordinary activities, as contractual performance obligations are fulfilled and control of goods and services passes to the customer. Revenues are decreased by any trade discounts or volume rebates granted to customers. Transactions between related parties are eliminated in consolidation.

We recognize variable consideration when it is highly probable that a significant reversal in the amount of cumulative revenue recognized for the contract will not occur and is measured using the expected value or the most likely amount method, whichever is expected to better predict the amount based on the terms and conditions of the contract.

Revenue and costs from trading activities, in which we acquire finished goods from a third party and subsequently sell the goods to another third-party, are recognized on a gross basis, considering that we assume the total risk on the goods purchased, not acting as agent or broker.

When revenue is earned over time as contractual performance obligations are satisfied, which is the case of construction contracts, we apply the stage of completion method to measure revenue, which represents: (i) the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs; (ii) the surveys of work performed; or (iii) the physical proportion of the contract work completed, whichever better reflects the percentage of completion under the specific circumstances. Revenue and costs related to construction contracts are recognized in the period in which the work is performed by reference to the contract's stage of completion at the end of the period, considering that the following have been defined: (i) each party's enforceable rights regarding the asset under construction; (ii) the consideration to be exchanged; (iii) the manner and terms of settlement; (iv) actual costs incurred and contract costs required to complete the asset are effectively controlled; and (v) it is probable that the economic benefits associated with the contract will flow to the entity. Progress payments and advances received from customers do not reflect the work performed and are recognized as a short- or long-term advance payments, as appropriate.

Results of Operations

Consolidation of Our Results of Operations

Our 2019 audited consolidated financial statements included elsewhere in this annual report include those subsidiaries in which we hold a controlling interest or which we otherwise control. Control exists when we have the power, directly or indirectly, to govern the administrative, financial and operating policies of an entity in order to obtain benefits from its activities.

Investments in associates are accounted for by the equity method, when we have significant influence, which is generally presumed with a minimum equity interest of 20% unless it is proven that we have significant influence with a lower percentage. Under the equity method, after acquisition, the investment's original cost is adjusted for the proportional interest of the holding company in the associate's equity and earnings, considering the effects of inflation.

All balances and transactions between the group subsidiaries have been eliminated in consolidation.

Discontinued operations

Considering the disposal of entire reportable operating segments as well as the sale of significant businesses, our income statements present in the single line item of "Discontinued operations" the results of: (a) the assets held for sale in the United Kingdom for the years 2017, 2018 and 2019; (b) the assets held for sale in the U.S. related to the Kosmos cement plant in Louisville, Kentucky, and related assets for the years 2017, 2018 and 2019; (c) the white cement business held for sale in Spain for the years 2017, 2018 and 2019; (d) the French assets sold for the years ended 2017 and 2018 and for the period from January 1 to June 28, 2019; (e) the German assets sold for the years 2017 and 2018 and for the period from January 1 to May 31, 2019; (f) the Baltic and Nordic businesses sold for the years 2017 and 2018 and for the period from January 1 to March 29, 2019; (g) the operating segment in Brazil sold for the year 2017 and for the period from January 1 to September 27, 2018; (h) our Pacific Northwest Materials Business operations in the U.S. sold on June 30, 2017 for the six-months ended June 30, 2017; and (i) our Concrete Pipe Business operations in the U.S. sold on January 31, 2017 for the one-month ended January 31, 2017. Discontinued operations are presented net of income tax. See note 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Significant Transactions

For the years ended December 31, 2017, 2018 and 2019, our consolidated results reflect the following transactions:

- As of December 31, 2019, through an affiliate in the United Kingdom, we were in negotiations with Breedon for the sale of certain assets in the United Kingdom for a total consideration of \$235 million, including \$31 million of debt. The assets held for sale mainly consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom. After completion of the potential divestiture, we will retain significant operations in the United Kingdom related to the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.
- On November 26, 2019, we announced that our U.S. affiliate Kosmos, a partnership with a subsidiary of BUZZI Unicem S.p.A. in which CEMEX held a 75% interest, entered into a binding agreement for the sale of certain assets to Eagle Materials for \$665 million. The divestiture successfully closed on March 6, 2020. The share of proceeds to us from this transaction was \$499 million, minus transaction costs. The assets that were divested consisted of the Kosmos cement plant in Louisville, Kentucky, as well as related assets which include seven distribution terminals and raw material reserves. The closing of this transaction was subject to the satisfaction of certain conditions, including approval from regulators. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.
- On June 28, 2019, after obtaining customary authorizations, we closed with several counterparties the sale of our ready-mix and aggregates business in the central region of France to several counterparties for an aggregate price of €31.8 million (\$36.2 million).
- On May 31, 2019, we concluded the sale of our aggregates and ready-mix assets in the North and North-West regions of Germany to GP Günter Papenburg AG for €87 million (\$97 million). The assets divested in Germany consisted of four aggregates quarries and four ready-mix facilities in North Germany, and nine aggregates quarries and 14 ready-mix facilities in North-West Germany.
- On March 29, 2019, we closed the sale of our assets in the Baltics and Nordics to the German building materials group Schwenk for a price in Euro equivalent to \$387 million. The divested Baltic assets consisted of one cement production plant in Broceni with a production capacity of 1.7 million tons, four aggregates quarries, two cement quarries, six ready-mix plants, one marine terminal and one land distribution terminal in Latvia. The assets divested also included our 37.8% indirect interest in one cement production plant in Akmene, Lithuania with a production capacity of 1.8 million tons, as well as the exports business to Estonia. The divested Nordic assets consisted of three import terminals in Finland, four import terminals in Norway and four import terminals in Sweden. CEMEX’s operations of these disposed assets for the period from January 1 to March 29, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements net of income tax in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$66 million.
- On March 29, 2019, we entered into a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest our white cement business outside of Mexico and the U.S., for \$180 million, including our Buñol cement plant in Spain and our white cement customers list. The closing of the transaction is subject to approval by Spanish authorities. As of the date of this annual report, we expect to close the transaction during the first half of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing.
- On September 27, 2018, one of our subsidiaries concluded the sale of our Brazilian Operations through the sale to Votorantim Cimentos N/NE S.A. of all the shares of CEMEX’s Brazilian subsidiary Cimento Vencemos Do Amazonas Ltda, consisting of a fluvial cement distribution terminal located in Manaus, Amazonas province, as well as the operating license. The sale price was \$31 million.
- In August 2018, our subsidiary in the United Kingdom acquired shares of the ready-mix concrete producer Procon for an amount in Pounds Sterling equivalent to \$22 million, based on the Pound Sterling to Dollar exchange rate as of August 31, 2018. Based on the valuation of the fair values of the assets acquired and liabilities assumed, the net assets of Procon amount to \$10 million and goodwill was determined in the amount of \$12 million. See note 4.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

- On September 29, 2017, one of our subsidiaries in the U.S. closed the divestment of the Block USA Materials Business, consisting of concrete block, architectural block, concrete pavers, retaining walls and building material operations in Alabama, Georgia, Mississippi and Florida to Oldcastle for \$38 million. The proceeds obtained from this sale were used mainly for debt reduction and general corporate purposes.
- During January and September 2017, by means of a public offering on the MSE and a definitive sale to two financial institutions, respectively, we sold an aggregate of 76.5 million shares of GCC, representing a 23% equity interest that was held through our investments in associates. We received combined proceeds of \$377 million. We continue to hold a 20% indirect interest in GCC through CAMCEM, GCC's parent company.
- On June 30, 2017, we concluded the sale of our Pacific Northwest Materials Business consisting of aggregate, asphalt and ready-mix concrete operations in Oregon and Washington to Cadman Materials, Inc., a subsidiary of HeidelbergCement Group, for \$150 million.
- On February 10, 2017, one of our subsidiaries in the U.S. sold its Fairborn, Ohio cement plant and cement terminal in Columbus, Ohio to Eagle Materials for \$400 million. The proceeds obtained from this transaction were used mainly for debt reduction and for general corporate purposes.
- On January 31, 2017, one of our subsidiaries in the U.S. closed the sale of its Concrete Pipe Business to Quikrete for \$500 million plus an additional \$40 million contingent consideration based on future performance.

See notes 4.1 and 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Selected Consolidated Income Statements Data

The following table sets forth our selected consolidated income statements data for each of the three years ended December 31, 2017, 2018 and 2019 expressed as a percentage of revenues.

	Year Ended December 31,					
	2017		2018		2019	
		100%		100%		100%
Revenues						
Cost of sales	(64.7)		(65.4)		(67.2)	
Gross profit	35.3		34.6		32.8	
Operating expenses	(21.9)		(22.0)		(22.6)	
Operating earnings before other expenses, net	13.4		12.6		10.2	
Other expenses, net	(1.6)		(2.2)		(2.7)	
Operating earnings	11.8		10.4		7.5	
Financial expense	(8.4)		(5.4)		(5.4)	
Financial income and other items, net	1.4		0.0		(0.6)	
Share of profit on equity accounted investees	0.3		0.3		0.4	
Earnings before income tax	5.1		5.3		1.9	
Income tax	(0.1)		(1.7)		(1.2)	
Net income from continuing operations	5.0		3.6		0.7	
Discontinued operations	1.7		0.6		0.7	
Consolidated net income	6.7		4.2		1.4	
Non-controlling interest net income	0.6		0.3		0.3	
Controlling interest net income	6.1		3.9		1.1	

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Summarized in the table below are the percentage (%) increases (+) and decreases (-) for the year ended December 31, 2019, compared to the year ended December 31, 2018, in our domestic cement and ready-mix concrete sales volumes, as well as export sales volumes of cement and domestic cement and ready-mix concrete average sales prices for each of our reportable segments.

Reportable segments represent the components of CEMEX that engage in business activities from which we may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's top management to make decisions about resources to be allocated to the segments and assess their performance, and for which discrete financial information is available. We operate geographically and by line of business on a regional basis. For the reported periods, our operations were organized in five geographical regions, each under the supervision of a regional president, as follows: 1) Mexico, 2) the U.S., 3) Europe, 4) SCA&C and 5) AMEA. The accounting policies applied to determine the financial information by reportable segment are consistent with those described in note 2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Considering similar regional and economic characteristics and/or materiality, certain countries have been aggregated and presented as single line items as follows: (i) “Rest of Europe”; (ii) “Rest of South, Central America and the Caribbean” or Rest of SCA&C; (iii) Caribbean TCL; and (iv) “Rest of Asia, Middle East and Africa” or “Rest of AMEA.” The segment “Others” refers to: (1) cement trade maritime operations, (2) Neoris N.V., our subsidiary involved in the business of information technology solutions, (3) CEMEX, S.A.B. de C.V., other corporate entities and finance subsidiaries and (4) other minor subsidiaries with different lines of business.

The table below and the other volume data presented by reportable segment in this “—Year Ended December 31, 2019 Compared to Year Ended December 31, 2018” section are presented before eliminations resulting from consolidation (including those shown in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report).

Reportable Segment	Domestic Sales Volumes		Export Sales Volumes	Average Domestic Sales Prices in Local Currency ⁽¹⁾	
	Cement	Ready-Mix Concrete	Cement	Cement	Ready-Mix Concrete
Mexico	-15%	-14%	+22%	+2%	+3%
United States	-2%	+2%	—	+4%	+3%
Europe					
United Kingdom	-3%	-1%	—	+3%	+1%
France	—	+1%	—	—	+3%
Germany	+1%	-6%	+11%	+5%	+5%
Spain	+4%	+26%	-58%	+4%	+2%
Rest of Europe	Flat	-5%	-7%	+7%	+6%
South, Central America and the Caribbean					
Colombia	+9%	+5%	—	+5%	Flat
Panama	-15%	-28%	+80%	-6%	-3%
Caribbean TCL	-4%	-15%	+19%	Flat	-7%
Dominican Republic	+6%	-5%	-6%	+9%	+9%
Rest of South, Central America and the Caribbean	-11%	-29%	-10%	Flat	+7%
Asia, Middle East and Africa					
Philippines	-3%	—	-10%	+4%	—
Israel	—	+5%	—	—	-1%
Rest of Asia, Middle East and Africa	-21%	-23%	-68%	+3%	+3%

“—” = Not Applicable

- (1) Represents the average change in domestic cement and ready-mix concrete prices in local currency terms. For purposes of a reportable segment consisting of a region, the average prices in local currency terms for each individual country within the region are first translated into Dollar terms (except for the Rest of Europe, in which they are translated first into Euros) at the exchange rates in effect as of the end of the reporting period. Variations for a region represent the weighted average change of prices in Dollar terms (except for the Rest of Europe, in which they represent the weighted average change of prices in Euros) based on total sales volumes in the region.

On a consolidated basis, our cement sales volumes decreased 7%, from 67.2 million tons in 2018 to 62.8 million tons in 2019, and our ready-mix concrete sales volumes decreased 3%, from 51.7 million cubic meters in 2018 to 50.1 cubic meters in 2019. Our revenues decreased 3%, from \$13,531 million in 2018 to \$13,130 million in 2019, and our operating earnings before other expenses, net decreased 22%, from \$1,703 million in 2018 to \$1,333 million in 2019. See the table below for a breakdown according to reportable segment.

The following tables present selected financial information for revenues and operating earnings before other expenses, net for each of our reportable segments for the years ended December 31, 2018 and 2019. The revenues information in the table below are presented before eliminations resulting from consolidation (including those shown in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report). Variations in revenues determined on the basis of Dollars include the appreciation or depreciation which occurred during the period between the local currencies of the countries in the regions vis-à-vis the Dollar; therefore, such variations differ substantially from those based solely on the countries’ local currencies:

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Revenues For the Year Ended	
				2018	2019
Mexico	-12%	—	-12%	\$ 3,302	\$ 2,897
United States	+5%	—	+5%	3,614	3,780
Europe					
United Kingdom	+1%	-4%	-3%	773	749
France	+2%	-5%	-3%	895	869

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Revenues For the Year Ended	
				2018	2019
Germany	+8%	-6%	+2%	429	439
Spain	+1%	-5%	-4%	334	319
Rest of Europe	Flat	-8%	-8%	733	672
SCA&C					
Colombia	+7%	-11%	-4%	524	504
Panama	-18%	—	-18%	222	181
Caribbean TCL	-2%	—	-2%	254	248
Dominican Republic	+16%	-4%	+12%	218	245
Rest of SCA&C	-13%	—	-13%	590	511
AMEA					
Philippines	Flat	+2%	+2%	448	458
Israel	+3%	+2%	+5%	630	660
Rest of AMEA	-20%	—	-20%	357	286
Others	-11%	—	-11%	1,247	1,104
Revenues from continuing operations before eliminations resulting from consolidation			-4%	\$ 14,570	\$ 13,922
Eliminations resulting from consolidation				(1,039)	(792)
Revenues from continuing operations			-3%	<u>\$ 13,531</u>	<u>\$ 13,130</u>

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Operating Earnings Before Other Expenses, Net For the Year Ended December 31,	
				2018	2019
Mexico	-24%	—	-24%	\$ 1,069	\$ 810
United States	-25%	—	-25%	317	237
Europe					
United Kingdom	+1%	-1%	Flat	50	50
France	+19%	-7%	+12%	41	46
Germany	+301%	+10%	+311%	9	37
Spain	-5%	-5%	-10%	(20)	(18)
Rest of Europe	+31%	-15%	+16%	63	73
SCA&C					
Colombia	Flat	-10%	-10%	68	61
Panama	-36%	-1%	-37%	49	31
Caribbean TCL	-15%	—	-15%	39	33
Dominican Republic	+51%	-4%	+47%	51	75
Rest of SCA&C	-22%	—	-22%	112	87
AMEA					
Philippines	+37%	+2%	+39%	57	79
Israel	-2%	+2%	Flat	66	66
Rest of AMEA	-156%	+1%	-155%	22	(12)
Others	-11%	—	-11%	(290)	(322)
Operating earnings before other expenses, net from continuing operations			-22%	<u>\$ 1,703</u>	<u>\$ 1,333</u>

“—” = Not Applicable

(1) Represents the variation in local currency terms. For purposes of a reportable segment consisting of a region, the variation in local currency terms for each individual country within the region are first translated into Dollar terms (except for the Rest of Europe, in which they are translated first into Euros) at the exchange rates in effect as of the end of the reporting period. Variations for a region represent the change in Dollar terms (except for the Rest of Europe region, in which they represent the change in Euros), net, in the region.

Revenues. Our consolidated revenues decreased 3%, from \$13,531 million in 2018 to \$13,130 million in 2019. The decrease was mainly due to a decrease in our consolidated cement and ready-mix concrete sales volumes, mainly in our Mexican operations. Set forth below is a quantitative and qualitative analysis of the various factors affecting our revenues on a reportable segment basis. The discussion of volume data and revenues information below is presented before eliminations resulting from consolidation as described in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Mexico

Our domestic cement sales volumes from our operations in Mexico decreased 15% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 14% over the same period. Our revenues from our operations in Mexico represented 21% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. The decrease in domestic cement and ready-mix concrete sales volumes was primarily attributable to muted public and private investment in a government-transition year and by delays and suspensions of building permits in Mexico City. The commercial sector was the main driver of demand during the year, with favorable dynamics in tourism-related investments and commercial projects. The formal residential sector continued to be supported by mortgages from commercial banks and to a lesser degree by the Mexican National Housing Institute (Instituto del Fondo Nacional de la Vivienda para los Trabajadores) (“INFONAVIT”). Our cement export volumes from our operations in Mexico, which represented 9% of our Mexican cement sales volumes for the year ended December 31, 2019, increased 22% in 2019 compared to 2018. Of our total cement export volumes from our operations in Mexico during 2019, 67% was shipped to the U.S. and 33% to our Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement from our operations in Mexico increased 2%, in Mexican Peso terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 3%, in Mexican Peso terms, over the same period. For the year ended December 31, 2019, cement represented 58%, ready-mix concrete 23% and our aggregates and other businesses 19% of our revenues in Dollar terms from our operations in Mexico before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes, partially offset by increases in our domestic cement and ready-mix concrete sales prices, our revenues in Mexico, in Mexican Peso terms, decreased 12% in 2019 compared to 2018.

United States

Our domestic cement sales volumes from our operations in the U.S. decreased 2% in 2019 compared to 2018, and ready-mix concrete sales volumes increased 2% over the same period. The decrease in domestic cement sales volumes was primarily attributable to bad weather in some of our key states, coupled with weak residential performance during the first half of 2019, as well as unfavorable competitive dynamics in Florida. Activity in the residential sector increased during the second half of 2019, supported by lower interest rates. Infrastructure activity, particularly street-and-highway spending, remained dynamic and was driven by funding at the state/local level. In the industrial-and-commercial sector, a decrease in commercial construction was offset by growth in offices and lodging. Our operations in the U.S. represented 27% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average domestic cement sales prices of our operations in the U.S. increased 4%, in Dollar terms, in 2019 compared to 2018, and our average ready-mix concrete sales price increased 3%, in Dollar terms, over the same period. For the year ended December 31, 2019, cement represented 32%, ready-mix concrete 43% and our aggregates and other businesses 25% of revenues in Dollar terms from our operations in the U.S. before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in domestic ready-mix concrete sales volumes and our domestic cement and ready-mix concrete sales prices, partially offset by decreases in domestic cement sales volumes, revenues from our operations in the U.S., in Dollar terms, increased 5% in 2019 compared to 2018.

Europe

In 2019, our operations in the Europe region consisted of our operations in the United Kingdom, France, Germany and Spain, which represent the most significant operations in this region, in addition to the Rest of Europe. Our revenues from our operations in the Europe region represented 21% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our operations in the Europe region represented 16% of our total assets. The infrastructure sector was the main contributor to growth in regional cement demand during 2019. Multi-year projects in UK, Germany, Poland and France, favorable activity in the residential sector in Spain, Poland, Germany and the Czech Republic and positive performance in the industrial-and-commercial sector in all countries except for the UK supported cement demand growth in 2019. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the Europe region.

United Kingdom

Our domestic cement sales volumes from our operations in the United Kingdom decreased 3% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 1% over the same period. The decreases in domestic cement and ready-mix concrete sales volumes reflect continued uncertainty around Brexit. Our operations in the United Kingdom represented 5% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales

price of domestic cement from our operations in the United Kingdom increased 3%, in Pound terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 1%, in Pound terms, over the same period. For the year ended December 31, 2019, cement represented 21%, ready-mix concrete 29% and our aggregates and other businesses 50% of revenues in Dollar terms from our operations in the United Kingdom before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices, partially offset by decreases in domestic cement and ready-mix concrete volumes, revenues from our operations in the United Kingdom, in Pound terms, increased 1% in 2019 compared to 2018.

France

Our ready-mix concrete sales volumes from our operations in France increased 1% in 2019 compared to 2018. Being in the intensive phase of a large project, such as the “Grand Paris” project, as well as demand from the industrial-and-commercial sector, benefited our France operations. Our operations in France represented 6% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of ready-mix concrete of our operations in France increased 3%, in Euro terms, in 2019 compared to 2018. For the year ended December 31, 2019, ready-mix concrete represented 67% and our aggregates and other businesses 33% of revenues in Dollar terms from our operations in France before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in our ready-mix concrete sales volumes and sales prices, revenues from our operations in France, in Euro terms, increased 2% in 2019 compared to 2018.

Germany

Our domestic cement sales volumes from our operations in Germany increased 1% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 6% over the same period. The infrastructure sector was the main contributor to growth in domestic cement demand during 2019. Multi-year projects in Germany, favorable activity in the residential sector and positive performance in the industrial-and-commercial sector supported cement demand growth in 2019. Our operations in Germany represented 3% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Germany, which represented 27% of our Germany cement sales volumes for the year ended December 31, 2019 increased 11% in 2019 compared to 2018. All of our total cement export volumes from our operations in Germany during 2019, were to our Rest of Europe region. Our average sales price of domestic cement from our operations in Germany increased 5%, in Euro terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 5%, in Euro terms, over the same period. For the year ended December 31, 2019, cement represented 40%, ready-mix concrete 38% and our aggregates and other businesses 22% of revenues in Dollar terms from our operations in Germany before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in our domestic cement and ready-mix concrete sales prices and domestic cement sales volume, partially offset by decreases in ready-mix concrete sales volumes, revenues from our operations in Germany, in Euro terms, increased 8% in 2019 compared to 2018.

Spain

Our domestic cement sales volumes from our operations in Spain increased 4% in 2019 compared to 2018, while ready-mix concrete sales volumes increased 26% over the same period. The increases in domestic cement and ready-mix concrete volumes reflected improvement in the residential sector in Spain while the industrial-and-commercial sector also showed a positive performance. Our operations in Spain represented 2% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Spain, which represented 16% of our Spain cement sales volumes for the year ended December 31, 2019, decreased 58% in 2019 compared to 2018. Of our total cement export volumes from our operations in Spain during 2019, 53% were to the United Kingdom, 19% were to the Rest of Europe region, 22% were to Colombia and 6% were to the Rest of Asia, Middle East and Africa region. Our average sales price of domestic cement of our operations in Spain increased 4%, in Euro terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 2%, in Euro terms, over the same period. For the year ended December 31, 2019, cement represented 64%, ready-mix concrete 24% and our aggregates and other businesses 12% of revenues in Dollar terms from our operations in Spain before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales volumes and sales prices, revenues from our operations in Spain, in Euro terms, increased 1% in 2019 compared to 2018.

Rest of Europe

Our domestic cement sales volumes from our operations in the Rest of Europe remained flat in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 5% over the same period. Our cement export volumes from our operations in the Rest of Europe segment, which represented 7% of our Rest of Europe cement sales volumes for the year ended December 31, 2019, decreased 7% in 2019 compared to 2018. Of our total cement export volumes from our operations in Rest of Europe during 2019, 82% were within the region and 18% were to the Asia, Middle East and Africa region. Our revenues from our operations in the Rest of Europe represented 5% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Rest of Europe increased 7%, in Euro terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 6%, in Euro terms, over the same period. For the year ended December 31, 2019, cement represented 50%, ready-mix concrete 36% and our aggregates and other businesses 14% of revenues in Dollar terms from our operations in the Rest of Europe before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices, offset by a decrease in ready-mix concrete sales volumes, revenues in the Rest of Europe, in Euro terms, remained flat in 2019 compared to 2018.

South, Central America and the Caribbean

In 2019, our operations in the SCA&C region consisted of our operations in Colombia, Panama, the Dominican Republic, our Caribbean TCL operations, which represent our most significant operations in this region, and the Rest of SCA&C, Guatemala and El Salvador, excluding the acquired operations of the Caribbean TCL. Our revenues from our operations in the SCA&C region represented 13% of our total revenues in Dollar terms for the year ended December 31, 2019, before eliminations resulting from consolidation. As of December 31, 2019, our operations in the SCA&C region represented 9% of our total assets. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the SCA&C region.

Colombia

Our domestic cement sales volumes from our operations in Colombia increased 9% in 2019 compared to 2018, and ready-mix concrete sales volumes increased 5% over the same period. The increases in domestic cement sales volumes and in ready-mix concrete sales volumes were primarily due to strong infrastructure activity related to major projects, as well as good performance in the residential self-construction segment. Our revenues from our operations in Colombia represented 4% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in Colombia increased 5%, in Colombian Peso terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete remained flat, in Colombian Peso terms, over the same period. For the year ended December 31, 2019, cement represented 57%, ready-mix concrete 27% and our aggregates and other businesses 16% of our revenues in Dollar terms from our operations in Colombia before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in domestic cement and ready-mix concrete sales volumes and in our domestic cement sales prices, revenues of our operations in Colombia, in Colombian Peso terms, increased 7% in 2019 compared to 2018.

Panama

Our domestic cement sales volumes from our operations in Panama decreased 15% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 28% over the same period. The decreases in domestic cement and ready-mix concrete sales volumes in Panama were affected by a slowdown in construction, high inventory levels for apartments and offices and delays in infrastructure projects. Higher cement imports also negatively impacted industry dynamics. Our cement export volumes from our operations in the Panama segment represented less than 1% of our Panama cement sales volumes for the year ended December 31, 2019, and increased 80% in 2019 compared to 2018. All of our total cement exports from our operations in Panama during 2019 were to the Rest of South, Central America and the Caribbean region. Our revenues from our operations in Panama represented 1% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in Panama decreased 6% in Dollar terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete decreased 3%, in Dollar terms, over the same period. For the year ended December 31, 2019, cement represented 65%, ready-mix concrete 23% and our aggregates and other businesses 12% of our revenues in Dollar terms from our operations in Panama before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes and our sales prices, revenues of our operations in Panama, in Dollar terms, decreased 18% in 2019 compared to 2018.

Caribbean TCL

Our domestic cement sales volumes from our operations in Caribbean TCL decreased 4% in 2019 compared to 2018, while ready-mix concrete sales volumes decreased 15% over the same period. As mentioned in note 4.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report, CEMEX acquired a controlling interest in Caribbean TCL in February 2017. Our revenues from our operations in Caribbean TCL represented 2% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Caribbean TCL segment represented 22% of our Caribbean TCL cement sales volumes for the year ended December 31, 2019, increased 19% in 2019 compared to 2018. All of our total cement exports from our operations in Caribbean TCL during 2019 were to the Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement of our operations in Caribbean TCL remained flat, in Trinidad and Tobago Dollar terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete decreased 7%, in Trinidad and Tobago Dollar terms, over the same period. For the year ended December 31, 2019, cement represented 91%, ready-mix concrete 4% and our other businesses 5% of revenues in Dollar terms from our operations in Caribbean TCL before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes and our ready-mix concrete sales prices, revenues of our operations in Caribbean TCL, in Trinidad and Tobago Dollar terms, decreased 2% in 2019 compared to 2018.

Dominican Republic

Our domestic cement sales volumes from our operations in the Dominican Republic increased 6% in 2019 compared to 2018, while ready-mix concrete sales volumes decreased 5% over the same period. The increases in our domestic cement sales volumes in our Dominican Republic region were mainly driven by strong activity in tourism-related projects and a solid residential sector. Our operations in the Dominican Republic represented 2% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in the Dominican Republic, which represented 13% of our Dominican Republic cement sales volumes for the year ended December 31, 2019, decreased 6% in 2019 compared to 2018. Of our total cement export volumes from our operations in the Dominican Republic during 2019, all were to our Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement of our operations in the Dominican Republic increased 9%, in Dominican Peso terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 9%, in Dominican Peso terms, over the same period. For the year ended December 31, 2019, cement represented 76%, ready-mix concrete 11% and our aggregates and other businesses 13% of revenues in Dollar terms from our operations in the Dominican Republic before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices and domestic cement sale volumes, partially offset by decreases in domestic ready-mix concrete sales volumes, revenues from our operations in the Dominican Republic, in Dominican Peso terms, increased 16% in 2019 compared to 2018.

Rest of South, Central America and the Caribbean

Our domestic cement volumes from our operations in the Rest of South, Central America and the Caribbean decreased 11% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 29% over the same period. Our cement export volumes from our operations in the Rest of South, Central America and the Caribbean segment, which represented 6% of our Rest of South, Central America and the Caribbean cement sales volumes for the year ended December 31, 2019, decreased 10% in 2019 compared to 2018. Of our total cement export volumes from our operations in Rest of South, Central America and the Caribbean during 2019, 69% were within the same region and 31% were to the Rest of Europe region. Our revenues from our operations in the Rest of South, Central America and the Caribbean represented 4% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Rest of South, Central America and the Caribbean remained flat in Dollar terms, in 2019 compared to 2018, and our average sales price of ready-mix concrete increased 7%, in Dollar terms, over the same period. For the year ended December 31, 2019, cement represented 85%, ready-mix concrete 9% and our aggregates and other businesses 6% of revenues in Dollar terms from our operations in the Rest of South, Central America and the Caribbean before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes, partially offset by an increase in our ready-mix concrete sales prices, revenues of our operations in the Rest of South, Central America and the Caribbean, in Dollar terms, decreased 13% in 2019 compared to 2018.

Asia, Middle East and Africa

For the year ended December 31, 2019, our operations in the Asia, Middle East and Africa region consisted of our operations in the Philippines and Israel, which represent the most significant operations in this region, in addition to the Rest of Asia, Middle East and Africa, which refers primarily to operations in Egypt and the UAE. Our revenues from our operations in the Asia, Middle East and Africa region represented 10% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2019, our operations in the Asia, Middle East and Africa region represented 5% of our total assets. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the Asia, Middle East and Africa region.

The Philippines

Our domestic cement sales volumes from our operations in the Philippines decreased 3% in 2019 compared to 2018. Despite an improvement in activity early in the year, the decrease in domestic cement volumes was mainly caused by adverse weather conditions in December 2019, due to two typhoons which hit Luzon and Visayas, our most important markets. Our cement export volumes from our operations in the Philippines, which represented less than 1% of our Philippines cement sales volumes for the year ended December 31, 2019, decreased 10% in 2019 compared to 2018. All of our total cement exports from our operations in Philippines during 2019 were to the Rest of Asia, Middle East and Africa region. Our revenues from our operations in the Philippines represented 3% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Philippines increased 4%, in Philippine Peso terms, in 2019 compared to 2018. For the year ended December 31, 2019, cement represented 99.6% and our aggregate and other businesses 0.4% of our revenues in Dollar terms from our operations in the Philippines before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

Increases in our domestic cement sales prices were completely offset by decreases in domestic cement sales volumes. As a result, revenues of our operations in the Philippines, in Philippine Peso terms, remained flat in 2019 compared to 2018.

Israel

Our ready-mix concrete sales volumes from our operations in Israel increased 5% in 2019 compared to 2018. The increase in the ready-mix concrete sales volumes was mainly driven by an increase in market demand and industrial-and-commercial activity was especially positive. Our operations in Israel represented 5% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of ready-mix concrete of our operations in Israel decreased 1%, in Israeli New Shekel terms, in 2019 compared to 2018. For the year ended December 31, 2019, ready-mix concrete represented 68% and our aggregates and other businesses 32% of revenues in Dollar terms from our operations in Israel before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in ready-mix concrete sales volumes, partially offset by decreases in our ready-mix concrete sales prices, revenues from our operations in Israel, in Israeli New Shekel terms, increased 3% in 2019 compared to 2018.

Rest of Asia, Middle East and Africa

Our domestic cement sales volumes from our operations in the Rest of Asia, Middle East and Africa decreased 21% in 2019 compared to 2018, and ready-mix concrete sales volumes decreased 23% over the same period. Our cement export volumes from our operations in Rest of Asia, Middle East and Africa, which represented less than 1% of our Rest of Asia, Middle East and Africa cement sales volumes for the year ended December 31, 2019, decreased 68% in 2019 compared to 2018. All of our total cement exports from our operations in the region during 2019 were within the same operations region. Our revenues from our operations in our Rest of Asia, Middle East and Africa segment represented 2% of our total revenues for the year ended December 31, 2019, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement increased 3%, in Dollar terms, in 2019 compared to 2018, and the average sales price of ready-mix concrete increased 3%, in Dollar terms, over the same period. For the year ended December 31, 2019, cement represented 68%, ready-mix concrete 30% and our aggregates and other business 2% of revenues from our operations in the Rest of Asia, Middle East and Africa before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes, partially offset by an increase in our domestic cement sales volumes and ready-mix concrete sales prices, revenues from our operations in Rest of Asia, Middle East and Africa, in Dollar terms, decreased 20% in 2019 compared to 2018.

Others (Revenues)

Revenues from our Others segment decreased 11% before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable, in 2019 compared to 2018, in Dollar terms. The decrease resulted primarily from a decrease in our worldwide cement volume of our trading operations and a decrease in our information technology solutions company. For the year ended December 31, 2019, our information technology solutions company represented 28% and our trading operations represented 37% of our revenues in our Others segment, in Dollar terms.

Cost of Sales

Our cost of sales, including depreciation, decreased 0.3% from \$8,849 million in 2018 to \$8,825 million in 2019. As a percentage of revenues, cost of sales increased from 65.4% in 2018 to 67.2% in 2019. The increase in cost of sales as a percentage of revenues was mainly driven by higher maintenance, an increase in raw materials cost and freight costs partially mitigated by lower energy costs. Our cost of sales includes freight expenses of raw materials used in our producing plants.

Gross Profit

For the reasons described above, our gross profit decreased 8% from \$4,682 million in 2018 to \$4,305 million in 2019. As a percentage of revenues, gross profit decreased from 34.6% in 2018 to 32.8% in 2019. In addition, our gross profit may not be directly comparable to those of other entities that include all their freight expenses in cost of sales. As described below, we include freight expenses of finished products from our producing plants to our points of sale and from our points of sale to our customers' locations within operating expenses as part of distribution and logistics expenses.

Operating expenses

Our operating expenses, which are represented by administrative, selling and distribution and logistics expenses, decreased 0.2%, from \$2,979 million in 2018 to \$2,979 million in 2019. As a percentage of revenues, operating expenses increased from 22.0% in 2018 to 22.6% in 2019. Our operating expenses include expenses related to personnel, equipment and services involved in sales activities and storage of product at points of sale, which are included as part of the operating expenses, as well as freight expenses of finished products between plants and points of sale and freight expenses between points of sale and the customers' facilities, which are included as part of the line item "Distribution and logistics expenses." For the years ended December 31, 2018 and 2019, selling expenses included as part of the line item "Operating expenses" amounted to \$312 million and \$371 million, respectively. As discussed above, we include freight expenses of finished products from our producing plants to our points of sale and from our points of sale to our customers' locations within distribution and logistics expenses, which in the aggregate represented costs of \$1,537 million in 2018 and \$1,489 million in 2019. As a percentage of revenues, distribution and logistics expenses decreased from 11.4% in 2018 to 11.3% in 2019.

Operating Earnings Before Other Expenses, Net

For the reasons described above, our operating earnings before other expenses, net decreased 22% from \$1,703 million in 2018 to \$1,333 million in 2019. As a percentage of revenues, operating earnings before other expenses, net decreased from 12.6% in 2018 to 10.2% in 2019. Additionally, set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our operating earnings before other expenses, net on a reportable segment basis.

Mexico

Our operating earnings before other expenses, net, from our operations in Mexico decreased 24% in 2019 compared to 2018, in Dollar terms, from operating earnings before other expenses, net, of \$1,069 million in 2018 to operating earnings before other expenses, net, of \$810 million in 2019. Our operating earnings before other expenses, net from our operations in Mexico represented 61% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from the decrease in our revenues driven by a decrease in our sales volumes.

United States

Our operating earnings before other expenses, net, from our operations in the U.S. decreased 25% in 2019 compared to 2018, in Dollar terms. Our operating earnings before other expenses, net from our operations in the U.S. represented 18% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from uneven demand dynamics among our four key states, which increased supply chain and transportation costs and was further exacerbated by higher maintenance, partially offset by the increase in revenues.

Europe

United Kingdom. Our operating earnings before other expenses, net, from our operations in the United Kingdom increased 1%, in Pound terms, in 2019 compared to 2018. Our operating earnings before other expenses, net from our operations in the United Kingdom represented 4% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from an increase in our revenues.

France. Our operating earnings before other expenses, net, from our operations in France increased 19%, in Euro terms, in 2019 compared to 2018. Our operating earnings before other expenses, net from our operations in France represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from an increase in our revenues and due to our cost reduction efforts.

Germany. Our operating earnings before other expenses, net, from our operations in Germany increased 301%, in Euro terms, in 2019 compared to 2018. Our operating earnings before other expenses, net from our operations in Germany represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from an increase in our revenues as well as our cost reduction efforts.

Spain. Our operating loss before other expenses, net, from our operations in Spain decreased 5% in 2019 compared to 2018, in Euro terms. Our operating loss before other expenses, net from our operations in Spain represented a loss of \$18 million, which was a negative impact of 1% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from an increase in our production and operational costs, partially offset by an increase in our revenues.

Rest of Europe. Our operating earnings before other expenses, net, from our operations in the Rest of Europe increased 31% in 2019 compared to 2018, in Euro terms. Our operating earnings before other expenses, net from our operations in the Rest of Europe region represented 5% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from a decrease in our operating costs.

South, Central America and the Caribbean

Colombia. Our operating earnings before other expenses, net, from our operations in Colombia remained flat in 2019 compared to 2018, in Colombian Peso terms. Our operating earnings before other expenses, net from our operations in Colombia represented 5% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase in revenues from our Colombian operations was offset by an increase in our energy costs.

Panama. Our operating earnings before other expenses, net, from our operations in Panama decreased 36% in 2019 compared to 2018, in Dollar terms. Our operating earnings before other expenses, net from our operations in Panama represented 2% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from a decrease in our revenues, as well as an increase in our operational costs.

Caribbean TCL. Our operating earnings before other expenses, net, from our operations in Caribbean TCL decreased 15% in 2019 compared to 2018, in Trinidad and Tobago Dollar terms. Our operating earnings before other expenses, net from our Caribbean TCL operations represented 2% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from a decrease in our revenues and an increase in our distribution expenses.

Dominican Republic. Our operating earnings before other expenses, net, from our operations in the Dominican Republic increased 51% in 2019 compared to 2018, in Dominican Peso terms. Our operating earnings before other expenses, net from our operations in the Dominican Republic represented 6% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from an increase in our revenues.

Rest of South, Central America and the Caribbean. Our operating earnings before other expenses, net, from our operations in the Rest of South, Central America and the Caribbean decreased 22% in 2019 compared to 2018, in Dollar terms. Our operating earnings before other expenses, net from our operations in the Rest of South, Central America and the Caribbean region represented 7% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from a decrease in our revenues.

Asia, Middle East and Africa

The Philippines. Our operating earnings before other expenses, net, from our operations in the Philippines increased 37% in 2019 compared to 2018, in Philippine Peso terms. Our operating earnings before other expenses, net from our operations in the Philippines represented 6% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The increase resulted primarily from a decrease in our operating costs.

Israel. Our operating earnings before other expenses, net, from our operations in Israel decreased 2% in 2019 compared to 2018, in Israeli New Shekel terms. Our operating earnings before other expenses, net from our operations in Israel represented 5% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease in Israel operating earnings resulted primarily from an increase in our operating costs, partially offset by an increase in our revenues.

Rest of Asia, Middle East and Africa. Our operating earnings before other expenses, net, from our operations in the Rest of Asia, Middle East and Africa decreased significantly by 156% in 2019 compared to 2018, in Dollar terms. Our operating loss before other expenses, net from our operations in the Rest of Asia, Middle East and Africa region represented a loss of \$12 million, which was a negative impact of 1% of our total operating earnings before other expenses, net for the year ended December 31, 2019, in Dollar terms. The decrease resulted primarily from a decrease in our revenues and an increase in our operational costs.

Others. Our operating loss before other expenses, net, from our operations in our Others segment increased 11% in 2019 compared to 2018, in Dollar terms. The increase resulted primarily from a decrease in our revenues from our Others segment, mainly in connection with a decrease in our trading operations revenues.

Other Expenses, Net. Our other expenses, net, increased 17%, in Dollar terms, from an expense of \$296 million in 2018 to an expense of \$347 million in 2019, including in both years, expenses related to property damages and natural disasters of \$56 million in 2018 and \$55 million in 2019. The increase in 2019 resulted primarily from expenses recognized in 2019 related to the Mexican Reorganization of \$45 million and the recognition of a settlement loss of \$24 million in 2019 related to our change of a multiemployer plan in the U.S. from defined benefit to defined contribution. See notes 6, 14, 18 and 27 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The most significant items included under this caption for the years ended December 31, 2018 and 2019, are as follows:

	For the Years Ended December 31,	
	2018	2019
	(in millions of Dollars)	
Results from the sale of assets and others, net	\$ 149	\$ 230
Restructuring costs	72	48
Impairment losses	62	64
Remeasurement of pension liabilities	8	-
Charitable contributions	5	5
	<u>\$ 296</u>	<u>\$ 347</u>

Financial expense. Our financial expense decreased 2%, from \$722 million in 2018 to \$711 million in 2019, primarily attributable to lower interest rates on our financial debt and a lower average financial debt during 2019 compared to 2018. See note 16.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Financial income and other items, net. Our financial income and other items, net, in Dollar terms, increased significantly, from an expense of \$2 million in 2018 to an expense of \$71 million in 2019, mainly as a result of negative foreign exchange results during the year which changed from a gain of \$10 million in 2018 to a loss of \$32 million in 2019 mainly considering the fluctuation of the Mexican Peso against the Dollar, partially offset by the fluctuation of the Euro against the Dollar, and our results from financial instruments, net, which changed from a gain of \$39 million in 2018 to a loss of \$1 million in 2019 as a result of lower valuation gains on our equity forwards on third-party shares, partially compensated by a one-off loss on the remeasurement of previously held interest before change in control of associates of \$10 million in 2018, resulting from last fair value adjustments related to our acquisition of TCL. See notes 13.1 and 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The most significant items included under this caption for the years ended December 31, 2018 and 2019 are as follows:

	For the Year Ended	
	December 31,	
	2018	2019
	(in millions of Dollars)	
Financial income and other items, net:		
Effects of amortized cost on assets and liabilities and others, net	\$ (59)	\$ (59)
Foreign exchange results	10	(32)
Results from financial instruments, net	39	(1)
Financial income	18	21
Remeasurement of previously held interest before change in control of associates	(10)	-
	<u>\$ (2)</u>	<u>\$ (71)</u>

Income Taxes. Our income tax effect in the income statements, which is comprised of current income taxes plus deferred income taxes, decreased 28% from an expense of \$224 million in 2018 to \$162 million in 2019.

Our current income tax expense increased from \$99 million in 2018 to \$143 million in 2019, mainly as a result of increases in taxes in Colombia, the Dominican Republic and the Netherlands. In addition, during 2018, there was a positive effect of tax uncertainties compared to 2019. Our deferred income tax expense decreased from a deferred income tax expense of \$125 million in 2018 to \$19 million in 2019, mainly associated with the recognition of deferred tax assets related to tax loss carryforwards from our operations in Mexico, a lower use of net operating losses in the U.S. compared to 2018 and a lower reserve of intellectual property tax value in Switzerland compared to 2018. See notes 19.1, 19.2, 19.3 and 19.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

For each of the years ended December 31, 2018 and 2019, our statutory income tax rate in Mexico was 30%. Considering a decrease in our earnings before income taxes from \$717 million in 2018 to \$253 million in 2019 mentioned above, as well as differences between accounting and tax expenses, partially offset by the recognition of deferred tax assets during 2019, our average effective income tax rate increased from an income tax rate of 31.2% in 2018 to 64.0% in 2019. Our average effective tax rate equals the net amount of income tax expense divided by earnings before income taxes, as these line items are reported in our consolidated income statements. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—Certain tax matters may have a material adverse effect on our cash flow, financial condition and net income, as well as on our reputation” and note 19.3 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Net Income from continuing operations. For the reasons described above, our net income from continuing operations for 2019 decreased 82%, from a net income from continuing operations of \$493 million in 2018 to a net income from continuing operations of \$91 million in 2019. As a percentage of revenues, net income from continuing operations represented 3.6% for the year ended as of December 31, 2018 and 0.7% for the year ended as of December 31, 2019.

Discontinued operations. For the years ended December 31, 2018 and 2019, our discontinued operations included in our consolidated income statements amounted to a net income from discontinued operations of \$77 million and a net income from discontinued operations of \$88 million, respectively. As a percentage of revenues, discontinued operations, net of tax, represented 0.6% for the year ended as of December 31, 2018, and 0.7% for the year ended as of December 31, 2019. See note 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Consolidated Net Income. For the reasons described above, our consolidated net income (before deducting the portion allocable to non-controlling interest) for 2019 decreased 69%, from a consolidated net income of \$570 million in 2018 to a consolidated net income of \$179 million in 2019. As a percentage of revenues, consolidated net income represented 4.2% for the year ended as of December 31, 2018, and 1.4% for the year ended as of December 31, 2019.

Non-controlling Interest Net Income. Changes in non-controlling interest net income in any period reflect changes in the percentage of the stock of our subsidiaries held by non-associated third parties as of the end of each month during the relevant period and the consolidated net income attributable to those subsidiaries. Non-controlling interest net income decreased 14%, from an income of \$42 million in 2018 to an income of \$36 in 2019, primarily attributable to a decrease in the net income of the consolidated entities in which others have a non-controlling interest. As a percentage of revenues, non-controlling interest net income represented 0.3% for the years ended as of December 31, 2018 and 2019. See note 20.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Controlling Interest Net Income. Controlling interest net income represents the difference between our consolidated net income and non-controlling interest net income, which is the portion of our consolidated net income attributable to those of our subsidiaries in which non-associated third parties hold interests. For the reasons described above, our controlling interest net income decreased 73%, from a controlling interest net income of \$528 million in 2018 to \$143 million in 2019. As a percentage of revenues, controlling interest net income, represented 3.9% for the year ended as of December 31, 2018, and 1.1% for the year ended as of December 31, 2019.

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

Summarized in the table below are the percentage (%) increases (+) and decreases (-) for the year ended December 31, 2018, compared to the year ended December 31, 2017, in our domestic cement and ready-mix concrete sales volumes, as well as export sales volumes of cement and domestic cement and ready-mix concrete average sales prices for each of our reportable segments.

Reportable segments represent the components of CEMEX that engage in business activities from which we may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity’s top management to make decisions about resources to be allocated to the segments and assess their performance, and for which discrete financial information is available. We

operate geographically and by line of business on a regional basis. For the reported periods, our operations were reorganized into five geographical regions, each under the supervision of a regional president, as follows: (1) Mexico, (2) the U.S., (3) Europe, (4) SCA&C, and (5) AMEA. Under our then new organization, the geographical operating segments under the former Mediterranean region were incorporated to the Europe region or the Asia, Middle East and Africa. The accounting policies applied to determine the financial information by reportable segment are consistent with those described in note 2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Considering similar regional and economic characteristics and/or materiality, certain countries have been aggregated and presented as single line items as follows: (i) Rest of Europe; (ii) Rest of South, Central America and the Caribbean; (iii) Caribbean TCL; and (iv) Rest of Asia, Middle East and Africa.

The table below and the other volume data presented by reportable segment in this “—Year Ended December 31, 2018 Compared to Year Ended December 31, 2017” section are presented before eliminations resulting from consolidation (including those shown on note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report).

Reportable Segment	Domestic Sales Volumes		Export Sales Volumes	Average Domestic Sales Prices in Local Currency ⁽¹⁾	
	Cement	Ready-Mix Concrete	Cement	Cement	Concrete
Mexico	+1%	+10%	+51%	+3%	+8%
United States	+4%	+8%	—	+2%	+2%
Europe					
United Kingdom	-5%	-2%	—	-1%	Flat
France	—	+28%	—	—	+4%
Germany	-1%	-8%	-24%	+2%	+6%
Spain	+4%	+34%	-36%	+5%	+2%
Rest of Europe	+5%	+1%	-34%	+4%	+7%
South, Central America and the Caribbean					
Colombia	-6%	-11%	—	+2%	Flat
Panama	-18%	-15%	—	-1%	-7%
Caribbean TCL	+6%	+10%	+16%	+2%	-11%
Dominican Republic	-1%	-8%	-10%	+11%	+4%
Rest of South, Central America and the Caribbean	+2%	-9%	-46%	Flat	Flat
Asia, Middle East and Africa					
Philippines	+7%	-94%	+4%	+1%	-1%
Israel	—	+4%	—	—	+2%
Rest of Asia, Middle East and Africa	-2%	-7%	-28%	+15%	+11%

“—” = Not Applicable

(1) Represents the average change in domestic cement and ready-mix concrete prices in local currency terms.

For purposes of a reportable segment consisting of a region, the average prices in local currency terms for each individual country within the region are first translated into Dollar terms (except for the Rest of Europe, in which they are translated first into Euros) at the exchange rates in effect as of the end of the reporting period. Variations for a region represent the weighted average change of prices in Dollar terms (except for the Rest of Europe, in which they represent the weighted average change of prices in Euros) based on total sales volumes in the region.

On a consolidated basis, our cement sales volumes increased 3%, with 65 million tons in 2017 and 67 million tons in 2018, and our ready-mix concrete sales volumes increased 6%, from 49 million cubic meters in 2017 to 52 cubic meters in 2018. Our revenues increased 5%, from \$12,926 million in 2017 to \$13,531 in 2018, and our operating earnings before other expenses, net decreased 2%, from \$1,735 million in 2017 to \$1,703 million in 2018.

The following tables present selected financial information for revenues and operating earnings before other expenses, net for each of our reportable segments for the years ended December 31, 2017 and 2018. The revenues information in the table below are presented before eliminations resulting from consolidation (including those shown in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report). Variations in revenues determined on the basis of Dollars include the appreciation or depreciation which occurred during the period between the local currencies of the countries in the regions vis-à-vis the Mexican Peso; therefore, such variations differ substantially from those based solely on the countries' local currencies:

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Revenues For the Year Ended	
				2017	2018
Mexico	+9%	-3%	+6%	\$ 3,104	\$ 3,302

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Revenues For the Year Ended	
				2017	2018
United States	+9%	—	+9%	3,320	3,614
Europe					
United Kingdom	-2%	-6%	-8%	841	773
France	+8%	+3%	+11%	805	895
Germany	+6%	-2%	+4%	412	429
Spain	+8%	+1%	+9%	306	334
Rest of Europe	+14%	+5%	+19%	616	733
SCA&C					
Colombia	-7%	—	-7%	566	524
Panama	-17%	—	-17%	266	222
Caribbean TCL	+10%	-1%	+9%	232	254
Dominican Republic	+10%	-5%	+5%	207	218
Rest of SCA&C	-2%	—	-2%	605	590
AMEA					
Philippines	+6%	-4%	+2%	440	448
Israel	+5%	-1%	+4%	603	630
Rest of AMEA	+12%	—	+12%	318	357
Others	+14%	—	+14%	1,090	1,247
Revenues from continuing operations before eliminations resulting from consolidation			+6%	\$ 13,731	\$ 14,570
Eliminations resulting from consolidation				(805)	(1,039)
Revenues from continuing operations			+5%	\$ 12,926	\$ 13,531

Reportable Segment	Variation in Local Currency ⁽¹⁾	Approximate Currency Fluctuations	Variation in Dollars (in millions of Dollars)	Operating Earnings Before Other Expenses, Net for the Year Ended	
				2017	2018
Mexico	+6%	-3%	+3%	\$ 1,041	\$ 1,069
United States	+42%	—	+42%	224	317
Europe					
United Kingdom	-46%	+3%	-43%	87	50
France	+68%	+10%	+78%	23	41
Germany	-23%	-13%	-36%	14	9
Spain	+4%	+1%	+5%	(19)	(20)
Rest of Europe	+468%	+5%	+473%	11	63
SCA&C					
Colombia	-21%	—	-21%	86	68
Panama	-45%	—	-45%	89	49
Caribbean TCL	+56%	—	+56%	25	39
Dominican Republic	+13%	-4%	+9%	47	51
Rest of SCA&C	-9%	—	-9%	123	112
AMEA					
Philippines	+17%	+4%	+21%	47	57
Israel	+5%	-2%	+3%	64	66
Rest of AMEA	-20%	-11%	-31%	32	22
Others	-82%	—	-82%	(159)	(290)
Operating earnings before other expenses, net form continue operations			-2%	\$ 1,735	\$ 1,703

“—” = Not Applicable

- (1) Represents the variation in local currency terms. For purposes of a reportable segment consisting of a region, the variation in local currency terms for each individual country within the region are first translated into Dollar terms (except for the Rest of Europe, in which they are translated first into Euros) at the exchange rates in effect as of the end of the reporting period. Variations for a region represent the change in Dollar terms (except for the Rest of Europe region, in which they represent the change in Euros), net, in the region.

Revenues. Our consolidated revenues increased 5%, from \$12,926 million in 2017 to \$13,531 million in 2018. The increase was primarily attributable to higher prices for our products, in local currency terms, in our Mexico, the U.S. and Europe regions, as well as higher cement volumes in our Mexico, the U.S., Europe and Rest of Asia, Middle East and Africa regions. Set forth below is a quantitative and qualitative analysis of the various factors affecting our revenues on a reportable segment basis. The discussion of volume data and revenues information below is presented before eliminations resulting from consolidation as described in note 4.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Mexico

Our domestic cement sales volumes from our operations in Mexico increased 1% in 2018 compared to 2017, and ready-mix concrete sales volumes increased 10% over the same period. Our revenues from our operations in Mexico represented 23% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Cement volumes during the year were supported by increased demand from the formal residential and industrial-and-commercial sector mitigated by lower infrastructure activity. In the formal residential sector, investment in mortgages for new home acquisitions continued to grow as INFONAVIT surpassed its 2018 target. In the industrial-and-commercial sector, favorable dynamics continued in tourism, office-space and manufacturing-related construction. Our cement export volumes from our operations in Mexico, which represented 6% of our Mexican cement sales volumes for the year ended December 31, 2018, increased 51% in 2018 compared to 2017. Of our total cement export volumes from our operations in Mexico during 2018, 63% was shipped to the U.S., and 37% to our Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement from our operations in Mexico increased 3%, in Mexican Peso terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete increased 8%, in Mexican Peso terms, over the same period. For the year ended December 31, 2018, cement represented 57%, ready-mix concrete 22% and our aggregates and other businesses 21% of our revenues in Dollar terms from our operations in Mexico before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices and domestic cement and ready-mix concrete sales volumes, our revenues in Mexico, in Mexican Peso terms, increased 9% in 2018 compared to 2017.

United States

Our domestic cement sales volumes from our operations in the U.S. increased 4% in 2018 compared to 2017, and ready-mix concrete sales volumes increased 8% over the same period. Residential and infrastructure activity were the main drivers of volume growth. In the industrial-and-commercial sector, construction spending was driven by offices, lodging and commercial activity. Regarding infrastructure, street-and-highway spending continued to grow in 2018. Contract awards in our key states are growing in the double-digits and in excess of the national average, driven by specific state infrastructure funding initiatives. Our operations in the U.S. represented 25% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average domestic cement sales prices of our operations in the U.S. increased 2%, in Dollar terms, in 2018 compared to 2017, and our average ready-mix concrete sales price increased 2%, in Dollar terms, over the same period. For the year ended December 31, 2018, cement represented 32%, ready-mix concrete represented 42% and our aggregates and other businesses represented 26% of revenues in Dollar terms from our operations in the U.S. before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in our domestic cement and ready-mix concrete sales volumes and domestic cement and ready-mix concrete sales prices, revenues from our operations in the U.S., in Dollar terms, increased 9% in 2018 compared to 2017.

Europe

In 2018, our operations in the Europe region consisted of our operations in the United Kingdom, France, Germany and Spain, which represent the most significant operations in this region, in addition to the Rest of Europe, which refers primarily to operations in Poland, Czech Republic and Croatia. Our revenues from our operations in the Europe region represented 21% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2018, our operations in the Europe region represented 19% of our total assets. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the Europe region.

United Kingdom

Our domestic cement sales volumes from our operations in the United Kingdom decreased 5% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 2% over the same period. The decreases in domestic cement and ready-mix concrete sales volumes reflect continued uncertainty around Brexit. Our operations in the United Kingdom represented 5% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the United Kingdom decreased 1%, in Pound terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete remained flat, in Pound terms, over the same period. For the year ended December 31, 2018, cement represented 21%, ready-mix concrete 28% and our aggregates and other businesses 51% of revenues in Dollar terms from our operations in the United Kingdom before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in our domestic cement and ready-mix concrete sales volumes and domestic cement sales prices, revenues from our operations in the United Kingdom, in Pound terms, decreased 2% in 2018 compared to 2017.

France

Our ready-mix concrete sales volumes from our operations in France increased 28% in 2018 compared to 2017. Infrastructure activity was the main driver of volume, including the “Grand Paris” project, as well as demand from the industrial-and-commercial sector. Our operations in France represented 6% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of ready-mix concrete of our operations in France increased 4%, in Euro terms, in 2018 compared to 2017. For the year ended December 31, 2018, ready-mix concrete represented 67% and our aggregates and other businesses 33% of revenues in Dollar terms from our operations in France before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in our ready-mix concrete sales volumes and our sales prices, revenues from our operations in France, in Euro terms, increased 8% in 2018 compared to 2017.

Germany

Our domestic cement sales volumes from our operations in Germany decreased 1% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 8% over the same period. The decrease in ready-mix concrete volumes reflected, in part, continued supply constraints in the construction industry. This also resulted in lower domestic cement volumes supplied to our ready-mix concrete operations. Our operations in Germany represented 3% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Germany, which represented 25% of our Germany cement sales volumes for the year ended December 31, 2018, decreased 24% in 2018 compared to 2017. Our average sales price of domestic cement from our operations in Germany increased 2%, in Euro terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete increased 6%, in Euro terms, over the same period. For the year ended December 31, 2018, cement represented 32%, ready-mix concrete 34% and our aggregates and other businesses 34% of revenues in Dollar terms from our operations in Germany before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of the increases in our domestic cement and ready-mix concrete sales prices, partially offset by decreases in domestic cement and ready-mix concrete sales volumes, revenues from our operations in Germany, in Euro terms, increased 6% in 2018 compared to 2017.

Spain

Our domestic cement sales volumes from our operations in Spain increased 4% in 2018 compared to 2017, while ready-mix concrete sales volumes increased 34% over the same period. The increase in domestic cement and ready-mix concrete volumes reflected in part the introduction of ten new ready-mix concrete plants and three new aggregates quarries. Activity from the residential and industrial-and-commercial sectors continued to be favorable. The residential sector continued to benefit from favorable credit conditions, low interest rates, positive income perspectives and pent-up housing demand, with double-digit growth in both housing permits and mortgages. Our operations in Spain represented 2% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Spain, which represented 32% of our Spain cement sales volumes for the year ended December 31, 2018, decreased 36% in 2018 compared to 2017. Of our total cement export volumes from our operations in Spain during 2018, 5% were to the SCA&C region, 22% were to the U.S., 32% were to the United Kingdom, 10% were to the Rest of Europe region and 31% were to the Rest of Asia, Middle East and Africa region. Our average sales price of domestic cement of our operations in Spain increased 5%, in Euro terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete increased 2%, in Euro terms, over the same period. For the year ended December 31, 2018, cement represented 70%, ready-mix concrete 20% and our aggregates and other businesses 10% of revenues in Dollar terms from our operations in Spain before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales volumes and sales prices, revenues from our operations in Spain, in Euro terms, increased 8% in 2018 compared to 2017.

Rest of Europe

Our domestic cement sales volumes from our operations in the Rest of Europe increased 5% in 2018 compared to 2017, and ready-mix concrete sales volumes increased 1% over the same period. Our cement export volumes from our operations in the Rest of Europe segment, which represented 8% of our Rest of Europe cement sales volumes for the year ended December 31, 2018, decreased 34% in 2018 compared to 2017. Of our total cement export volumes from our operations in Rest of Europe during 2018, 7% were to Dominican Republic, 31% were to Israel, 50% were within the region and 12% were to the Asia, Middle East and Africa region. Our revenues from our operations in the Rest of Europe represented 5% of our total revenues for the year ended December 31, 2018, in

Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Rest of Europe increased 4%, in Euro terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete increased 7%, in Euro terms, over the same period. For the year ended December 31, 2018, cement represented 41%, ready-mix concrete 30% and our aggregates and other businesses 29% of revenues in Dollar terms from our operations in the Rest of Europe before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices, revenues in the Rest of Europe, in Euro terms, increased 14% in 2018 compared to 2017.

South, Central America and the Caribbean

Our revenues from our operations in the SCA&C region represented 13% of our total revenues in Dollar terms for the year ended December 31, 2018, before eliminations resulting from consolidation. As of December 31, 2018, our operations in the SCA&C region represented 10% of our total assets. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the SCA&C region.

Colombia

Our domestic cement sales volumes from our operations in Colombia decreased 6% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 11% over the same period. The decreases in domestic cement sales volumes and in ready-mix concrete sales volumes were primarily due to a general industry downturn and an aggressive pricing strategy carried out by our competitors. Our revenues from our operations in Colombia represented 4% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in Colombia increased 2%, in Colombian Peso terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete remained flat, in Colombian Peso terms, over the same period. For the year ended December 31, 2018, cement represented 51%, ready-mix concrete 27% and our aggregates and other businesses 22% of our revenues in Dollar terms from our operations in Colombia before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in domestic cement and ready-mix concrete sales volumes, partially offset by an increase in our domestic cement sales prices, revenues of our operations in Colombia, in Colombian Peso terms, decreased 7% in 2018 compared to 2017.

Panama

Our domestic cement sales volumes from our operations in Panama decreased 18% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 15% over the same period. The decreases in domestic cement and ready-mix concrete sales volumes reflected the market slowdown and slow execution of infrastructure projects. Our revenues from our operations in Panama represented 2% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in Panama decreased 1% in Dollar terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete decreased 7%, in Dollar terms, over the same period. For the year ended December 31, 2018, cement represented 61%, ready-mix concrete represented 26% and our aggregates and other businesses represented 13% of our revenues in Dollar terms from our operations in Panama before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in our domestic cement and ready-mix concrete sales volumes and sales prices, revenues of our operations in Panama, in Dollar terms, decreased 17% in 2018 compared to 2017.

Caribbean TCL

Our domestic cement sales volumes from our operations in Caribbean TCL increased 6% in 2018 compared to 2017, while ready-mix concrete sales volumes increased 10% over the same period. As mentioned in note 4.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report, CEMEX acquired a controlling interest in Caribbean TCL in February 2017. Our revenues from our operations in Caribbean TCL represented 2% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in Caribbean TCL segment represented 19% of our Caribbean TCL cement sales volumes for the year ended December 31, 2018, increased 16% in 2018 compared to 2017. All of our total cement exports from our operations in Caribbean TCL during 2018 were to the Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement of our operations in Caribbean TCL increased 2%, in Trinidad and Tobago Dollar terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete decreased 11%, in Trinidad and Tobago Dollar terms, over the same period. For the year ended December 31, 2018, cement represented 89%,

ready-mix concrete 4% and our other businesses 7% of revenues in Dollar terms from our operations in Caribbean TCL before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales volumes and domestic cement sales prices, partially offset by decreases in our ready-mix concrete sales prices, revenues of our operations in Caribbean TCL, in Trinidad and Tobago Dollar terms, increased 10% in 2018 compared to 2017.

Dominican Republic

Our domestic cement sales volumes from our operations in the Dominican Republic decreased 1% in 2018 compared to 2017, while ready-mix concrete sales volumes decreased 8% over the same period. The decreases in our domestic cement and ready-mix concrete sales volumes in our Dominican Republic region were mainly driven by lower consumption from the private sector, fewer government projects and delays of state permits to initiate. Our operations in the Dominican Republic represented 1% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our cement export volumes from our operations in the Dominican Republic, which represented 14% of our Dominican Republic cement sales volumes for the year ended December 31, 2018, decreased 10% in 2018 compared to 2017. Of our total cement export volumes from our operations in the Dominican Republic during 2018, all were to our Rest of South, Central America and the Caribbean region. Our average sales price of domestic cement of our operations in the Dominican Republic increased 11%, in Dominican Peso terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete increased 4%, in Dominican Peso terms, over the same period. For the year ended December 31, 2018, cement represented 75%, ready-mix concrete 11% and our aggregates and other businesses 14% of revenues in Dollar terms from our operations in the Dominican Republic before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices, partially offset by decreases in domestic cement and ready-mix concrete sales volumes, revenues from our operations in the Dominican Republic, in Dominican Peso terms, increased 10% in 2018 compared to 2017.

Rest of South, Central America and the Caribbean

Our domestic cement volumes from our operations in the Rest of South, Central America and the Caribbean increased 2% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 9% over the same period. Our cement export volumes from our operations in the Rest of South, Central America and the Caribbean segment, which represented 6% of our Rest of South, Central America and the Caribbean cement sales volumes for the year ended December 31, 2018, decreased 46% in 2018 compared to 2017. Of our total cement export volumes from our operations in Rest of South, Central America and the Caribbean during 2018, 96% were within the same region and 4% were to the Rest of Europe region. Our revenues from our operations in the Rest of South, Central America and the Caribbean represented 4% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Rest of South, Central America and the Caribbean remained flat in Dollar terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete remained flat, in Dollar terms, over the same period. For the year ended December 31, 2018, cement represented 84%, ready-mix concrete 10% and our other businesses 6% of revenues in Dollar terms from our operations in the Rest of South, Central America and the Caribbean before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of decreases in ready-mix concrete sales volumes, partially offset by an increase in domestic cement sales volumes, revenues of our operations in the Rest of South, Central America and the Caribbean, in Dollar terms, decreased 2% in 2018 compared to 2017.

Asia, Middle East and Africa

For the year ended December 31, 2018, our operations in the Asia, Middle East and Africa region consisted of our operations in the Philippines and Israel, which represent the most significant operations in this region, in addition to the Rest of Asia, Middle East and Africa, which refers primarily to operations in Egypt and the UAE. Our revenues from our operations in the Asia, Middle East and Africa region represented 9% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. As of December 31, 2018, our operations in the Asia, Middle East and Africa region represented 6% of our total assets. Set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our revenues for our main operations in the Asia, Middle East and Africa region.

The Philippines

Our domestic cement sales volumes from our operations in the Philippines increased 7% in 2018 compared to 2017, and ready-mix concrete sales volumes, which for the year ended December 31, 2018, represented less than 1% of our revenues in Dollar terms from our operations in the Philippines, decreased 94% over the same period. The increase in domestic cement volumes were supported by the infrastructure and residential sectors, coupled with operational and logistics debottlenecking efforts. Our cement export volumes from our operations in the Philippines, which represented less than 1% of our Philippines cement sales volumes for the year ended December 31, 2018, increased 4% in 2018 compared to 2017. All of our total cement exports from our operations in Philippines during 2018 were to the Rest of Asia, Middle East and Africa region. Our revenues from our operations in the Philippines represented 3% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement from our operations in the Philippines increased 1%, in Philippine Peso terms, in 2018 compared to 2017, and our average sales price of ready-mix concrete decreased 1%, in Philippine Peso terms, over the same period. For the year ended December 31, 2018, cement represented 99% and our aggregates and other businesses 1% of our revenues in Dollar terms from our operations in the Philippines before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement sales volumes and our sales prices, partially offset by decreases in our domestic ready-mix concrete sales volumes and our sales prices, revenues of our operations in the Philippines, in Philippine Peso terms, increased 6% in 2018 compared to 2017.

Israel

Our ready-mix concrete sales volumes from our operations in Israel increased 4% in 2018 compared to 2017. The increase in the ready-mix concrete sales volumes was mainly driven by an increase in market demand, as well as projects in the south and center regions. Our operations in Israel represented 4% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of ready-mix concrete of our operations in Israel increased 2%, in Israeli New Shekel terms, in 2018 compared to 2017. For the year ended December 31, 2018, ready-mix concrete represented 66% and our aggregates and other businesses 34% of revenues in Dollar terms from our operations in Israel before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our ready-mix concrete sales volumes and sales prices, revenues from our operations in Israel, in Israeli New Shekel terms, increased 5% in 2018 compared to 2017.

Rest of Asia, Middle East and Africa

Our domestic cement sales volumes from our operations in the Rest of Asia, Middle East and Africa decreased 2% in 2018 compared to 2017, and ready-mix concrete sales volumes decreased 7% over the same period. Our cement export volumes from our operations in Rest of Asia, Middle East and Africa, which represented 1% of our Rest of Asia, Middle East and Africa cement sales volumes for the year ended December 31, 2018, decreased 28% in 2018 compared to 2017. All our total cement exports from our operations in the region during 2018 were within the same operations region. Our revenues from our operations in our Rest of Asia, Middle East and Africa segment represented 2% of our total revenues for the year ended December 31, 2018, in Dollar terms, before eliminations resulting from consolidation. Our average sales price of domestic cement increased 15%, in Dollar terms, in 2018 compared to 2017, and the average sales price of ready-mix concrete increased 11%, in Dollar terms, over the same period. For the year ended December 31, 2018, cement represented 66%, ready-mix concrete 31% and our aggregates and other business 3% of revenues from our operations in the Rest of Asia, Middle East and Africa before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable.

As a result of increases in our domestic cement and ready-mix concrete sales prices, partially offset by decreases in our domestic cement and ready-mix concrete sales volumes, revenues from our operations in Rest of Asia, Middle East and Africa, in Dollar terms, increased 12% in 2018 compared to 2017.

Others

Revenues from our Others segment increased 14% before intra-sector eliminations within the segment and before eliminations resulting from consolidation, as applicable, in 2018 compared to 2017, in Dollar terms. The increase resulted primarily from an increase in our worldwide cement volume of our trading operations and a sales increase in our information technology solutions company. For the year ended December 31, 2018, our information technology solutions company represented 20%, our trading operations represented 50% and other businesses represented 30% of our revenues in our Others segment, in Dollar terms.

Cost of Sales

Our cost of sales, including depreciation, increased 6% from \$8,365 million in 2017 to \$8,849 million in 2018. As a percentage of revenues, cost of sales increased from 64.7% in 2017 to 65.4% in 2018. The increase in cost of sales as a percentage of revenues was mainly driven by higher energy costs, as well as higher volumes of purchased cement and clinker. Our cost of sales includes freight expenses of raw materials used in our producing plants.

Gross Profit

For the reasons described above, our gross profit increased 3% from \$4,561 million in 2017 to \$4,682 million in 2018. As a percentage of revenues, gross profit decreased from 35.3% in 2017 to 34.6% in 2018. In addition, our gross profit may not be directly comparable to those of other entities that include all their freight expenses in cost of sales. As described below, we include freight expenses of finished products from our producing plants to our points of sale and from our points of sale to our customers' locations within operating expenses as part of distribution and logistics expenses.

Operating expenses

Our operating expenses, which are represented by administrative, selling and distribution and logistics expenses, increased 5%, from \$2,826 million in 2017 to \$2,979 million in 2018. As a percentage of revenues, operating expenses increased from 21.9% in 2017 to 22.0% in 2018. Our operating expenses include expenses associated with personnel, equipment and services involved in sales and administrative activities and storage of product at points of sale, which are included as part of the operating expenses, as well as freight expenses of finished products between plants and points of sale and freight expenses between points of sale and the customers' facilities, which are included as part of the line item "Distribution and logistics expenses." For the years ended December 31, 2017 and 2018, selling expenses included as part of the line item "Operating expenses" amounted to \$323 million and \$312 million, respectively. As discussed above, we include freight expenses of finished products from our producing plants to our points of sale and from our points of sale to our customers' locations within distribution and logistics expenses, which in the aggregate represented costs of \$1,412 million in 2017 and \$1,537 million in 2018. As a percentage of revenues, distribution and logistics expenses increased from 10.9% in 2017 to 11.4% in 2018.

Operating Earnings Before Other Expenses, Net

For the reasons described above, our operating earnings before other expenses, net decreased 2% from \$1,735 million in 2017 to \$1,703 million in 2018. As a percentage of revenues, operating earnings before other expenses, net decreased from 13.4% in 2017 to 12.6% in 2018. Additionally, set forth below is a quantitative and qualitative analysis of the effects of the various factors affecting our operating earnings before other expenses, net on a reportable segment basis.

Mexico

Our operating earnings before other expenses, net, from our operations in Mexico increased 3% in 2018 compared to 2017, in Dollar terms, from operating earnings before other expenses, net, of \$1,041 million in 2017 to operating earnings before other expenses, net, of \$1,069 million in 2018. Our operating earnings before other expenses, net from our operations in Mexico represented 63% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from the increase in our revenues, partially offset by higher maintenance cost.

United States

Our operating earnings before other expenses, net, from our operations in the U.S. increased 42% in 2018 compared to 2017, in Dollar terms. Our operating earnings before other expenses, net from our operations in the U.S. represented 19% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues.

Europe

United Kingdom. Our operating earnings before other expenses, net, from our operations in the United Kingdom decreased 46% in 2018 compared to 2017, in Pound terms. Our operating earnings before other expenses, net from our operations in the United Kingdom represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from a decrease in our revenues, as well as higher production cost.

France. Our operating earnings before other expenses, net, from our operations in France increased 68% in 2018 compared to 2017, in Euro terms. Our operating earnings before other expenses, net from our operations in France represented 2% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues and due to our cost reduction efforts.

Germany. Our operating earnings before other expenses, net, from our operations in Germany decreased 23% in 2018 compared to 2017, in Euro terms. Our operating earnings before other expenses, net from our operations in Germany represented 1% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from an increase in our operational costs, partially offset by an increase in our revenues.

Spain. Our operating loss before other expenses, net, from our operations in Spain increased 4% in 2018 compared to 2017, in Euro terms. Our operating loss before other expenses, net from our operations in Spain represented a loss of \$20 million, which was a negative impact of 1% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our production and operational costs, partially offset by an increase in our revenues.

Rest of Europe. Our operating earnings before other expenses, net, from our operations in the Rest of Europe increased 468% in Euro terms in 2018 compared to 2017, in Euro terms. Our operating earnings before other expenses, net from our operations in the Rest of Europe region represented 4% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues and an increase in our operating costs.

South, Central America and the Caribbean

Colombia. Our operating earnings before other expenses, net, from our operations in Colombia decreased 21% in 2018 compared to 2017, in Colombian Peso terms. Our operating earnings before other expenses, net from our operations in Colombia represented 4% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from a decrease in revenues, as well as an increase in our production cost due to lower demand.

Panama. Our operating earnings before other expenses, net, from our operations in Panama decreased 45% in 2018 compared to 2017, in Dollar terms. Our operating earnings before other expenses, net from our operations in Panama represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from a decrease in our revenues, as well as an increase in our energy cost.

Caribbean TCL. Our operating earnings before other expenses, net, from our operations in Caribbean TCL increased 56% in 2018 compared to 2017, in Trinidad and Tobago Dollar terms. Our operating earnings before other expenses, net from our Caribbean TCL operations represented 2% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues.

Dominican Republic. Our operating earnings before other expenses, net, from our operations in the Dominican Republic increased 13% in 2018 compared to 2017, in Dominican Peso terms. Our operating earnings before other expenses, net from our operations in the Dominican Republic represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues, partially offset by an increase in production cost.

Rest of South, Central America and the Caribbean. Our operating earnings before other expenses, net, from our operations in the Rest of South, Central America and the Caribbean decreased 9% in 2018 compared to 2017, in Dollar terms. Our operating earnings before other expenses, net from our operations in the Rest of South, Central America and the Caribbean region represented 7% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from a decrease in our revenues.

Asia, Middle East and Africa

The Philippines. Our operating earnings before other expenses, net, from our operations in the Philippines increased 17% in 2018 compared to 2017, in Philippine Peso terms. Our operating earnings before other expenses, net from our operations in the Philippines represented 3% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues.

Israel. Our operating earnings before other expenses, net, from our operations in Israel increased 5% in 2018 compared to 2017, in Israeli New Shekel terms. Our operating earnings before other expenses, net from our operations in Israel represented 4% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The increase resulted primarily from an increase in our revenues.

Rest of Asia, Middle East and Africa. Our operating earnings before other expenses, net, from our operations in the Rest of Asia, Middle East and Africa decreased 20% in 2018 compared to 2017, in Dollar terms. Our operating earnings before other expenses, net from our operations in the Rest of Asia, Middle East and Africa region represented 1% of our total operating earnings before other expenses, net for the year ended December 31, 2018, in Dollar terms. The decrease resulted primarily from an increase in our production cost, partially offset by an increase in our revenues.

Others. Our operating loss before other expenses, net, from our operations in our Others segment increased 82% in 2018 compared to 2017, in Dollar terms. The increase resulted primarily from an increase in our operating cost from our other segment, partially offset by an increase in our revenues.

Other Expenses, Net. Our other expenses, net, increased 44%, in Dollar terms, from an expense of \$205 million in 2017 to an expense of \$296 million in 2018. The increase in 2018 resulted primarily from the losses from the sale of assets and others, net, which includes a loss of \$56 million in connection with property damages and natural disasters, partially offset by a decrease in impairment losses in 2018 compared to 2017. As a percentage of revenues, other expenses, net, increased from 1.6% in 2017 to 2.2% in 2018. See notes 6, 14, and 15 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The most significant items included under this caption for the years ended December 31, 2017 and 2018 are as follows:

	For the Year Ended December 31,	
	2017	2018
	(in millions of Dollars)	
Results from the sale of assets and others, net	\$ 2	\$ 149
Restructuring costs	45	72
Impairment losses	151	62
Remeasurement of pension liabilities	–	8
Charitable contributions	7	5
	<u>\$ 205</u>	<u>\$ 296</u>

Financial expense. Our financial expense decreased 34%, from \$1,086 million in 2017 to \$722 million in 2018, primarily attributable to lower interest rates on our financial debt as well as a decrease in our financial debt during 2018 compared to 2017. See note 16.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Financial income and other items, net. Our financial income and other items, net, in Dollar terms, decreased significantly, from a gain of \$184 million in 2017 to a loss of \$2 million in 2018, mainly as a result of the sale of associates and the remeasurement of previously held interest before change in control of associates, which decreased significantly, from a gain of \$221 million in 2017 to a loss of \$10 million in 2018, primarily attributable to the gain from the sale of GCC's common stock during 2017. See notes 7.2 and 13.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The most significant items included under this caption for the years ended December 31, 2017 and 2018 are as follows:

	For the Year Ended December 31,	
	2017	2018
	(in millions of Dollars)	
Financial income and other items, net:		
Effects of amortized cost on assets and liabilities and others, net	\$ (59)	\$ (59)
Foreign exchange results	(5)	10
Results from financial instruments, net	9	39
Financial income	18	18
Results in the sale of associates and remeasurement of previously held interest before change in control of associates	221	(10)
	<u>\$ 184</u>	<u>\$ (2)</u>

Income Tax. Our income tax effect in the income statements, which is primarily comprised of current income taxes plus deferred income taxes, increased significantly from an expense of \$16 million in 2017 to an expense of \$224 million in 2018.

The increase in the income tax expense is mainly attributable to an increase in our deferred income tax expense during the period, which decreased from a deferred income tax revenue of \$168 million in 2017, mainly associated with the recognition of deferred tax assets related to tax loss carryforwards from our operations in the U.S. in 2017, to a deferred tax expense of \$125 million in 2018 that includes the derecognition of deferred income tax assets of \$92 million mainly related to net operating tax losses recognized in prior years. Such increase in our deferred income tax expense during 2018 was partially offset by a decrease in our current income tax expense, which decreased from \$184 million in 2017 to \$99 million in 2018. The decrease in our current income tax expense in 2018 was mainly attributable to lower taxable income in certain operations, such as Central and South America, as well as a reduction in our uncertain tax positions during the period of \$32 million. See notes 19.1, 19.2, 19.3 and 19.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

For each of the years ended December 31, 2017 and 2018, our statutory income tax rate in Mexico was 30%. Our average effective tax rate in 2017, as described below, resulted in an effective income tax rate of 2.4%, considering earnings before income tax of \$661 million, and our average effective income tax rate in 2018 resulted in an effective income tax rate of 31.2%, considering earnings before income tax of \$717 million. Our average effective income tax rate equals the net amount of income tax expense divided by earnings before income taxes, as these line items are reported in our consolidated income statements. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—Certain tax matters may have a material adverse effect on our cash flow, financial condition and net income, as well as on our reputation” and note 19.3 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Net Income from continuing operations. For the reasons described above, our net income from continuing operations for 2018 decreased 24%, from a net income from continuing operations of \$645 million in 2017 to a net income from continuing operations of \$493 million in 2018. As a percentage of revenues, net income from continuing operations represented 5.0% for the year ended as of December 31, 2017 and 3.6% for the year ended as of December 31, 2018.

Discontinued operations. For the years ended December 31, 2017 and 2018, our discontinued operations included in our consolidated income statements amounted to \$222 million and \$77 million, respectively. As a percentage of revenues, discontinued operations, net of tax, represented 1.7% for the year ended as of December 31, 2017, and 0.6% for the year ended as of December 31, 2018. See note 4.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Consolidated Net Income. For the reasons described above, our consolidated net income (before deducting the portion allocable to non-controlling interest) for 2018 decreased 34%, from a consolidated net income of \$867 million in 2017 to a consolidated net income of \$570 million in 2018. As a percentage of revenues, consolidated net income represented 6.7% for the year ended as of December 31, 2017, and 4.2% for the year ended as of December 31, 2018.

Non-controlling Interest Net Income. Changes in non-controlling interest net income in any period reflect changes in the percentage of the stock of our subsidiaries held by non-associated third parties as of the end of each month during the relevant period and the consolidated net income attributable to those subsidiaries.

Non-controlling interest net income decreased 44%, from an income of \$75 million in 2017 to an income of \$42 million in 2018, primarily attributable to a decrease in the net income of the consolidated entities in which others have a non-controlling interest. As a percentage of revenues, non-controlling interest net income represented 0.6% for the year ended as of December 31, 2017, and 0.3% for the year ended as of December 31, 2018. See note 20.4 to our 2018 audited consolidated financial statements included elsewhere in this annual report.

Controlling Interest Net Income. Controlling interest net income represents the difference between our consolidated net income and non-controlling interest net income, which is the portion of our consolidated net income attributable to those of our subsidiaries in which non-associated third parties hold interests. For the reasons described above, our controlling interest net income decreased 33%, from a controlling interest net income of \$792 million in 2017 to \$528 million in 2018. As a percentage of revenues, controlling interest net income, represented 6.1% for the year ended as of December 31, 2017, and 3.9% for the year ended as of December 31, 2018.

Liquidity and Capital Resources

Operating Activities

We have satisfied our operating liquidity needs primarily through the operation of our subsidiaries and expect to continue to do so for both the short and long-term. Although cash flow from our operations has historically met our overall liquidity needs for operations, servicing debt and funding capital expenditures and acquisitions, our subsidiaries are exposed to risks from changes in foreign currency exchange rates, price and currency controls, interest rates, inflation, governmental spending, social instability and other political, economic and/or social developments in the countries in which we operate, among other risks, any one of which may materially decrease our net income and cash from operations. Consequently, in order to meet our liquidity needs, we also rely on cost-cutting and operating improvements to optimize capacity utilization and maximize profitability, as well as borrowing under credit facilities, loans, proceeds of debt and equity offerings and proceeds from asset sales, including our account receivables securitizations. Our consolidated net cash flows provided by operating activities from continuing operations before financial expense and coupons on Perpetual Debentures and income taxes paid in cash were \$2,859 million in 2017, \$2,383 million in 2018 and \$2,144 million in 2019. See our statements of cash flows included elsewhere in this annual report. CEMEX management is of the opinion that working capital is sufficient for our current requirements.

Sources and Uses of Cash

Our review of sources and uses of cash below refers to nominal amounts included in our consolidated statements of cash flows for 2017, 2018 and 2019.

Our primary sources and uses of cash during the years ended December 31, 2017, 2018 and 2019 were as follows:

	Year Ended December 31,		
	2017	2018	2019
	(in millions of Dollars)		
Operating Activities			
Consolidated Net Income	867	570	179
Discontinued operations	222	77	88
Net income from continuing operations	645	493	91
Non-cash items	1,783	1,945	1,955
Changes in working capital, excluding income taxes	431	(55)	98
Net cash flows provided by operating activities from continuing operations before Interest and coupons on Perpetual Debentures and income taxes	2,859	2,383	2,144
Financial expense and coupons on Perpetual Debentures and income taxes paid	(1,145)	(948)	(862)
Net cash flows provided by operating activities from continuing operations	1,714	1,435	1,282
Net cash flows provided by operating activities from discontinued operations	131	132	71
Net cash flows provided by operating activities	1,845	1,567	1,353
Investing Activities			
Property, machinery and equipment, net	(567)	(601)	(651)
Acquisition and disposal of subsidiaries and other disposal groups, net	1,202	(26)	469
Intangible assets and other non-current assets and others, net	(82)	(188)	(111)
Net cash flows (used in) provided by investing activities	553	(815)	(293)
Financing Activities			
Dividends paid	–	–	(150)
Derivative financial instruments	16	20	(56)
Proceeds from (repayments of) debt, net	(2,056)	(420)	47
Other financial obligations, net	(190)	(578)	(233)
Share repurchase program	–	(75)	(50)
Securitization of trade receivables	25	32	(6)
Non-current liabilities, net	(185)	(142)	(96)
Net cash flows used in financing activities	(2,390)	(1,163)	(544)
Increase (decrease) in cash and cash equivalents from continuing operations	(123)	(543)	445
Increase in cash and cash equivalents from discontinued operations	131	132	71
Foreign currency translation effect on cash	130	21	(37)
Cash and cash equivalents at beginning of period	561	699	309
Cash and cash equivalents at end of period	699	309	788

2019. During 2019, excluding the negative foreign currency effect of our initial balances of cash and cash equivalents generated during the period of \$37 million, there was an increase in cash and cash equivalents from continuing operations of \$445 million. This increase was the result of our net cash flows provided by operating activities from continuing operations, which, after interest and coupons on Perpetual Debentures and income taxes paid in cash of \$862 million, amounted to \$1,282 million, partially offset by our net cash flows used in financing activities of \$544 million and our net cash flows used in investing activities of \$293 million.

For the year ended December 31, 2019, our net cash flows provided by operating activities included cash flows generated from changes in working capital, excluding income taxes, of \$98 million, which was primarily comprised of other accounts receivable and other assets, inventories and other accounts payable and accrued expenses, for an aggregate amount of \$147 million, partially offset by trade payables and trade receivables, net for an aggregate amount of \$49 million.

During 2019, our net cash flows provided by operating activities from continuing operations after interest and coupons on Perpetual Debentures and income taxes paid in cash of \$862 million, amounted to \$1,282 million, were mainly disbursed in connection with (i) our net cash flows used in financing activities of \$544 million, which include dividends paid of \$150 million, resources used in our share repurchase program of \$50 million, derivative financial instruments, of \$56 million and resources used in our other financial obligations, net, of \$233 million, partially offset by net proceeds from debt of \$47 million and (ii) our net cash flows used in the investing activities from continuing operations of \$293 million, which was primarily comprised of investment in property, machinery and equipment, net, and intangible assets and other non-current assets and others, net, for an aggregate amount of \$762 million, partially offset by net resources from disposal of subsidiaries of \$469 million.

2018. During 2018, excluding the positive foreign currency effect of our initial balances of cash and cash equivalents generated during the period of \$21 million, there was a decrease in cash and cash equivalents from continuing operations of \$543 million. This decrease was the result of our net cash flows used in financing activities of \$1,163 million and our net cash flows used in investing activities of \$815 million, partially offset by our net cash flows provided by operating activities from continuing operations, which, after interest expense and coupons on Perpetual Debentures and income taxes paid in cash of \$948 million, amounted to \$1,435 million.

For the year ended December 31, 2018, our net cash flows provided by operating activities included cash flows applied in working capital, excluding income taxes, of \$55 million, which was primarily comprised of other accounts receivable and other assets, inventories and other accounts payable and accrued expenses, for an aggregate amount of \$301 million, partially offset by trade payables and trade receivables, net for an aggregate amount of \$246 million.

During 2018, our net cash flows provided by operating activities from continuing operations after interest and coupons on Perpetual Debentures and income taxes paid in cash of \$948 million, amounted to \$1,435 million, were disbursed in connection with (i) our net cash flows used in financing activities of \$1,163 million, which include repayment of our debt, net, other financial obligations, net, share repurchase program and non-current liabilities, net, for an aggregate amount of \$1,215 million, partially offset by derivative instruments and securitization of trade receivables for an aggregate amount of \$52 million and (ii) our net cash flows used in investing activities of \$815 million, which was primarily comprised of investment in property, machinery and equipment, net, acquisition and disposal of subsidiaries and other disposal groups, net and by intangible assets and other non-current assets and others, net.

2017. During 2017, excluding the positive foreign currency effect of our initial balances of cash and cash equivalents generated during the period of \$130 million, there was a decrease in cash and cash equivalents from continuing operations of \$123 million. This decrease was the result of our net cash flows used in financing activities of \$2,390 million partially offset by our net cash flows provided by our investing activities of \$553 million and by our net cash flows provided by operating activities from continuing operations, which, after interest and coupons on Perpetual Debentures and income taxes paid in cash of \$1,145 million, amounted to \$1,714 million.

For the year ended December 31, 2017, our net cash flows provided by operating activities included cash flows generated by working capital of \$431 million, which was primarily comprised of trade receivables, other accounts receivable and other assets, trade payables and other accounts payable and accrued expenses, for an aggregate amount of \$450 million, partially offset by inventories of \$19 million.

During 2017, our net cash flows provided by operating activities from continuing operations after interest and coupons on Perpetual Debentures and income taxes paid in cash of \$1,145 million, amounted to \$1,714 million and our net cash flows provided by investing activities of \$553 million, which include acquisition and disposal of subsidiaries and other disposal groups, net for an amount of \$1,202 million, partially offset by investment in property, machinery and equipment, net and intangible assets and other non-current assets and others, net, for an aggregate amount of \$649 million, were disbursed in connection with our net cash flows used in financing activities of \$2,390 million, which include repayment of our debt, net, other financial obligations, net, and non-current liabilities for an aggregate amount of \$2,431 million, partially offset by derivative instruments and securitization of trade receivables for an aggregate amount of \$41 million.

As of December 31, 2019, we had the following lines of credit, of which the only committed portion refers to the revolving credit facility under the 2017 Facilities Agreement, at annual interest rates ranging between 0.75% and 8.50%, depending on the negotiated currency:

	<u>Lines of Credit</u>	<u>Available</u>
	<u>(in millions of Dollars)</u>	
Other lines of credit in foreign subsidiaries	385	286
Other lines of credit from banks	683	635
Revolving credit facility under the 2017 Facilities Agreement	<u>1,135</u>	<u>1,135</u>
	<u>2,203</u>	<u>2,056</u>

In addition, as of December 31, 2019, we had full availability in our committed revolving credit tranche under the 2017 Facilities Agreement. We expect that this, in addition to our proven capacity to continually refinance and replace short-term obligations, will enable us to meet any liquidity risk in the short term. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19 on our debt and cash levels.

Capital Expenditures

Our capital expenditures incurred for the years ended December 31, 2018 and 2019, and our expected capital expenditures during 2020, which include an allocation to 2020 of a portion of our total future committed amount, are as follows:

	Actual for the Year Ended December 31,		Estimated in 2020 ⁽¹⁾
	2018	2019	
	Actual (in millions of Dollars)		
Mexico	168	199	186
United States	405	398	388
Europe			
United Kingdom	61	67	71
France	44	38	51
Germany	27	25	26
Spain	27	34	21
Rest of Europe	54	52	54
SCA&C			
Colombia	22	25	31
Panama	12	10	5
Caribbean TCL	29	21	22
Dominican Republic	8	8	9
Rest of SCA&C	14	18	18
AMEA			
Philippines	36	84	124
Israel	27	33	28
Rest of AMEA	15	13	14
Others	15	8	52
Total consolidated	964	1,033	1,100
Of which:			
Expansion capital expenditures	157	234	300
Base capital expenditures	807	799	800

(1) See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19-related measures on our estimated capital expenditures for 2020.

For the years ended December 31, 2018 and 2019, we recognized \$964 million and \$1,033 million in capital expenditures from our continuing operations, respectively. As of December 31, 2019, in connection with our significant projects, we had capital expenditure commitments of \$134 million, including our capital expenditures estimated to be incurred during 2020. This amount is expected to be incurred during 2020, based on the evolution of the related projects. Pursuant to the 2017 Facilities Agreement, we are prohibited from making aggregate annual capital expenditures in excess of \$1.5 billion in any financial year (excluding certain capital expenditures, joint venture investments and acquisitions by each of CLH and CHP and their respective subsidiaries and those funded by Relevant Proceeds (as defined in the 2017 Facilities Agreement)), which capital expenditures, joint venture investments and acquisitions at any time then incurred are subject to a separate aggregate limit of (i) \$500 million (or its equivalent) for CLH and its subsidiaries and (ii) \$500 million (or its equivalent) for CHP and its subsidiaries. In addition, the amounts of which we and our subsidiaries are allowed for permitted acquisitions and investments in joint ventures cannot exceed certain thresholds as set out in the 2017 Facilities Agreement. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on the impact of COVID-19-related measures on our estimated capital expenditures for 2020 and possible amendments to our 2017 Facilities Agreement, which may restrict our overall capital expenditures.

Our Indebtedness

As of December 31, 2019, we had \$11,790 million (principal amount \$11,864 million, excluding deferred issuance costs) of total debt plus other financial obligations in our statement of financial position, which does not include \$443 million of Perpetual Debentures. Of our total debt plus other financial obligations, 12% were short-term (including current maturities of long-term debt) and 88% were long-term. As of December 31, 2019, 67% of our total debt plus other financial obligations was Dollar-denominated, 23% was Euro-denominated, 5% was Pound Sterling-denominated, 2% was Philippine Peso-denominated and immaterial amounts were denominated in other currencies. See notes 16.1, 16.2 and 20.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

On September 29, 2014, CEMEX, S.A.B. de C.V. and certain of its subsidiaries entered into a facilities agreement (as amended and restated, the “2014 Credit Agreement”) for \$1.35 billion with nine of the main lending banks from its 2012 Facilities Agreement. On November 3, 2014, five additional banks joined the 2014 Credit Agreement as lenders with aggregate commitments of \$515 million, increasing the total amount of the 2014 Credit Agreement from \$1.35 billion to \$1.87 billion (increasing the revolving tranche of the 2014 Credit Agreement proportionally to \$746 million).

On July 19, 2017, CEMEX, S.A.B. de C.V. and certain of its subsidiaries entered into the 2017 Facilities Agreement for an amount in different currencies equivalent to \$4.1 billion (in aggregate), the proceeds of which were used to refinance in full the indebtedness incurred under the 2014 Credit Agreement and other debt repayment obligations, allowing us to increase the then average life of our syndicated bank debt to approximately 4.3 years with a final maturity in July 2022. The indebtedness incurred under the 2017 Facilities Agreement ranks equally in right of payment with certain of our other existing and future indebtedness, pursuant to the terms of an intercreditor agreement, dated September 17, 2012, among CEMEX, S.A.B. de C.V. and certain of its subsidiaries named therein, Citibank Europe PLC, UK Branch (formerly Citibank International plc), as facility agent, the financial institutions, noteholders and other entities named therein and Wilmington Trust (London) Limited, as security agent, as amended by an amendment agreement, dated October 31, 2014, and as amended and restated by an amendment and restatement agreement, dated on or about July 23, 2015, and an amendment and restatement agreement, dated July 19, 2017 (the “Intercreditor Agreement”). CEMEX, S.A.B. de C.V. and certain of its subsidiaries have pledged the Collateral and all proceeds of the Collateral to secure our payment obligations under the 2017 Facilities Agreement, our outstanding Senior Secured Notes and under several other of our financing arrangements. These subsidiaries whose shares were pledged or transferred as part of the Collateral collectively own, directly or indirectly, substantially all our operations worldwide. See “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—We pledged the capital stock of some of our subsidiaries that represent substantially all of our business as collateral to secure our payment obligations under the 2017 Facilities Agreement, the indentures governing our outstanding Senior Secured Notes and other financing arrangements.” Also see “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees. The shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

In February 2019, CEMEX, S.A.B. de C.V. launched a consent request to lenders under the 2017 Facilities Agreement, pursuant to which lenders were requested to consent to certain amendments to the 2017 Facilities Agreement in order to, among other things, (i) extend the July 2020 and January 2021 repayment installments for a significant portion of the term loan tranches by three years; (ii) delay the scheduled tightening of the consolidated financial leverage ratio limit by one year; and (iii) make adjustments for the implementation of IFRS 16—Leases and to compensate for its effects on certain financial ratios (together, the “April 2019 Facilities Agreement Amendments”). In March 2019, CEMEX, S.A.B. de C.V. obtained the requisite consents from lenders under the 2017 Facilities Agreement to implement the April 2019 Facilities Agreement Amendments. The April 2019 Facilities Agreement Amendments became effective when certain customary conditions precedent were fulfilled, and the parties entered into an amendment and restatement agreement to the 2017 Facilities Agreement on April 2, 2019.

On November 4, 2019, we amended and restated by an amendment and restatement agreement the 2017 Facilities Agreement. These amendments (together, the “November 2019 Facilities Agreement Amendments” and, together with the April 2019 Facilities Agreement Amendments, the “2019 Facilities Agreement Amendments”) include: amendments providing for an additional basket of up to \$500 million that can only be used for buy-backs of shares or securities that represent shares of CEMEX, S.A.B. de C.V.; amendments providing for a new allowance for disposals of non-controlling interest in subsidiaries that are not obligors (as defined in the 2017 Facilities Agreement) under the 2017 Facilities Agreement of up to \$100 million per calendar year; amendments relating to the implementation of corporate reorganizations in Mexico, Europe and in the Trinidad Cement Group (as defined in the 2017 Facilities Agreement); and amendments to the consolidated leverage ratio and the consolidated coverage ratio (as defined and calculated in the 2017 Facilities Agreement) to increase CEMEX’s flexibility, as follows:

AMENDED LEVERAGE RATIO AND COVERAGE RATIO LEVELS

Reference period ending	Consolidated leverage ratio	Consolidated coverage ratio
31-Dec-19	5.25x	2.50x
31-Mar-20	5.25x	2.50x
30-Jun-20	5.25x	2.50x
30-Sep-20	5.25x	2.50x
31-Dec-20	5.25x	2.50x
31-Mar-21	5.25x	2.50x
30-Jun-21	5.00x	2.50x
30-Sep-21	5.00x	2.50x
31-Dec-21	4.75x	2.50x
31-Mar-22	4.75x	2.50x

Reference period ending	Consolidated leverage ratio	Consolidated coverage ratio
30-Jun-22	4.75x	2.50x
30-Sep-22	4.75x	2.50x
31-Dec-22	4.50x	2.75x
31-Mar-23	4.50x	2.75x
30-Jun-23; and each subsequent Reference Period (as defined in the 2017 Facilities Agreement)	4.25x	2.75x

See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on the impact of COVID-19 on our debt and cash levels and regarding possible amendments to the 2017 Facilities Agreement, including to the financial ratios.

As of December 31, 2019, we reported an aggregate amount of outstanding debt of \$2,897 million under the 2017 Facilities Agreement. As of December 31, 2019, we had full availability under the \$1,135 million revolving credit facility tranche of the 2017 Facilities Agreement. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” for more information on the impact of COVID-19 on our debt and cash levels. If we are unable to comply with our upcoming principal maturities under our indebtedness, or refinance or extend maturities of our indebtedness, our debt could be accelerated. Acceleration of our debt would have a material adverse effect on our financial condition. See “Item 3—Key Information—Risk Factors—We have a substantial amount of debt and other financial obligations maturing in the next several years. If we are unable to secure refinancing on favorable terms or at all, we may not be able to comply with our upcoming payment obligations. Our ability to comply with our principal maturities and financial covenants may depend on us implementing certain initiatives, which may include making asset sales, and there is no assurance that we will be able to implement any such initiatives or execute such sales, if needed, on terms favorable to us or at all.”

For a discussion of restrictions and covenants under the 2017 Facilities Agreement, see “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The 2017 Facilities Agreement contains several restrictions and covenants. Our failure to comply with such restrictions and covenants could have a material adverse effect on our business and financial conditions.”

For a description of the Senior Secured Notes, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes.”

Some of our subsidiaries and special purpose vehicles (“SPVs”) have issued or provided guarantees of certain of our indebtedness, as indicated in the table below.

	The Notes	Senior Secured Notes	2017 Facilities Agreement	Perpetual Debentures
		\$6,044 million (principal amount \$6,087 million)	\$2,865 million (principal amount \$2,897 million)	\$443 million
Amount outstanding as of December 31, 2019⁽¹⁾				
CEMEX Finance LLC	✓	✓	✓	
CEMEX, S.A.B. de C.V.	✓	✓	✓	✓
CEMEX México, S.A. de C.V. ⁽²⁾	✓	✓	✓	✓
CEMEX Concretos, S.A. de C.V.	✓	✓	✓	
Empresas Tolteca de México, S.A. de C.V. ⁽²⁾	✓	✓	✓	
New Sunward Holding B.V.	✓	✓	✓	✓
CEMEX España, S.A.	✓	✓	✓	
Cemex Asia B.V.	✓	✓	✓	
CEMEX Corp.	✓	✓	✓	
Cemex Africa & Middle East Investments B.V.	✓	✓	✓	
CEMEX France Gestion (S.A.S.)	✓	✓	✓	
Cemex Research Group AG	✓	✓	✓	
CEMEX UK	✓	✓	✓	

(1) Includes Senior Secured Notes and Perpetual Debentures held by CEMEX, as applicable.

(2) See “Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees.

In addition, as of December 31, 2019, (i) CEMEX Materials LLC was a borrower of \$154 million (principal amount \$150 million) under an indenture which is guaranteed by CEMEX Corp. and (ii) on an as adjusted basis after giving effect to the Mexican

Reorganization, several of our other operating subsidiaries were borrowers under debt facilities or debt arrangements aggregating \$300 million.

Most of our current outstanding indebtedness was incurred to finance our acquisitions and to finance our capital expenditure programs. Historically, we have addressed our liquidity needs (including funds required to make scheduled principal and interest payments, refinance debt, and fund working capital and planned capital expenditures) with operating cash flow, securitizations, borrowings under credit facilities, proceeds of debt and equity offerings and proceeds from asset sales.

If the global economic environment deteriorates and our operating results worsen significantly, if we were unable to complete debt or equity offerings, or if we are unable to consummate asset sales or if the proceeds of any divestitures and/or our cash flow or capital resources prove inadequate, we could face liquidity problems and may not be able to comply with our upcoming principal payments under our indebtedness or refinance our indebtedness. If we are unable to comply with our upcoming principal maturities under our indebtedness, or refinance or extend maturities of our indebtedness, our debt could be accelerated. Acceleration of our debt would have a material adverse effect on our business and financial condition.

Historically, we and our subsidiaries have sought and obtained waivers and amendments to several of our debt instruments relating to a number of financial ratios in the past. Our ability to comply with these ratios may be affected by current global economic conditions and volatility in foreign exchange rates and the financial and capital markets. We may need to seek waivers or amendments in the future. However, we cannot assure you that any future waivers or amendments, if requested, will be obtained. If we or our subsidiaries are unable to comply with the provisions of our debt instruments and are unable to obtain a waiver or amendment, the indebtedness outstanding under such debt instruments could be accelerated. Acceleration of these debt instruments would have a material adverse effect on our financial condition. See “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations” and “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement” for more information on the impact of COVID-19 on the possibility having to amend or seek waivers under the 2017 Facilities Agreement.

Relevant Transactions Related to Our Indebtedness in 2019

The following is a description of our most important transactions related to our indebtedness in 2019:

- In February 2019, we launched a consent request to lenders under the 2017 Facilities Agreement, pursuant to which we requested lenders to consent to certain amendments to the 2017 Facilities Agreement in order to, among other things, (i) extend the July 2020 and January 2021 repayment installments for a significant portion of the term loan tranches by three years; (ii) delay the scheduled tightening of the consolidated financial leverage ratio limit by one year; and (iii) make adjustments for the implementation of IFRS 16—Leases and to compensate for its effects on certain financial ratios. In March 2019, we obtained the requisite consents from lenders under the 2017 Facilities Agreement to implement the April 2019 Facilities Agreement Amendments. The April 2019 Facilities Agreement Amendments became effective when certain customary conditions precedent were fulfilled, and the parties entered into an amendment and restatement agreement to the 2017 Facilities Agreement, on April 2, 2019.
- During March 2019, we renewed the securitization program outstanding in United Kingdom and France. As a result of such renewal, the program was scheduled to mature in March 2020.
- On March 19, 2019, we issued €400 million aggregate principal amount of our March 2026 Euro Notes (as defined under “Results of Operations—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes”) in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group AG (“CEMEX Research Group”) and CEMEX UK have fully and unconditionally guaranteed the performance of all of our obligations under the March 2026 Euro Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral. See “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

- On April 15, 2019, we redeemed €400 million aggregate principal amount of our March 2023 Euro Notes (as defined under “Results of Operations—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes”) mainly using the proceeds from the issuance of the March 2026 Euro Notes.
- On April 30, 2019, we fully redeemed the remaining €150 million aggregate principal amount of the March 2023 Euro Notes (the “March 2023 Euro Notes Redemption”).
- On November 4, 2019, we further amended and restated, by way of the November 2019 Facilities Agreement Amendments, our 2017 Facilities Agreement (originally amended and restated on April 2, 2019). These amendments include: amendments providing for an additional basket of up to \$500 million that can only be used for buy-backs of shares or securities that represent shares of CEMEX, S.A.B. de C.V.; amendments providing for a new allowance for disposals of non-controlling interests in subsidiaries that are not obligors (as defined in the 2017 Facilities Agreement) under the 2017 Facilities Agreement of up to \$100 million per calendar year; amendments relating to the implementation of corporate reorganizations in Mexico, Europe and in the Trinidad Cement Group (as defined in the 2017 Facilities Agreement); and amendments to the consolidated leverage ratio and the consolidated coverage ratio (as defined and calculated in the 2017 Facilities Agreement) to increase CEMEX’s flexibility.
- On November 19, 2019, we issued \$1 billion aggregate principal amount of our November 2029 Dollar Notes (as defined below) in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all of our obligations under the November 2029 Dollar Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral. See “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.
- On November 28, 2019, the November 2019 Mandatory Convertible Mexican Peso Notes (as defined below) were converted into ordinary, nominative shares and without nominal value, representative of the capital of CEMEX, represented by CPOs. This conversion was made at a conversion rate of 509.1077 CPOs per note, delivering a total of 236,050,840 CPOs.
- On December 6, 2019, we extended for an additional 27 months the securitization program outstanding in the U.S. for an amount of \$405 million. As a result of such extension, the program is now scheduled to mature in March 2022.
- On December 13, 2019, we extended for an additional 18 months the securitization program outstanding in Mexico for 1.8 billion Mexican Pesos. As a result of such extension, the program is now scheduled to mature in June 2021.
- On December 19, 2019, we redeemed \$350,000,000 of the April 2024 Dollar Notes (as defined under “Results of Operations—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes”) using mainly the proceeds from the issuance of the November 2029 Dollar Notes (as defined under “Results of Operations—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes”).
- During 2019, we conducted drawdowns and repayments under the revolving tranche of the 2017 Facilities Agreement. As of December 31, 2019, we had no amount outstanding under the revolving tranche of the 2017 Facilities Agreement. In addition, as of December 31, 2019, we had an aggregate amount of \$1,135 million available under the revolving tranche of the 2017 Facilities Agreement.

We used a substantial portion of the proceeds from these transactions to repay and refinance indebtedness, to improve our liquidity position and for general corporate purposes. For a description of the 2017 Facilities Agreement, see “—Our Indebtedness.”

Our Other Financial Obligations

Other financial obligations in the consolidated statement of financial position as of December 31, 2018 and 2019 are detailed as follows:

	Short-term	2018 Long-term	Total	Short-term	2019 Long-term	Total
	(in millions of Dollars)					
Leases	\$ 237	1,078	1,315	\$ 262	1,044	1,306
Liabilities secured with accounts receivable	599	—	599	599	—	599
Convertible subordinated notes due 2020	—	514	514	520	—	520
Mandatory convertible securities due 2019	19	—	19	—	—	—
	\$ 855	1,592	2,447	\$ 1,381	1,044	2,425

As mentioned in note 2.6 to our 2019 audited consolidated financial statements included elsewhere in this annual report, financial instruments convertible into CPOs and/or ADSs contain components of both liability and equity, which are recognized differently depending on whether the instrument is mandatorily convertible or is optionally convertible by election of the note holders, as well as the currency in which the instrument is denominated and the functional currency of the issuer.

Leases

We have several operating and administrative assets under lease contracts. As previously described, beginning January 1, 2019, we applied IFRS 16 using the full retrospective approach and re-presented the amounts in prior periods. We apply the recognition exemption for short-term leases and leases of low-value assets. See notes 14.2 and 16.2 to our 2019 audited consolidated financial statements included elsewhere in the annual report.

Changes in the balance of lease financial liabilities during 2017, 2018 and 2019 were as follows:

(in millions of Dollars)	2017	2018	2019
Lease financial liability at beginning of year	\$ 1,054	1,309	1,315
Additions from new leases	328	296	274
Reductions from payments	(112)	(192)	(239)
Cancellations and liability remeasurements	(11)	(67)	(54)
Foreign currency translation and accretion effects	50	(31)	10
Lease financial liability at end of year	\$ 1,309	1,315	1,306

As of December 31, 2019, the maturities of lease financial liabilities were as follows:

(in millions of Dollars)	Total
2020	\$ 262
2021	221
2022	159
2023	115
2024 and thereafter	549
	\$ 1,306

Total cash outflows for leases in 2017, 2018 and 2019 were \$183 million, \$266 million and \$316 million, respectively.

Our Receivables Financing Arrangements

Our subsidiaries in Mexico, the U.S., France and the United Kingdom are parties to sales of trade accounts receivable programs with financial institutions, referred to as securitization programs. As of December 31, 2018 and 2019, trade accounts receivable included receivables of \$664 million and \$682 million, respectively. Under these programs, our subsidiaries effectively surrender control associated with the trade accounts receivable sold and there is no guarantee or obligation to reacquire the assets. Nonetheless, in such programs, our subsidiaries retain certain residual interest in the programs and/or maintain continuing involvement with the accounts receivable. Therefore, the trade accounts receivable sold were not removed from the statement of financial position, and the funded amounts were recognized within the line item of "Other financial obligations" and the difference in each year against the trade receivables sold was maintained as reserves. Trade accounts receivable qualifying for sale exclude amounts over certain days past due or concentrations over certain limits to any customer, according to the terms of the programs. The portion of the accounts receivable sold maintained as reserves amounted to \$65 million and \$83 million as of December 31, 2018 and 2019, respectively. Therefore, the funded amount to us was \$599 million in 2018 and \$599 million as of December 31, 2019. The discount granted to the acquirers of the trade accounts receivable is recorded as financial expense and amounted to \$23 million and \$25 million in 2018 and 2019, respectively. Our securitization programs are usually negotiated for periods of one to two years and are usually renewed at their maturity. See notes 9 and 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

March 2020 Optional Convertible Subordinated Dollar Notes

During 2015, we issued, in March 2015 and May 2015, respectively, \$521 million aggregate principal amount of our 3.72% Convertible Subordinated Notes due March 15, 2020 (“March 2020 Optional Convertible Subordinated Dollar Notes”) as a result of exchanges or settlements of other convertible notes. The March 2020 Optional Convertible Subordinated Dollar Notes, which are subordinated to all of our liabilities and commitments, are convertible into a fixed number of our ADSs at any time at the holder’s election and are subject to anti-dilution adjustments. The aggregate fair value of the conversion option as of the issuance dates, which amounted to \$12 million, was recognized in “Other equity reserves.” As of December 31, 2018 and 2019, the conversion price per ADS for the March 2020 Optional Convertible Subordinated Dollar Notes was \$11.01 Dollars in 2018 and \$10.73 Dollars in 2019. After anti-dilution adjustments, the conversion rate for the March 2020 Optional Convertible Subordinated Dollar Notes as of December 31, 2018 and 2019 was 90.8592 and 93.2334 ADS, respectively, per each one thousand dollars principal amount of such notes. See note 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

November 2019 Mandatory Convertible Mexican Peso Notes

In December 2009, we exchanged certain debt into \$315 million principal amount of 10% mandatorily convertible securities denominated in Mexican Pesos maturing in 2019 (the “November 2019 Mandatory Convertible Mexican Peso Notes”). On November 28, 2019, the November 2019 Mandatory Convertible Mexican Peso Notes expired and were converted into 236 million CPOs at a conversion price in Mexican Pesos equivalent to \$0.8937 per CPO. See note 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Perpetual Debentures

We define the “Perpetual Debentures,” collectively, as the (i) Dollar-Denominated 6.222% Fixed-to-Floating Rate Callable Perpetual Debentures issued by C5 Capital (SPV) Limited, (ii) Dollar-Denominated 6.345% Fixed-to-Floating Rate Callable Perpetual Debentures issued by C8 Capital (SPV) Limited, (iii) Dollar-Denominated 6.655% Fixed-to-Floating Rate Callable Perpetual Debentures issued by C10 Capital (SPV) Limited and (iv) Euro-Denominated 4.400% Fixed-to-Floating Rate Callable Perpetual Debentures issued by C10-EUR Capital (SPV) Limited. Unless the context otherwise requires, when we refer to the Perpetual Debentures (as defined above), we also include our underlying dual-currency notes that underlie the Perpetual Debentures. See “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

As of December 31, 2017, 2018 and 2019, non-controlling interest stockholders’ equity included \$447 million, \$444 million and \$443 million, respectively, representing the notional amount of Perpetual Debentures, which exclude any Perpetual Debentures held by subsidiaries. The Perpetual Debentures have no fixed maturity date and do not represent contractual obligations to exchange any series of its outstanding Perpetual Debentures for financial assets or financial liabilities. Based on their characteristics, the Perpetual Debentures, issued through SPVs, qualify as equity instruments and are classified within non-controlling interest as they were issued by consolidated entities, and, if the conditions to interest deferred are satisfied, we have the unilateral right to defer indefinitely the payment of interest due on the Perpetual Debentures. Issuance costs, as well as the interest expense, which is accrued based on the principal amount of the Perpetual Debentures, are included within “Other equity reserves” and represented expenses of \$25 million, \$29 million and \$29 million in 2017, 2018 and 2019, respectively. The different SPVs were established solely for purposes of issuing the Perpetual Debentures and are included in our 2019 audited consolidated financial statements included elsewhere in this annual report. As of December 31, 2019, the Perpetual Debentures were as follows:

Issuer	Issuance Date	Nominal Amount at Issuance Date (in millions)	Nominal Amount Outstanding as of December 31, 2019 (in millions)	Repurchase Option	Interest Rate
C10-EUR Capital (SPV) Ltd.(3)	May 2007	€ 730	€ 64	Tenth anniversary	EURIBOR + 4.79%
C8 Capital (SPV) Ltd.(2)	February 2007	\$ 750	\$ 135	Eighth anniversary	LIBOR + 4.40%
C5 Capital (SPV) Ltd.(1)(2)	December 2006	\$ 350	\$ 61	Fifth anniversary	LIBOR + 4.277%
C10 Capital (SPV) Ltd.(2)	December 2006	\$ 900	\$ 175	Tenth anniversary	LIBOR + 4.71%

(1) Under the 2017 Facilities Agreement, we are restricted from calling the Perpetual Debentures.

(2) “As of December 31, 2018 and 2019, 3-month LIBOR was 2.8076% and 1.9083%, respectively.

(3) “EURIBOR” above refers to the Euro Interbank Offered Rate. As of December 31, 2018 and 2019, 3-month EURIBOR was (0.309)% and (0.383)%, respectively.

Stock Repurchase Program

Under Mexican law, CEMEX, S.A.B. de C.V.’s shareholders are the only ones authorized to approve the maximum amount of resources that can be allocated to the stock repurchase program at any annual general ordinary shareholders’ meeting. Unless otherwise instructed by CEMEX, S.A.B. de C.V.’s shareholders, we are not required to purchase any minimum number of shares pursuant to such program.

In connection with CEMEX, S.A.B. de C.V.’s 2017 and 2018 annual general ordinary shareholders’ meetings held on April 5, 2018 and March 28, 2019, respectively, proposals were approved to set the amount of \$500 million or its equivalent in Mexican Pesos, each year and until the next ordinary shareholders’ meeting, as the maximum amount of resources that CEMEX, S.A.B. de C.V. can use to repurchase its own shares or securities that represent such shares. The board of directors of CEMEX, S.A.B. de C.V. approved the policy and procedures for the operation of the stock repurchase program, and is authorized to determine the basis on which the repurchase and placement of such shares is made, appoint the persons who will be authorized to make the decision of repurchasing or replacing such shares and appoint the persons responsible to make the transaction and furnish the corresponding notices to authorities. The board of directors of CEMEX, S.A.B. de C.V. and/or attorneys-in-fact or delegates designated in turn, or the persons responsible for such transactions, will determine, in each case, if the repurchase is made with a charge to stockholders’ equity as long as the shares belong to CEMEX, S.A.B. de C.V. or with a charge to share capital if it is resolved to convert the shares into non-subscribed shares to be held in treasury. See “—Recent Developments—Recent Developments Relating to Our Shareholders’ Meeting.” We remain subject to certain restrictions regarding the repurchase of shares of our capital stock under the 2017 Facilities Agreement and the indentures governing the outstanding Senior Secured Notes.

As of December 31, 2018, under the 2018 repurchase program, CEMEX, S.A.B. de C.V. repurchased 153.6 million CPOs at a weighted-average price in Mexican Pesos equivalent to \$0.4883 per CPO. The total amount of these CPO repurchases, excluding fees and value-added tax, was \$75 million. All the shares repurchased under the 2018 repurchase program were cancelled in 2019 by resolution of the CEMEX, S.A.B. de C.V. annual general ordinary shareholders’ meeting passed on March 28, 2019.

As of December 31, 2019, under the 2019 repurchase program, CEMEX, S.A.B. de C.V. repurchased 157.7 million CPOs, at a weighted-average price in Mexican Pesos equivalent to \$0.3164 per CPO. The total amount of these CPO repurchases, excluding fees and value-added tax, was \$50 million. The shares repurchased under the 2019 repurchase program were proposed for cancellation at the CEMEX, S.A.B. de C.V. annual general ordinary shareholders’ meeting held on March 26, 2020.

The following table sets out information concerning repurchases by CEMEX, S.A.B. de C.V. of its CPOs in 2019. We did not repurchase CPOs other than through the stock repurchase program.

Period	Total Number of CPOs Purchased	Average Price in Dollars per CPO	Total Number of CPOs Purchases as Part of Publicly Announced Plans or Programs	Approximate Peso Value of CPOs that May Yet Be Purchased Under Plans
January 1 to January 31	—	—	—	\$ 8,125,977,478.16
February 1 to February 28	—	—	—	\$ 8,193,977,289.69
March 1 to March 31	—	—	—	\$ 9,700,000,000.00
April 1 to April 30	—	—	—	\$ 9,465,000,000.00
May 1 to May 31	—	—	—	\$ 9,810,000,000.00
June 1 to June 30	—	—	—	\$ 9,605,000,000.00
July 1 to July 31	—	—	—	\$ 9,580,000,000.00
August 1 to August 31	136,900,000	0.30866	136,900,000	\$ 9,173,324,564.71
September 1 to September 30	20,800,000	0.36741	20,800,000	\$ 8,880,655,138.15
October 1 to October 31	—	—	—	\$ 8,655,600,522.39
November 1 to November 30	—	—	—	\$ 8,804,136,568.79
December 1 to December 31	—	—	—	\$ 8,516,066,660.61
Total	157,700,000	0.31644	157,700,000	

Research and Development, Patents and Licenses, etc.

Headed by CEMEX Research Center, Research and Development (“R&D”) is increasingly assuming a key role as it is recognized as an important element in creating value for our products, which is important to CEMEX’s comprehensive pricing strategy for CEMEX’s products. Through the development of innovative technologies, services, and commercial models, CEMEX is leveraging its know-how based assets to create an important differentiation in its offerings to customers in a broad range of markets with unique challenges. We focus on creating tangible value for our customers by creating products designed to make their business

more profitable, but more importantly, as leaders in the industry, CEMEX intends to elevate and accelerate the industry's evolution in order to achieve greater sustainability, increase engagement in social responsibility and provoke an important leap in its technological advancement.

CEMEX's R&D initiatives are globally led, coordinated and managed by CEMEX Research Center, which encompasses the areas of Product Development & Construction Trends, Cement Production Technology, Sustainability, Business Process & IT, Innovation, and Commercial & Logistics.

CEMEX's interaction and engagement with customers is growing and evolving through the exploration of novel interaction methodologies. CEMEX's R&D continues to develop and evolve in the area of customer centricity, but with complementary emphases on digitalization, development of digital-based business models, socio-urban dynamics, processes and technologies to mitigate CO₂, and evaluating, adopting and proposing methodologies to engage specific types of customers who are the key decision makers in the very early stages of a construction project. Such methodologies are defining innovative approaches to involve and expose existing, potential, and future customers (e.g. Engineering & Architectural students) to our value-added products (cement, aggregates, ready-mix concrete, and admixtures) and constructions solutions. In other words, we aspire to create a unique customer experience in which the customer can see, touch, interact and even stimulate the modification of our technologies.

The areas of Product Development & Construction Trends and Cement Production Technology are responsible for, among others, developing new products for our cement, ready-mix concrete, aggregate and admixture businesses as well as introduce novel and/or improved processing and manufacturing technology for all of CEMEX's core businesses. These areas also address energy efficiency of buildings, comfort, novel and more efficient construction systems. Additionally, the Product Development & Construction Trends and Sustainability areas collaborate to develop and propose construction solutions through consulting and the integration of the aforementioned technologies.

The Cement Production Technology and Sustainability areas are dedicated to, among others, operational efficiencies leading to cost reductions and enhancing our CO₂ footprint and overall environmental impact through the usage of alternative or biomass fuels, the use of supplementary materials in substitution of clinker, as well as by managing our CO₂ footprint, mitigating it and processing it in the context of a circular economy. For example, we have developed processes and products that allow us to reduce heat consumption in our kilns, which in turn reduces energy costs. Special emphasis is placed on defining parameters by which we communicate our efforts to preserve resources for the future, reduce our CO₂ footprint and become more resilient with respect to our energy-related needs and potential supply constraints.

With respect to energy, the R&D team is focusing on energy storage, which represents the largest and most near-term opportunity to accelerate renewable energy deployments and bring us closer to replacing fossil fuels as the primary resource to meet the world's continual growth in energy demand. Global products/brands have been conceptualized and engineered to positively impact the jobsite safety, promote efficient construction practices, sensibly preserve natural resources vital to life, lower carbon foot-print and improve the quality of life in rapidly transforming cities.

Underlying CEMEX's R&D philosophy is a growing culture of global collaboration and coordination, where the innovation team identifies and promotes novel collaboration practices and mobilizes its adoption within CEMEX. Getting closer and understanding our customers is a fundamental transformation within CEMEX, and consequently the Commercial & Logistics area is carrying out research initiatives to better attend the needs of customers as well as identify key changes in our supply chain management that should enable us to bring products, solutions and services to our customers in the most cost-effective and efficient manner, using what we believe to be the best available technologies to design a new standard in digital commercial models. As of December 31, 2019, CEMEX Research Center actively participates in six research projects (SOLPART, EPOS, LEILAC, GENESIS, DESTINY and eCOCO2), funded by the European Union under the H2020 program, to develop new technologies aimed at reducing CEMEX's carbon footprint in Europe and other countries in which CEMEX operates.

There are nine laboratories supporting CEMEX's R&D efforts under a collaborative network. The laboratories are strategically located in close proximity to our plants and assist the operating subsidiaries with troubleshooting, optimization techniques and quality assurance methods. The laboratory located in Switzerland is continually improving and consolidating our research and development efforts in the areas of cement, concrete, aggregates, admixtures, mortar and asphalt technology, sustainability and energy management. In addition, CEMEX Research Center actively generates and registers patents and pending applications in many of the countries in which CEMEX operates. Patents and trade secrets are managed strategically in order for us to achieve important technology lock-ins associated with CEMEX technology.

Our Information Technology divisions develop information management systems and software relating to cement and ready-mix concrete operational practices, automation and maintenance. These systems have helped us to better serve our clients with respect to purchasing, delivery and payment. More importantly, thanks to the activities of the Business Process and IT departments, CEMEX

is continuously improving and innovating its business processes to adapt them to the dynamically evolving markets to better serve CEMEX's needs. The launch of CEMEX Go and its deployment throughout our operations is a testament to our commitment to evolve our digital commercial model to better serve the market and our customers.

R&D activities comprise part of the daily routine of the aforementioned departments and divisions. Therefore, the costs associated with such activities are expensed as incurred. In 2017, 2018 and 2019, total combined expenses of these departments recognized within administrative expenses were \$38 million, \$39 million and \$38 million, respectively. We capitalize the costs incurred in the development of software for internal use which are amortized in operating results over the estimated useful life of the software, which is approximately five years. Capitalized direct costs incurred in the development stage of internal-use software, such as professional fees, direct labor and related travel expenses amounted to \$76 million in 2017, \$133 million in 2018 and \$102 million in 2019. See notes 5 and 15.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events for the year ended December 31, 2019 that are reasonably likely to have a material and adverse effect on our revenues, income, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future results of operations or financial conditions.

Summary of Material Contractual Obligations and Commercial Commitments

The 2017 Facilities Agreement

On July 19, 2017, we and certain of our subsidiaries entered into the 2017 Facilities Agreement for an amount in different currencies equivalent to \$4.1 billion (in aggregate), the proceeds of which were used to refinance indebtedness incurred under a then-existing credit agreement and other debt repayment obligations. In March 2019 and October 2019, we obtained the requisite consents from lenders under the 2017 Facilities Agreement to make the 2019 Facilities Agreement Amendments. The 2019 Facilities Agreement Amendments became effective when certain customary conditions precedent were fulfilled, and the parties entered into an amendment and restatement agreement to the 2017 Facilities Agreement, on April 2, 2019 and November 4, 2019, respectively. See “—Liquidity and Capital Resources—Our Indebtedness” and “—Liquidity and Capital Resources—Relevant Transactions Related to Our Indebtedness in 2019” for a discussion of the 2019 Facilities Agreement Amendments. See “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

As of December 31, 2019, we reported an aggregate principal amount of outstanding debt of \$2,897 under the 2017 Facilities Agreement. The 2017 Facilities Agreement is secured by a first-priority security interest over the Collateral and all proceeds of such Collateral. As of July 19, 2017, commitments initially available under the 2017 Facilities Agreement included (i) €741 million, (ii) £344 million and (iii) \$2,746 million, out of which \$1,135 million were in the revolving credit facility tranche of the 2017 Facilities Agreement. As of December 31, 2019, the 2017 Facilities Agreement had an amortization profile, considering all commitments of \$628 million in 2021, \$2,294 million in 2022, \$531 million in 2023 and 2024, respectively.

Our failure to comply with restrictions and covenants under the 2017 Facilities Agreement could have a material adverse effect on our business and financial conditions.

For a discussion of restrictions and covenants under the 2017 Facilities Agreement, see “Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The 2017 Facilities Agreement contains several restrictions and covenants. Our failure to comply with such restrictions and covenants could have a material adverse effect on our business and financial conditions.”

Senior Secured Notes

We refer to the April 2024 Dollar Notes, June 2024 Euro Notes, January 2025 Dollar Notes, May 2025 Dollar Notes, December 2024 Euro Notes, March 2026 Euro Notes, April 2026 Dollar Notes and November 2029 Dollar Notes (each as defined below) collectively as the “Senior Secured Notes.” See “—Recent Developments—Other Recent Developments—Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the “Mexican Reorganization”)” for a description of circumstances whereby CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness.

The indentures governing our outstanding Senior Secured Notes impose significant operating and financial restrictions on us. These restrictions will limit our ability, among other things, to: (i) create liens; (ii) incur additional debt; (iii) change CEMEX's business or the business of any obligor or material subsidiary (in each case, as defined in the 2017 Facilities Agreement); (iv) enter into mergers; (v) enter into agreements that restrict our subsidiaries' ability to pay dividends or repay intercompany debt; (vi) acquire assets; (vii) enter into or invest in joint venture agreements; (viii) dispose of certain assets; (ix) grant additional guarantees or indemnities; (x) declare or pay cash dividends or make share redemptions; (xi) enter into certain derivatives transactions; and (xii) exercise any call option in relation to any perpetual bonds issues unless the exercise of the call options does not have a materially negative impact on our cash flow.

April 2024 Dollar Notes. On April 1, 2014, CEMEX Finance issued \$1.0 billion aggregate principal amount of its 6.000% Dollar-Denominated Senior Secured Notes due 2024 (the "April 2024 Dollar Notes"), in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX, S.A.B. de C.V., CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX Finance under the April 2024 Dollar Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral. On December 19, 2019, CEMEX, S.A.B. de C.V. redeemed \$350 million of the April 2024 Dollar Notes using mainly the proceeds from the issuance of the November 2029 Dollar Notes.

January 2025 Dollar Notes. On September 11, 2014, CEMEX, S.A.B. de C.V. issued \$1.1 billion aggregate principal amount of its 5.700% Senior Secured Notes due 2025 (the "January 2025 Dollar Notes") in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX Concretos, New Sunward, CEMEX España, CEMEX Asia, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the January 2025 Dollar Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

May 2025 Dollar Notes and March 2023 Euro Notes. In March 2015, CEMEX, S.A.B. de C.V. issued \$750 million aggregate principal amount of its 6.125% Senior Secured Notes due 2025 (the "May 2025 Dollar Notes") and €550 million aggregate principal amount of its 4.375% Senior Secured Notes due 2023 (the "March 2023 Euro Notes") in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX Concretos, New Sunward, CEMEX España, CEMEX Asia, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK, have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the May 2025 Dollar Notes and March 2023 Euro Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral. On April 15, 2019, CEMEX, S.A.B. de C.V. redeemed €400 million aggregate principal amount of its March 2023 Euro Notes using mainly the proceeds from the issuance of the March 2026 Euro Notes. On April 30, 2019, CEMEX, S.A.B. de C.V. fully redeemed the remaining €150 million aggregate principal amount of the March 2023 Euro Notes.

April 2026 Dollar Notes. On March 16, 2016, CEMEX, S.A.B. de C.V. issued \$1.0 billion aggregate principal amount of its 7.75% Senior Secured Notes due 2026 (the "April 2026 Dollar Notes") in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the April 2026 Dollar Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

June 2024 Euro Notes. On June 14, 2016, CEMEX Finance issued €400 million aggregate principal amount of its 4.625% Senior Secured Notes due 2024 denominated in Euros (the "June 2024 Euro Notes") in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX, S.A.B. de C.V., CEMEX Concretos, New Sunward, CEMEX España, CEMEX Asia, CEMEX Corp., Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX Finance under the June 2024 Euro Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

December 2024 Euro Notes. On December 5, 2017, CEMEX, S.A.B. de C.V. issued €650 million aggregate principal amount of its 2.750% Euro-Denominated Senior Secured Notes due 2024 (the “December 2024 Euro Notes”) in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the December 2024 Euro Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

March 2026 Euro Notes. On March 19, 2019, CEMEX, S.A.B. de C.V. issued €400 million aggregate principal amount of its 3.125% Euro-Denominated Senior Secured Notes due 2026 (the “March 2026 Euro Notes”) in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the March 2026 Euro Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

November 2029 Dollar Notes. On November 19, 2019, CEMEX, S.A.B. de C.V. issued \$1.0 billion aggregate principal amount of its 5.450% Senior Secured Notes due 2029 (the “November 2029 Dollar Notes”) in transactions exempt from registration pursuant to Rule 144A and Regulation S under the Securities Act. CEMEX España, New Sunward, CEMEX Asia, CEMEX Concretos, CEMEX Corp., CEMEX Finance, Cemex Africa & Middle East Investments, CEMEX France, CEMEX Research Group and CEMEX UK have fully and unconditionally guaranteed the performance of all obligations of CEMEX, S.A.B. de C.V. under the November 2029 Dollar Notes. The payment of principal, interest and premium, if any, on such notes is secured by a first-priority security interest over the Collateral and all proceeds of the Collateral.

Convertible Notes

March 2020 Optional Convertible Subordinated Dollar Notes. During 2015, CEMEX, S.A.B. de C.V. issued in March 2015 and May 2015, respectively, a total of \$521 million aggregate principal amount of its 3.72% optional convertible subordinated notes due March 15, 2020.

The March 2020 Optional Convertible Subordinated Dollar Notes issued, which are subordinated to all of our liabilities and commitments, are convertible into a fixed number of CEMEX, S.A.B. de C.V.’s ADSs at any time at the holder’s election and are subject to antidilution adjustments. The value of the conversion option as of the issuance date which amounted to \$12 million was recognized in “Other equity reserves.” As of December 31, 2018 and 2019, the conversion price per ADS for the March 2020 Optional Convertible Subordinated Dollar Notes was \$11.01 and \$10.73 per ADS, respectively. After antidilution adjustments, the conversion rate for the March 2020 Optional Convertible Subordinated Dollar Notes as of December 31, 2018 and 2019 was 90.8592 and 93.2334 ADS per each one thousand Dollars principal amount of such notes. See note 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

November 2019 Mandatory Convertible Mexican Peso Notes. In December 2009, CEMEX, S.A.B. de C.V. completed an exchange offer of debt into mandatorily convertible securities in Mexican Pesos for \$315 million principal amount of the November 2019 Mandatory Convertible Mexican Peso Notes. On November 28, 2019 (the scheduled conversion date), the securities were converted into 236 million CEMEX, S.A.B. de C.V. CPOs at a conversion price in Mexican Pesos equivalent to \$0.8937 Dollars per CPO. See note 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Commercial Commitments

On July 27, 2012, we entered into a Master Professional Services Agreement with IBM. This agreement provides the framework for the ordinary course of business-related services IBM provides to us on a global scale, including: information technology, application development and maintenance, finance and accounting outsourcing, human resources administration and contact-center services. The term of the agreement began on July 27, 2012 and will end on August 31, 2022, unless terminated earlier. Our minimum required payments to IBM under the agreement is \$50 million per year. We have the right to negotiate a reduction of service fees every two years if, as a result of a third party’s benchmarking assessment, it is determined that IBM’s fees are greater than those charged by other providers for services of similar nature. We may terminate the agreement (or a portion of it) at our discretion and without cause at any time by providing at least six-months’ notice to IBM and paying termination charges consisting of IBM’s unrecovered investment and breakage and wind-down costs. In addition, we may terminate the agreement (or a portion of it) for cause without paying termination charges. Other termination rights may be available to us for a termination charge that varies depending on the reason for termination. IBM may terminate the agreement if we (i) fail to make payments when due or (ii) become bankrupt and do not pay in advance for the services.

On April 28, 2017, we completed the sale of the assets and activities related to the ready-mix concrete pumping business in Mexico to Pumping Team specializing in the supply of ready-mix concrete pumping services, for an aggregate price of \$88 million, which included the sale of fixed assets for \$16 million, plus administrative and client and market development services, as well as the lease of facilities in Mexico that we will supply to Pumping Team over a period of ten years with the possibility to extend such term for three additional years, for an aggregate initial amount of \$71 million, which are recognized each period as services are rendered. The agreement includes the possibility of a contingent revenue subject to results, productivity and term extension fees for up to \$30 million, linked to annual metrics within the first five years of the agreement. In the first two years of operation under the agreements from May 2018 to April 2019 and May 2017 to April 2018, we received an aggregate amount of \$2 million related to this contingent revenue.

As of December 31, 2019, we did not depend on any single one of our suppliers of goods or services to conduct our business.

Contractual Obligations

As of December 31, 2019, we had material contractual obligations as set forth in the table below.

Obligations	As of December 31, 2019				
	Less than 1 year	1-3 years	3-5 years	More than 5 Years	Total
Long-term debt	55	1,915	3,041	4,420	9,431
Leases ⁽¹⁾	333	546	295	552	1,726
Convertible notes ⁽²⁾	520	–	–	–	520
Total debt and other financial obligations ⁽³⁾	908	2,461	3,336	4,972	11,677
Interest payments on debt ⁽⁴⁾	469	870	720	471	2,530
Pension plans and other benefits ⁽⁵⁾	156	282	287	709	1,434
Acquisition of property, plant and equipment ⁽⁶⁾	155	30	1	3	189
Purchases of raw material, fuel and energy ⁽⁷⁾	482	595	613	1,134	2,824
Total contractual obligations	2,170	4,238	4,957	7,289	18,654

(1) Represent nominal cash flows. As of December 31, 2019, the net present value of future payments under such leases was \$1,404 million, of which, \$508 million refers to payments from one to three years and \$254 million refer to payments from three to five years. See note 23.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

(2) Refers to the liability components of the convertible notes described in note 16.2 to our 2019 audited consolidated financial statements included elsewhere in this annual report and assumes repayment at maturity and no conversion of such convertible notes.

(3) The schedule of debt payments, which includes current maturities, does not consider the effect of any refinancing of debt that may occur during the following years. In the past, we have replaced our long-term obligations for others of a similar nature.

(4) Estimated cash flows on floating rate denominated debt were determined using the floating interest rates in effect as of December 31, 2018 and 2019.

(5) Represents estimated annual payments under these benefits for the next 10 years (see note 18 to our 2019 audited consolidated financial statements included elsewhere in this annual report), including the estimate of new retirees during such future years.

(6) Refers mainly to the expansion of a cement-production line in the Philippines.

(7) Future payments for the purchase of raw materials are presented on the basis of contractual nominal cash flows. Future nominal payments for energy were estimated for all contractual commitments on the basis of an aggregate average expected consumption per year using the future prices of energy established in the contracts for each period. Future payments also include CEMEX's commitments for the purchase of fuel.

As of December 31, 2017, 2018 and 2019, in connection with the commitments for the purchase of fuel and energy included in the table above, a description of the most significant contracts is as follows:

On October 24, 2018, we entered into two energy financial hedge agreements in Mexico, for a period of 20 years with Tuli Energía and Helios Generación. We expect that the effective commencement date of such agreements will be during the first half of 2020. Pursuant to these agreements, we fixed the megawatt-hour cost over an electric energy volume of 400 thousand MW per year (200 thousand MW per agreement), through the payment of \$25.375 per MW of electric power in exchange for a market price. The committed price to pay will increase 1.5% annually. The differential between the agreed price and the market price is settled monthly. We consider these agreements to be a hedge for a portion of our aggregate consumption of electric energy in Mexico and recognize the result of the exchange of price differentials described previously in the income statement as a part of the costs of energy. During 2019, we received \$1.1 million as a result of these hedges. We do not record these agreements at fair value due to the fact that there is not a deep market for electric power in Mexico that would effectively allow for its valuation.

In connection with the beginning of full commercial operations of Ventikas, located in the Mexican state of Nuevo Leon with a combined generation capacity of 252 MW, we agreed to acquire a portion of the energy generated by Ventikas for our overall electricity needs in Mexico for a period of 20 years, which began in April 2016. As of December 31, 2019, the estimated annual cost of this agreement was \$18 million, assuming energy generation at full capacity (energy supply from wind sources is variable in nature and final amounts can be determined only based on energy ultimately received at the agreed prices per unit).

Beginning in February 2010, for our overall electricity needs in Mexico, we reached an agreement with the EURUS Wind Farm (“EURUS”) for the purchase of a portion of the electric energy generated for a period of no less than 20 years. EURUS is a wind farm with an installed capacity of 250 MW operated by ACCIONA in the Mexican state of Oaxaca. The estimated annual cost of this agreement is \$64 million (unaudited) assuming that we receive all our energy allocation. Energy supply from wind sources is variable in nature and final amounts can be determined only based on energy ultimately received at the agreed prices per unit.

We maintain a commitment initiated in April 2004 to purchase the energy generated by TEG until 2027 for our overall electricity needs in Mexico. The estimated annual cost of this agreement is \$113 million assuming we receive all our energy allocation. Nonetheless, final amounts will be determined considering the final megawatt hour effectively received at the agreed prices per unit.

In connection with the above, we also committed to supply TEG and another third-party electrical energy generating plant adjacent to TEG all fuel necessary for their operations until the year 2027, equivalent to approximately 1.2 million tons of petroleum coke per year. We cover our commitments under this agreement by acquiring the aforementioned volume of fuel from sources in the international markets and Mexico.

As of December 31, 2019, CEMEX Zement GmbH (“COZ”), our subsidiary in Germany, held an energy supply contract until 2023 with STEAG-Industriekraftwerk Rüdersdorf GmbH (“SIKW”) in connection with the overall electricity needs of CEMEX’s Rüdersdorf plant. Based on the contract, each year COZ has the option to fix in advance the volume of energy in terms of MW that it will acquire from SIKW, with the option to adjust the purchase amount one time on a monthly and quarterly basis. The estimated annual cost of this agreement is \$18 million assuming that we receive all our energy allocation.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements that are reasonably likely to have a material effect on our financial condition, operating results and liquidity or capital resources.

Quantitative and Qualitative Market Disclosure

Our Derivative Financial Instruments

In the ordinary course of business, we are exposed to credit risk, interest rate risk, foreign exchange risk, equity risk, commodities risk and liquidity risk, considering the guidelines set forth by CEMEX, S.A.B. de C.V.’s board of directors, which represent our risk management framework and are supervised by several of our committees. Our management establishes specific policies that determine strategies focused on obtaining natural hedges or risk diversification to the extent possible, such as avoiding customer concentration on a determined market or aligning the currencies portfolio in which we incur our debt with those in which we generate our cash flows. As of December 31, 2018 and 2019, these strategies were sometimes complemented by the use of derivative financial instruments. See note 16.4 and 16.5 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

During the reported periods, in compliance with the guidelines established by our risk management committee, the restrictions set forth by our debt agreements and our hedging strategy, we held derivative instruments, with the objectives of, as the case may be: (a) changing the risk profile or fixing the price of fuels and electric energy; (b) foreign exchange hedging; (c) hedge of forecasted transactions; and (d) other corporate purposes. See note 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

As of December 31, 2018 and 2019, the notional amounts and fair values of our derivative instruments were as follows:

(in millions of Dollars)	At December 31, 2018		At December 31, 2019		Maturity Date
	Notional Amount	Estimated Fair value	Notional Amount	Estimated Fair value	
Net investment hedge	1,249	2	1,154	(67)	December 2021
Equity forwards on third-party shares	111	2	74	1	March 2021
Interest Rate Swaps	1,126	(8)	1,000	(35)	June 2023
Fuel price hedging	122	(14)	96	1	December 2023
	<u>2,608</u>	<u>(18)</u>	<u>2,324</u>	<u>(100)</u>	

The caption “Financial income and other items, net” in the income statement includes gains and losses related to the recognition of changes in fair values of those derivative financial instruments not specifically designated as hedges, which represented net gains of \$9 million in 2017, net gains of \$39 million in 2018 and net losses of \$1 million in 2019. As described below, changes in fair value of our net investment hedge are recognized in other comprehensive income for the period as part of our currency translation results. In addition, changes in fair value of our outstanding interest rate swaps related to debt are recognized as part of our financial expense in the income statement. Changes in fair value of our fuel price hedging derivatives are temporarily recognized through other comprehensive income and are recycled to operating expenses as the related fuel volumes are consumed.

For the majority of the last ten years, we significantly decreased our use of derivative instruments related to debt, including currency and interest rate derivatives, thereby reducing the risk of cash margin calls.

Our Net Investment Hedge. As of December 31, 2018 and 2019, we hold Dollar / Mexican Peso foreign exchange forward contracts under a program that started in February 2017 at around \$1,250 million, which can be notionally adjusted in relation to hedged risks, with monthly revolving settlement dates from one to 24 months. The average life of these contracts is approximately one year. For accounting purposes under IFRS, we have designated this program as a hedge of our net investment in Mexican Pesos, pursuant to which changes in fair market value of these instruments are recognized as part of other comprehensive income in equity. For the years 2017, 2018 and 2019, these contracts generated gains of \$6 million, losses of \$59 million and losses of \$126 million, respectively, which partially offset currency translation results in each year recognized in equity generated from our net assets denominated in Mexican Pesos due to the appreciation of the Mexican Peso in 2018 and 2019 and the depreciation of the Mexican Peso in 2017. See note 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Our Equity Forward Contracts on Third-Party Shares. As of December 31, 2018 and 2019, we maintained equity forward contracts with cash settlement in March 2020 and March 2021, respectively, over the price of 20.9 million shares of GCC in 2018, and 13.9 million shares of GCC in 2019, in connection with our sale of GCC shares in September 2017 included elsewhere in this annual report. During 2018 and 2019, we early settled a portion of these contracts for 10.6 million shares and 6.9 million shares, respectively. Changes in the fair value of these instruments and early settlement effects generated losses of \$24 million in 2017, gains of \$26 million in 2018 and gains of \$2 million in 2019 recognized within “Financial income and other items, net” in the income statement. See notes 13.1 and 16.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Our Interest Rate Swaps. As of December 31, 2018 and 2019, CEMEX held interest rate swaps for a notional amount of \$1,000 million, the fair value of which represented a liability of \$19 million and \$35 million, respectively, negotiated in June 2018 to fix interest payments of existing bank loans bearing floating rates. The contracts mature in June 2023. For accounting purposes under IFRS, we designated these contracts as cash flow hedges, pursuant to which, changes in fair value are initially recognized as part of other comprehensive income in equity and are subsequently allocated through financial expense as the interest expense of the related bank loans is accrued. For the years ended in 2018 and 2019, changes in fair value of these contracts generated losses of \$19 million and of \$26 million, respectively, recognized in other comprehensive income.

As of December 31, 2018, we had an interest rate swap maturing in September 2022 associated with an agreement entered by us for the acquisition of electric energy in Mexico, the fair value of which represented an asset of \$11 million. Pursuant to this instrument, during the tenure of the swap and based on its notional amount, we received fixed rate of 5.4% and paid LIBOR. Changes in the fair value of this interest rate swap generated losses of \$6 million in both 2017 and 2018, recognized in the income statement for each period. During 2019, we unwound and settled this interest rate swap.

Our Fuel Price Hedging Derivatives. As of December 31, 2018 and 2019, we maintained forward and option contracts negotiated to hedge the price of certain fuels, including diesel, and gas, as solid fuel, in several operations for aggregate notional amounts of \$122 million and \$96 million, respectively, with an estimated aggregate fair value representing liabilities of \$14 million in 2018 and assets of \$1 million in 2019. By means of these contracts, for our own consumption only, we fixed the price of these fuels over certain volumes representing a portion of the estimated consumption of such fuels in several operations. These contracts have been designated as cash flow hedges of diesel, gas or coal consumption, and as such, changes in fair value are recognized temporarily through other comprehensive income and are recycled to operating expenses as the related fuel volumes are consumed. For the years 2017, 2018 and 2019, changes in fair value of these contracts recognized in other comprehensive income represented gains of \$4 million, losses of \$35 million and gains of \$15 million, respectively.

With respect to our existing financial derivatives, we may incur net losses and be subject to margin calls that will require cash. If we enter into new derivative financial instruments, we may incur net losses and be subject to margin calls. The cash required to cover the margin calls may be substantial and may reduce the funds available to us for our operations or other capital needs.

As with any derivative financial instrument, we assume the creditworthiness risk of the counterparty, including the risk that the counterparty may not honor its obligations to us. Before entering into any derivative financial instrument, we evaluate, by reviewing credit ratings and our business relationship according to our policies, the creditworthiness of the financial institutions and corporations that are prospective counterparties to our derivative financial instruments. We select our counterparties to the extent we believe that they have the financial capacity to meet their obligations in relation to these instruments. Under current financial

conditions and volatility, we cannot assure that risk of non-compliance with the obligations agreed to with such counterparties is minimal. See notes 16.4 and 16.5 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

The fair value of derivative financial instruments is based on estimated settlement costs or quoted market prices and supported by confirmations of these values received from the counterparties to these financial instruments. The notional amounts of derivative financial instrument agreements are used to measure interest to be paid or received and do not represent the amount of exposure to credit loss.

Interest Rate Risk, Foreign Currency Risk and Equity Risk

Interest Rate Risk. The table below presents tabular information of our fixed and floating rate long-term foreign currency-denominated debt as of December 31, 2019. Average floating interest rates are calculated based on forward rates in the yield curve as of December 31, 2019. Future cash flows represent contractual principal payments. The fair value of our floating rate long-term debt is determined by discounting future cash flows using borrowing rates available to us as of December 31, 2019 and is summarized as follows:

Long-Term Debt ⁽¹⁾	Expected maturity dates as of December 31, 2019					Total	Fair Value
	2020	2021	2022	2023	After 2024		
	(In millions of Dollars, except percentages)						
Variable rate	\$ 53	672	1,189	612	524	\$ 3,050	\$ 3,141
Average interest rate	3.79%	4.10%	4.07%	4.19%	4.11%		
Fixed rate	\$ 2	1	40	53	6,212	\$ 6,308	\$ 6,625
Average interest rate	4.93%	5.59%	5.62%	5.62%	5.51%		

(1) The information above includes the current maturities of the long-term debt. Total long-term debt as of December 31, 2019 does not include our other financial obligations and the Perpetual Debentures for an aggregate amount of \$443 million issued by consolidated entities. See notes 16.2 and 20.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

As of December 31, 2019, we were subject to the volatility of floating interest rates, which, if such rates were to increase, may adversely affect our financing cost and our net income. As of December 31, 2018, 37% of our foreign currency-denominated long-term debt bore floating rates at a weighted average interest rate of LIBOR plus 241 basis points. As of December 31, 2019, 22% of our foreign currency-denominated long-term debt bore floating rates at a weighted average interest rate of LIBOR plus 285 basis points. As of December 31, 2018 and 2019, if interest rates at that date had been 0.5% higher, with all other variables held constant, our net income for 2018 and 2019 would have been reduced by \$19 million and \$19 million, respectively, as a result of higher interest expense on variable-rate debt. However, this analysis does not include the interest rate swaps held by us during 2018 and 2019. See note 16.5 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Foreign Currency Risk. Due to our geographic diversification, our revenues are generated in various countries and settled in different currencies. However, some of our production costs, including fuel and energy, and some of our cement prices, are periodically adjusted to take into account fluctuations between the Dollar and the other currencies in which we operate. For the year ended December 31, 2019, 21% of our revenues, before eliminations resulting from consolidation, were generated in Mexico, 27% in the U.S., 5% in the United Kingdom, 6% in France, 3% in Germany, 2% in Spain, 5% in the Rest of Europe, 4% in Colombia, 2% in Panama, 1% in Caribbean TCL, 2% in the Dominican Republic, 4% in the Rest of the SCA&C region, 3% in Philippines, 5% in Israel, 2% in the Rest of Asia, Middle East and Africa region and 8% from our Other operations.

Foreign exchange gains and losses occur by monetary assets or liabilities in a currency different from its functional currency and are recorded in the consolidated income statements, except for exchange fluctuations associated with foreign currency indebtedness directly related to the acquisition of foreign entities and related parties' long-term balances denominated in foreign currency, for which the resulting gains or losses are reported in other comprehensive income. As of December 31, 2018 and 2019, excluding from the sensitivity analysis the impact of translating the net assets of foreign operations into our reporting currency and considering a hypothetical 10% strengthening of the Dollar against the Mexican Peso, with all other variables held constant, our net income for 2018 and 2019 would have decreased by \$63 million and \$76 million, respectively, as a result of higher foreign exchange losses on our Dollar-denominated net monetary liabilities held in consolidated entities with other functional currencies. Conversely, a hypothetical 10% weakening of the Dollar against the Mexican Peso would have had the opposite effect.

As of December 31, 2019, 67% of our total debt plus other financial obligations was Dollar-denominated, 23% was Euro-denominated, 5% was Pound Sterling-denominated, 2% was Philippine Peso-denominated and immaterial amounts were denominated in other currencies, which does not include \$443 million of Perpetual Debentures. Therefore, we had a foreign currency exposure arising from the debt plus other financial obligations denominated in Dollars and the debt and other financial obligations denominated in Euros versus the currencies in which our revenues are settled in most countries in which we operate. We cannot guarantee that we will generate sufficient revenues in Dollars and Euros from our operations to service these obligations. As of December 31, 2018 and 2019, CEMEX had not implemented any derivative financing hedging strategy to address this foreign currency risk.

In addition, considering that CEMEX S.A.B. de C.V.'s functional currency for all assets, liabilities and transactions associated with its financial and holding company activities is the Dollar (note 2.4), there is foreign currency risk associated with the translation of subsidiaries' net assets denominated in different currencies (Mexican Peso, Euro, Pound Sterling and other currencies) into Dollars. When the Dollar appreciates, the value of CEMEX S.A.B. de C.V.'s net assets denominated in other currencies decreases in terms of Dollars, generating negative foreign currency translation and reducing stockholders' equity. Conversely, when the dollar depreciates, the value of CEMEX S.A.B. de C.V.'s net assets denominated in other currencies would increase in terms of Dollars generating the opposite effect. As mentioned above in our derivative financial instruments section, we have implemented a long-term program for up to \$1,250 million to hedge foreign currency translation in connection with our net assets denominated in Mexican Pesos. See notes 2.4 and 16.5 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

Equity Risk. Equity risk represents the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in the market price of CEMEX, S.A.B. de C.V.'s and/or a third party's shares. As described above, we have entered into equity forward contracts on GCC shares. Under these equity forward contracts, there is a direct relationship in the change in the fair value of the derivative with the change in price of the underlying share.

As of December 31, 2018 and 2019, the potential change in the fair value of our forward contracts in GCC shares that would result from a hypothetical, instantaneous decrease of 10% in the market price of GCC shares in Dollars, with all other variables held constant, our net income for 2018 and 2019 would have been reduced by \$11 million and \$7 million, respectively, as a result of additional negative changes in fair value associated with these forward contracts. A 10% hypothetical increase in the price of GCC shares in 2019 would have generated approximately the opposite effect.

Liquidity Risk. Liquidity risk represents the risk that we will not have sufficient funds available to meet our obligations. In addition to cash flows provided by our operating activities, in order to meet our overall liquidity needs for operations, servicing debt and funding capital expenditures and acquisitions, we rely on cost-cutting and operating improvements to optimize capacity utilization and maximize profitability, as well as borrowing under credit facilities, proceeds of debt and equity offerings, and proceeds from asset sales. We are exposed to risks from changes in foreign currency exchange rates, prices and currency controls, interest rates, inflation, governmental spending, social instability and other political, economic and/or social developments in the countries in which we operate, any one of which may materially affect our results and reduce cash from operations.

As of December 31, 2019, current liabilities, which included \$1,443 million of current maturities of debt and other financial obligations, exceeded current assets by \$830 million. For the year ended December 31, 2019, we generated net cash flows provided by operating activities from continuing operations of \$1,284 million, after payments of interest and income taxes. Our management believes that we will generate sufficient cash flows from operations in the following twelve months to meet our needs of cash. In addition, as of December 31, 2019, we have available committed lines of credit under the 2017 Facilities Agreement, which include the revolving credit facility for a combined amount of \$1,135 million. This, in addition to our historical capacity to be able to refinance and replace our short-term obligations, should enable us to meet any liquidity risk in the short term. See notes 16.1, 16.2 and 23.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

As of December 31, 2018 and 2019, the potential requirement for additional margin calls under our different commitments was not significant.

See "Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations" and see "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Effects of COVID-19 on Our Business and Operations" and "Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement" for more information on our liquidity position and on risks to our business mainly caused by the COVID-19 pandemic.

Investments, Acquisitions and Divestitures

The transactions described below represent our principal investments, acquisitions and divestitures completed during 2017, 2018 and 2019.

Investments and Acquisitions

During 2019, CASE increased its interest in CHP from 55% to 66.78% by conducting open market purchases for a total of \$31.3 million. On December 16, 2019, CHP announced that it obtained approval from the Philippine Stock Exchange to raise the

equivalent in Philippine Peso of up to \$250 million through the SRO. As of December 31, 2019, CHP expected that the SRO would be made to all eligible shareholders on January 14, 2020. As of December 31, 2019, it was possible that we could further increase our interest in CHP as a result of the stock rights offering to 75.66%. The net proceeds from the offering will be used by CHP primarily to fund the expansion of our Solid Cement Plant and the repayment of intra-group loans. See “—Recent Developments—Other Recent Developments” for the status of the SRO.

On February 14, 2018, we increased our ownership interest in Lehigh White Cement Company, a company that manufactures white cement in the U.S., from 24.5% to 36.75%, by paying a total consideration of \$36 million.

In August 2018, our subsidiary in the United Kingdom acquired the shares of the ready-mix concrete producer Procon for an amount in Pounds Sterling equivalent to \$22 million, based on the Pound Sterling to Dollar exchange rate as of August 31, 2018. Based on the valuation of the fair values of the assets acquired and liabilities assumed, the net assets of Procon amount to \$10 million and goodwill was determined in the amount of \$12 million. See note 4.1 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

On January 24, 2017, Sierra, announced that, having received a foreign investment license from the Trinidad and Tobago Ministry of Finance, all terms and conditions had been complied with or waived and the Offer (as defined below) to all shareholders that took place on December 5, 2016 had accordingly been declared unconditional. The offer closed on February 7, 2017. Sierra acquired all TCL shares deposited pursuant to the Offer up to the maximum number of the offered shares. The TCL shares deposited in response to the Offer, together with Sierra’s existing shareholding in TCL, represented 69.83% of the outstanding TCL shares. The total consideration paid by Sierra for the TCL shares was \$86 million.

After conclusion of the Offer, considering the obtention of control, we began consolidating TCL and its subsidiaries, including CCCL, for financial reporting purposes beginning February 1, 2017.

Divestitures

During 2017, 2018 and 2019, we made divestitures of \$1,514 million, \$84 million and \$621 million, respectively (which included fixed assets of \$93 million, \$69 million and \$109 million, respectively).

As of December 31, 2019, through an affiliate in the United Kingdom, we were in negotiations with Breedon for the sale of certain assets in the United Kingdom for a total consideration of \$235 million, including \$31 million of debt. The assets held for sale mainly consist of 49 ready-mix concrete plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom. After completion of the potential divestiture, we will retain significant operations in the United Kingdom related to the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. As of December 31, 2019, the assets and liabilities associated with this segment under negotiation in the United Kingdom are presented in the statement of financial position within the line items of “assets held for sale.” See “—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.

On November 26, 2019, we announced that our U.S. affiliate, Kosmos, a partnership with a subsidiary of Buzzi Unicem S.p.A. in which we hold a 75% interest, signed a definitive agreement for the sale of certain assets to Eagle Materials for \$665 million. The divestiture successfully closed on March 6, 2020. The share of proceeds to CEMEX from this transaction was \$499 million, minus transaction costs. The divested assets consisted of the Kosmos cement plant in Louisville, Kentucky, as well as related assets which include seven distribution terminals and raw material reserves. As of December 31, 2019, the assets and liabilities associated with the sale of the Kosmos cement plant in Louisville, Kentucky and related assets in the United States are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$291 million, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2017, 2018 and 2019, the operations related to this segment are presented net of income tax in the single line item “Discontinued operations.” See “—Recent Developments Relating to Our Assets Divestiture Plans” for more information regarding this transaction.

On June 28, 2019, after obtaining customary authorizations, we closed with several counterparties the sale of our ready-mix and aggregates business in the central region of France for an aggregate price of €31.8 million (\$36.2 million).

On May 31, 2019, we concluded the sale of our aggregates and ready-mix assets in the North and North-West regions of Germany to GP Günter Papenburg AG for €87 million (\$97 million). The assets divested in Germany consisted of four aggregates quarries and four ready-mix facilities in North Germany, and nine aggregates quarries and 14 ready-mix facilities in North-West Germany.

On March 29, 2019, we closed the sale of our assets in the Baltics and Nordics to German building materials group Schwenk for a price in Euro equivalent to \$387 million. The Baltic assets that were divested consisted of one cement production plant in Broceni with a production capacity of 1.7 million tons, four aggregates quarries, two cement quarries, six ready-mix plants, one marine terminal and one land distribution terminal in Latvia. The assets divested also included our 37.8% indirect interest in one cement production plant in Akmene, Lithuania with a production capacity of 1.8 million tons, as well as the exports business to Estonia. The divested Nordic assets consisted of three import terminals in Finland, four import terminals in Norway and four import terminals in Sweden. CEMEX's operations of these disposed assets for the period from January 1 to March 29, 2019 and for the years ended December 31, 2017 and 2018 are reported in the income statements net of income tax in the single line item "Discontinued operations," including in 2019 a gain on sale of \$66 million.

On March 29, 2019, we entered into a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest our white cement business outside of Mexico and the U.S., for \$180 million, including our Buñol cement plant in Spain and our white cement customer list. The closing of the transaction is subject to approval by Spanish authorities. As of the date of this annual report, we expect to close the transaction during the first half of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing.

On September 29, 2017, one of our subsidiaries in the U.S. closed the divestment of the Block USA Materials Business, consisting of concrete block, architectural block, concrete pavers, retaining walls and building material operations in Alabama, Georgia, Mississippi and Florida to Oldcastle for \$38 million.

On September 27, 2018, one of our subsidiaries concluded the sale of our Brazilian Operations through the sale to Votorantim Cimentos N/NE S.A. of all the shares of CEMEX's Brazilian subsidiary Cimento Vencemos Do Amazonas Ltda, consisting of a fluvial cement distribution terminal located in Manaus, Amazonas province, as well as the operating license. The sale price was \$31 million. We determined a net gain on sale of \$12 million. Our Brazilian Operations for the period from January 1 to September 27, 2018 and the year ended December 31, 2017 are reported in the income statements, net of income tax, in the single line item "Discontinued Operations."

On June 30, 2017, one of our subsidiaries in the U.S. closed the divestment of the Pacific Northwest Materials Business consisting of aggregate, asphalt and ready-mix concrete operations in Oregon and Washington to Cadman Materials, Inc., a subsidiary of HeidelbergCement Group, for \$150 million.

On February 10, 2017, one of our subsidiaries in the U.S. sold its Fairborn, Ohio, cement plant and cement terminal in Columbus, Ohio, to Eagle Materials for \$400 million.

On January 31, 2017, one of our subsidiaries in the U.S. concluded the sale of its Concrete Pipe Business in the United States to Quikrete Holdings, Inc. for \$500 million plus a potential contingent consideration based on future performance of \$40 million.

Recent Developments

Recent Developments Relating to Effects of COVID-19 on Our Business and Operations

The spread of COVID-19 and its effects on, among other things, supply chains, global trade, mobility of persons, business continuity, demand for goods and services and oil prices have significantly increased the risk of a deep global recession in the remainder of 2020 that could last beyond 2020. The International Monetary Fund recently published its *World Economic Outlook* report, which stated that, as a result of the COVID-19 pandemic, the global economy is projected to contract sharply by -3% in 2020, much worse than during the 2008-09 financial crisis.

Even though some governments and central banks have announced and implemented monetary and fiscal policies to curb COVID-19's impact on economies and financial markets, these measures vary by country and may not be enough to deter material adverse economic and financial effects. Fears about the magnitude of the economic downturn have had and may continue to have an adverse effect on financial markets and emerging market currencies, which in turn have adversely affected and may continue to adversely affect our industry and our results of operations and financial condition. We expect that the construction activity across most of the markets in which we operate and in which we offer our products and services will be adversely affected for some time, before returning to pre-pandemic levels.

In addition, emerging market foreign exchange rates have been adversely affected by the global market sell-off, mainly on the back of the COVID-19 pandemic, as well as because of other factors such as the perception of the Mexican government's policies and lower oil prices. The Dollar's surge given its perceived safe-haven status has driven several emerging market currencies, such as the Mexican Peso, to record lows against the Dollar in recent weeks, with the Mexican Peso devaluing by more than 20% against the Dollar from December 31, 2019 to the date of this annual report.

The wide spread of COVID-19 has also adversely affected and may continue to adversely affect our business continuity in some of the markets in which we operate and in which we offer our products and services. Many of our operations have been and may continue to be adversely affected by (i) government decisions that seek to stop the spread of COVID-19 and entail social distancing guidelines and other health and safety measures, which at times suspend non-essential activities or have the effect of lowering activity at our operating facilities, leading to lower production; and (ii) depressed demand for our products and services. As of the date of this annual report, several of our cement and ready-mix concrete operating facilities in different parts of the world have been operating with reduced volumes and, in some cases, have temporarily halted operations due to the effects of COVID-19 on the markets in which we operate and the demand for our products and services, or in compliance with measures enacted by local governments. In particular, as of the date of this annual report:

- In Mexico, we are operating in accordance with technical guidelines set by the Mexican government. We had initially announced that we would temporarily halt all production and certain related activities in Mexico until April 30, 2020, in accordance with a decree (the “Mexico COVID-19 Decree”) issued by the Health Ministry of Mexico in response to COVID-19. However, on April 7, 2020, relying on technical guidelines to the Mexico COVID-19 Decree issued by the Health Ministry of Mexico in the Official Mexican Gazette, we announced that we would be permitted to resume production and related activities in Mexico to support the development of sectors designated as essential by the Mexican government during the COVID-19 pandemic. However, if we are again required to halt all or part of our operations in Mexico, it would further adversely affect our financial condition, business, liquidity and results of operations. For the year ended December 31, 2019, our operations in Mexico represented 21% of our revenues in Dollar terms before eliminations resulting from consolidation.
- In most of our SCA&C region, our operations have been temporarily affected. For instance, on March 28, 2020, the government of Trinidad and Tobago issued regulations addressing COVID-19 (the “Trinidad and Tobago COVID-19 Regulations”) pursuant to which certain of our operations in Trinidad and Tobago were required to temporarily cease operations on March 30, 2020. As a result of the Trinidad and Tobago COVID-19 Regulations, we temporarily halted substantially all of our operations in Trinidad and Tobago, except for certain activities related to the safe operation and preservation of the kiln and certain port operations. Also, pursuant to orders issued by the government of Barbados on March 28, 2020, we temporarily halted operations at our cement manufacturing facility located in Barbados. In addition, following measures implemented by the authorities in Panama, we temporarily halted production and related activities in Panama until at least May 24, 2020. Additionally, pursuant to a nationwide decree issued by the government of Colombia in response to COVID-19, we temporarily halted production and related activities in Colombia on March 25, 2020. However, pursuant to a subsequent nationwide decree issued by the government of Colombia on April 8, 2020, we partially resumed certain operations that were deemed essential to attend to the COVID-19 pandemic in Colombia from April 13 to April 27, 2020, after which date we resumed the majority of our operations in Colombia, and will only resume our full operations once allowed by the government of Colombia. We also adopted certain preventive measures with respect to our operations in Guatemala and the Dominican Republic, resulting in reduced activity and, in turn, production, in these countries. For the year ended December 31, 2019, our operations in our SCA&C region represented 13% of our revenues in Dollar terms before eliminations resulting from consolidation.
- In our Europe, Middle East, Africa and Asia region, the main effects have been felt in Spain and the Philippines, where our operations are running on a limited basis or have been temporarily halted. Other countries have experienced negative effects in the markets in which we offer our products and services, with drops in demand, resulting in some temporary site closures. For instance, on March 19, 2020, we voluntarily initiated the steps to temporarily halt production at the Solid Cement Plant in the Philippines. This voluntary measure is consistent with the Philippine government’s implementation of the “Enhanced Community Quarantine” in Luzon, Philippines, which was declared by the president of the Philippines in an effort to institute more stringent measures to contain the spread of COVID-19 and which is expected to remain in place at least until April 30, 2020. For the year ended December 31, 2019, our operations in Spain and in the Philippines represented 2% and 3%, respectively, of our revenues in Dollar terms before eliminations resulting from consolidation. For the year ended December 31, 2019, our operations in our Europe, Middle East, Africa and Asia region represented 31% of our revenues in Dollar terms before eliminations resulting from consolidation.
- In the U.S., except for a few ready-mix concrete plants in the San Francisco area that have been temporarily shut down, all sites that were operational before the COVID-19 pandemic remain active. Although states and local governments continue to modify terms of shelter-in-place orders, while we have seen some decrease in volumes attributable to COVID-19, we believe that our customers have generally adjusted to the increased COVID-19-related operating health and safety requirements that have been implemented at construction projects and do not seem to be ceasing their activity because of these requirements. For the year ended December 31, 2019, our operations in the U.S. represented 27% of our revenues in dollar terms before eliminations resulting from consolidation.

We are also taking actions to protect our communities and the places where we operate. For example, at certain locations we are actively cleaning and sanitizing open public areas with our concrete ready-mix trucks and filling our concrete ready-mix trucks with soap and water to release into open areas, such as hospital entrances, health-care facilities, urban places, among others. Furthermore, our admixtures plants are producing hand disinfectant according to World Health Organization specifications in quantities sufficient to cover the needs of all employees and neighboring local communities for the entire year.

We are monitoring the development of the COVID-19 pandemic and leveraging the information and recommendations from health organizations such as the World Health Organization, Centers for Disease Control and other organizations, as well as from the authorities of the countries in which we operate. We have set up local rapid response teams (“RRTs”) that remain on alert throughout our global operations and we continue to implement preventive measures. Some of the measures we have taken so far include restrictions on all work-related travel, arrangements for certain of our employees to work remotely and optimization of the number of people working in our operating facilities and other locations at any given time. Among other initiatives, we have enhanced our internal information campaigns for recommended practices for health, hygiene, and social interaction, such as promoting social distancing. For example, we are currently implementing our H&S Protocols across our operations, including, among others, our Personal Hygiene, Screening, Physical Distancing and Quarantine Protocols, which set forth certain practices that need to be performed by our employees, contractors, customers and visitors. Under our Personal Hygiene Protocol, we encourage our workers to wash their hands frequently or, when not close to a bathroom, to use antibacterial gel or alcohol-based hand rub, and, when sneezing and coughing, to cover nose and mouth with a disposable tissue or with flexed elbow or upper sleeve. Additionally, under our Physical Distancing Protocol, we aim to (i) increase distance between closely-spaced facilities; (ii) ventilate the workplace; and (iii) clean workstations between shifts. We are also carrying out our Screening at Workplace Protocol which (i) screens people at the reception areas and all entry points for pandemic-related disease symptoms; (ii) limits visitors to a minimum; and (iii) assesses the access to, and availability of, medical services for the employees. Also, as part of our Workplace Cleaning Protocol, surfaces that are frequently touched with hands are cleaned often. Furthermore, as part of our Truck Drivers’ Protocol, we are (i) disinfecting the steering wheel, the levers, buttons, and everything that is normally touched by a hand, with the aim of keeping the truck cabin clean; and (ii) encouraging our drivers to use personal protective equipment (face mask and gloves) at all times and to observe physical distancing inside and outside of the truck (i.e., no more than one person in the truck at any one time). In addition, we are implementing our Commuting to and from Work Protocol, which aims to provide company transportation service when possible and to reduce number of weekly commutes by adjusting work shifts. Lastly, through our Quarantine Protocol, we seek to separate persons who (i) have a confirmed infectious illness; (ii) have disease-like symptoms; (iii) have been exposed to people with illness, but are not ill; and (iv) are returning from travel to medium- or high-risk locations. In general, we believe that we are applying strict hygiene guidelines in all of our operations, and we have modified our manufacturing, sales, and delivery processes to implement physical distancing intended to considerably reduce the possibility of COVID-19 contagion.

The main objective of our RRTs is the development and execution of activities aimed at mitigating impact from COVID-19. The focus of these activities is to monitor and protect our employees, clients, communities, suppliers, among others, to protect our business continuity and foster communication. In particular, our RRTs are (i) monitoring global health guidelines and peer response in relation to COVID-19; (ii) consolidating and updating COVID-19-related information; (iii) following up on any quarantine cases and providing support; (iv) assisting in protecting our employees by attempting to reduce the risk of COVID-19 contagion with the implementation of various hygiene measures, guidelines and protocols; (v) enhancing the frequency and procedures related to cleaning at our various sites; (vi) implementing various remote working programs; (vii) implementing screening and quarantine enforcement measures; (viii) ensuring availability of medical support and hygiene travel kits; (ix) implementing restrictions on attending large gatherings; (x) creating and releasing guidelines for social distancing, travel, cleaning, personal hygiene, screening and quarantine; (xi) enhancing engagement with our communities, industry associations and local authorities; (xii) implementing actions to protect our business continuity by developing plans designed to strengthen our business and promote financial resiliency; and (xiii) communicating all of our COVID-19-related measures to internal and external audiences.

We believe that we have developed plans to safely and responsibly deal with possible future halts to our operations, while at the same time maintaining our property, plants and equipment in appropriate technical condition, as well as to resume our operations when needed. We are in continuous and close contact with our suppliers to facilitate addressing any critical sourcing needs and we have enhanced our customer-centric practices. We continue to cooperate with our clients and suppliers in order to implement measures that are designed to maintain business continuity and to mitigate any disruptions to our businesses caused by COVID-19.

Moreover, we believe that we have been able to strengthen our liquidity position, primarily with drawdowns of \$1.135 billion under our committed revolving credit facility (our drawdowns of \$1 billion and \$135 million on March 20, 2020 and April 1, 2020, respectively, constituted the full amount available under the committed revolving credit facility), drawdowns under our other credit lines and loans and with the proceeds of almost \$500 million from a recent asset sale. The drawdowns had the effect of increasing our overall debt and cash levels in the short to medium term. In addition, we are continuing to evaluate several other options to increase our financial liquidity and flexibility, which may further increase our debt and cash levels and could include receiving government support from any financial aid or relief programs offered by the governments of the countries in which we operate and that we may qualify for. This includes the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”) in the U.S. The CARES Act provides opportunities for additional liquidity, loan guarantees and other government programs to support companies affected by the

COVID-19 pandemic and their employees. As of the date of this annual report, we have not received any financial aid or used any financial relief program related to COVID-19, but we intend to explore all available options, globally. Although we are currently reviewing any benefits under the CARES Act and similar governmental programs outside the U.S. for which we may be eligible, we cannot assure you that we will be able to access such benefits in a timely manner or at all and, in certain cases, we cannot predict the manner in which such benefits will be allocated or administered.

We have identified \$200 million in cost-saving initiatives for the 2020 year, which had been expected to be fully realized in 2020, but that as of the date of this annual report we believe could be delayed. Additionally, among other things, we intend to suspend, reduce or delay certain planned (i) capital expenditures; (ii) budgeted operating expenses in line with the evolution of demand per market in which we operate; (iii) production and, where required, inventory levels in all of our markets consistent with depressed demand; and (iv) corporate and global network activities that detract from our current business focus on managing the crisis and our operations. We also intend to maintain a reasonable amount of inventory at our operating facilities and other locations, with the intention of continuing to serve our customers to the extent possible.

As a further measure to enhance our liquidity, we have suspended the CEMEX, S.A.B. de C.V. share repurchase program for the remainder of 2020 and, as previously announced, CEMEX, S.A.B. de C.V. will not be paying dividends during 2020.

Lastly, starting on May 1, 2020 and for a 90-day period and subject to all applicable laws and regulations, CEMEX, S.A.B. de C.V.'s Chairman of the Board of Directors, Chief Executive Officer and the members of our Executive Committee have agreed to forgo 25% of their salaries; the members of the Board of Directors of CEMEX, S.A.B. de C.V. have agreed to forgo 25% of their remuneration (including with respect to the upcoming meetings in April 2020); and we have asked certain senior executives to voluntarily forgo 15% of their monthly salaries and other employees to voluntarily defer 10% of their monthly salary, the deferred amount to be paid in full during December 2020. We also intend to work to mitigate the impact on jobs of our hourly employees affected by the COVID-19 pandemic.

There can be no assurance that the measures we have taken or may take in the future will offset the adverse impact of COVID-19. The degree to which COVID-19 affects our results and operations will depend on future developments, which are highly uncertain and cannot be predicted, including, but not limited to, the duration and spread of the COVID-19 pandemic, its severity, the actions to contain COVID-19 or treat its impact, and how quickly and to what extent normal economic and operating conditions can resume.

Given the uncertain outlook, we withdrew our prior 2020 guidance. See "Item 3—Key Information—Risk Factors—Risks Relating to Our Business—The recent COVID-19 outbreak could materially adversely affect our financial condition and results of operations."

Recent Developments Relating to Proposed Amendments to the 2017 Facilities Agreement

Mainly as a result of the adverse effects of COVID-19 explained elsewhere in this annual report, which include a potential decrease in construction activity in most of the markets in which we offer our products and services, our operating and financial performance during the COVID-19 pandemic could be adversely affected.

In order to address any potential breach of the financial ratios in the 2017 Facilities Agreement, consistent with how CEMEX has managed its financial obligations during the past six years, as of the date of this annual report, we are seeking the consent of the lenders under the 2017 Facilities Agreement to modify certain financial covenants contained in the 2017 Facilities Agreement. In particular, we are proposing to amend the consolidated leverage ratio and the consolidated coverage ratio limits.

As part of the amendments we are seeking, certain limits and certain allowances that as of the date of this annual report are available to us under the 2017 Facilities Agreement would be reduced or cease to be available, in each case until the consolidated leverage ratio is equal to or less than certain ratio levels. Mainly, allowances relating to the use of certain proceeds (including from disposals) for capital expenditures, as well as allowances for the use of cash on hand for certain acquisitions and share buybacks, would be reduced. In addition, we would reduce the overall capital expenditure investment allowance (including for CLH and CHP), the available acquisition limits and the limits on the amount of loans to third parties that we can make, until the consolidated leverage ratio is equal to or less than certain ratio levels. A modification of the existing margin at the highest leverage level and the addition of further step-ups on the margin grid is also being sought, which would increase the financial expense under the 2017 Facilities Agreement.

As of December 31, 2019, we were in compliance with the 2017 Facilities Agreement. However, our failure to comply with the financial covenants in the 2017 Facilities Agreement could result in an event of default, which would materially and adversely affect our business, financial condition, liquidity and results of operations. As of the date of this annual report, lenders under the 2017 Facilities Agreement have until May 26, 2020, unless extended to a further date, to consent to the amendments being proposed to the 2017 Facilities Agreement, at which time, or sooner if possible, we would expect to announce the status of the proposed amendments and the main terms agreed with the lenders under the 2017 Facilities Agreement. Although we have good relations with our lenders and have successfully sought amendments and/or obtained waivers in the past, receiving the consents to implement the amendments or to receive waivers is not within our control, so we cannot assure you that we will be able to reach an agreement with the lenders under the 2017 Facilities Agreement to (i) implement the proposed

amendments or as to what the final terms of any such agreement regarding the proposed amendments will be, or, if needed, (ii) waive any potential non-compliance with the 2017 Facilities Agreement, or that we will not be out of compliance with one or more financial covenants in the future. See “Item 3—Key Risk Factors—Risks Relating to Our Business—The 2017 Facilities Agreement contains several restrictions and covenants. Our failure to comply with such restrictions and covenants could have a material adverse effect on our business and financial conditions” for more information on the consequences of any event of default under our 2017 Facilities Agreement, and also see note 26 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a description of our ability to reach an agreement to amend the 2017 Credit Agreement which raises significant doubt about our ability to continue as a going concern.

Recent Developments Relating to Effects of COVID-19 on Our Internal Control Over Financial Reporting

CEMEX understands the importance of transparency, accuracy and precision of maintaining proper internal controls, especially in those related to financial reporting. Therefore, in collaboration with management, the audit committee and our auditors, the Company is implementing actions to help ensure financial reporting and auditing processes remain robust and as timely as possible in the middle of the global COVID-19 crisis. These actions include, among others, (i) the implementation of new controls for emergency procedures, (ii) close monitoring of IT access controls to enable remote workforces, (iii) controls to mitigate the potential increase in cybersecurity risks and, (iv) if an existing control cannot be performed, identify/implement alternative appropriately designed controls to compensate for the lack of information. Additionally, the Company is implementing an alternative audit plan to remotely test the operating effectiveness of controls, due to travel restrictions.

Recent Developments Relating to the Effects of the COVID-19 Pandemic on Oil Prices and Demand

As of the date of this annual report, global oil prices have recently suffered their biggest fall since 1991. The COVID-19 pandemic has drastically undermined energy demand worldwide. Factories have been idled and thousands of flights canceled around the world. In March 2020, the International Energy Agency stated that it expected demand will contract this year for the first time since the recession in 2009 that followed the global financial crisis. This has also created inventory capacity problems as there is not enough storage capacity for the oil being produced but not consumed.

Furthermore, a price war between some the major oil producing countries in the world in the face of collapsing demand has contributed to the historic plunge in oil prices. As a result, the major oil producing countries would lose money regardless of the market share they can claw back. The Gulf countries produce oil at the lowest cost, but due to high government spending and generous subsidies for citizens, they need a certain price per barrel to balance their fiscal budgets.

Oil-dependent nations that have suffered from years of conflict, uprisings or sanctions would be affected the most. Iraq, Iran, Libya and Venezuela all belong in that category, and the United States, Mexico and Colombia would also be adversely affected. This would directly affect infrastructure and public housing spending, as countries whose budget is dependent on income generated by oil sales would be materially adversely affected and would need to decrease public spending which would have a material adverse effect on countries' economic outlook and on our sales, financial condition, business, liquidity and results of operations.

Likewise, the plunge of oil prices, along with other factors, has contributed to capital outflows from emerging economies reliant on oil revenue such as Mexico, which have driven emerging market currencies to record-low levels against the Dollar. Depreciation of emerging market currencies may have a material adverse effect on our financial condition and results of operations.

Certain countries that import oil such as China, India and Germany could get some relief in the form of less expensive energy bills. The magnitude of the impact will depend on government policy with respect to domestic energy prices. Consumers benefit in general from lower oil prices and the resulting decline in gas prices at gasoline stations, especially in the United States where retail markets react more directly to supply and demand. Taxes and surcharges make up a higher share of gas station prices in Europe, so we believe the effect would be less marked. Any reduction in gas prices would likely be outweighed by the dislocation to the economy caused by the COVID-19 led slowdown in global growth.

Lower land and maritime transportation costs resulting from lower fuel prices could increase cement and clinker imports to our markets. There would also be an adverse impact on U.S. oil producers and energy jobs in states such as Texas, Louisiana, Oklahoma, New Mexico and North Dakota, which have enjoyed a boom over the last decade, and also on PEMEX, the state owned oil producer in Mexico, which would have a material adverse effect on the country's economic growth and our financial condition, business, liquidity and results of operations, in particular in the U.S. and in Mexico.

Recent Developments Relating to Our Assets Divestiture Plans

On January 8, 2020, we reached an agreement for the sale of certain assets in the United Kingdom to Breedon for a total consideration of \$235 million, which includes \$31 million of debt. The assets held for sale as of December 31, 2019 consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of our paving solutions business in the United Kingdom and certain other inactive sites of ours in the United Kingdom. If the divestiture is completed, we will retain significant operations in the United Kingdom related to, among other things, the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. As of December 31, 2019, the assets and liabilities associated with this transaction in the United Kingdom are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$49 million, and “Liabilities directly related to assets held for sale,” respectively. For purposes of the income statements for the years ended December 31, 2017, 2018 and 2019, the operations related to this divestiture are presented net of tax in the single line item “Discontinued operations.” On January 20, 2020, the United Kingdom Competition and

Markets Authority (the “CMA”) imposed an initial enforcement order on Breedon, Southern Limited and Cemex Investments Limited in relation to this proposed acquisition by Breedon. The initial enforcement order requires both companies to operate separately while the CMA reviews the transaction. As of the date of this annual report, we expect to finalize this divestment during the second quarter of 2020, but we are not able to assess if COVID-19 will delay the closing of this divestment or prevent us from closing the transaction.

On March 6, 2020, we successfully closed our divestiture in the U.S. announced on November 26, 2019, pursuant to which our U.S. affiliate Kosmos, a partnership with a subsidiary of BUZZI Unicem S.p.A. in which CEMEX held a 75% interest, entered into a binding agreement for the sale of certain assets to Eagle Materials for \$665 million. The share of proceeds to us from this transaction was \$499 million, minus transaction costs. The assets that were divested consisted of the Kosmos cement plant in Louisville, Kentucky, USA, as well as related assets which included seven distribution terminals and raw material reserves. As of December 31, 2019, the assets and liabilities associated with the sale of the Kosmos cement plant in Louisville, Kentucky, and related assets in the U.S. are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$291 million, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2017, 2018, and 2019 the operations related to this segment are presented net of income tax in the single line item “Discontinued operations.”

Recent Developments Relating to CEMEX, S.A.B. de C.V.’s Shareholders’ Meeting

On March 26, 2020, CEMEX, S.A.B. de C.V. held its ordinary general shareholders’ meeting at which the shareholders of CEMEX, S.A.B. de C.V. approved, among other things, (a) setting the amount of \$500 million or its equivalent in Mexican Pesos as the maximum amount of resources that through fiscal year 2020, and until the next ordinary general shareholders’ meeting of CEMEX, S.A.B. de C.V. is held, CEMEX, S.A.B. de C.V. may use for the acquisition of its own shares or securities that represent such shares; and (b) the cancellation of shares of CEMEX, S.A.B. de C.V. (i) repurchased during the 2019 fiscal year and (ii) that remained in CEMEX, S.A.B. de C.V.’s treasury after the maturities of the November 2019 Mandatory Convertible Mexican Peso Notes and the 3.72% Convertible Subordinated Notes due March 15, 2020 issued in May 2015. On April 8, 2020, we announced that, to enhance our liquidity, we suspended the CEMEX, S.A.B. de C.V. share repurchase program for the remainder of 2020.

In addition, the shareholders approved the appointment of the members of the board of directors, the audit committee, the corporate practices and finance committee and the sustainability committee of CEMEX, S.A.B. de C.V.

Recent Developments Relating to CEMEX, S.A.B. de C.V.'s Senior Management and Board of Directors

Effective March 27, 2020, (i) Joaquín Miguel Estrada Suarez, the President of our Asia, Middle East and Africa region, and of CEMEX's global trading activities, decided to leave CEMEX, (ii) Sergio Mauricio Menendez Medina, the current President for CEMEX in Europe, was appointed President for CEMEX Europe, Middle East, Africa & Asia and will, as a result, oversee business in the Philippines, Israel, Egypt and the UAE in addition to his current responsibilities, and (iii) Jesus Vicente Gonzalez Herrera, the current President for CEMEX in SCA&C, will also oversee CEMEX's Global Trading activities, in addition to his current responsibilities.

Recent Developments Relating to Our Indebtedness

Maturity of our March 2020 Optional Convertible Subordinated Dollar Notes

On March 15, 2020, we informed the MSE that our 3.720% Subordinated Optional Convertible Notes issued on (i) March 13, 2015 (the "March 2015 Convertible Notes") and (ii) May 28, 2015 (the "May 2015 Convertible Notes," and collectively with the March 2015 Convertible Notes, the "March 2020 Optional Convertible Subordinated Dollar Notes") matured, without conversion, in accordance with the indenture governing such notes, except for \$2,000 aggregate principal amount of our May 2015 Convertible Notes which, as of March 15, 2020, was converted into 185 ADSs. As a result, on March 13, 2020, CEMEX paid to the trustee of the March 2020 Optional Convertible Subordinated Dollar Notes the amount of \$521.1 million as full settlement.

Recent Developments Relating to Our Stock Repurchase Program

From March 10, 2020 to March 24, 2020, under the 2019 repurchase program authorized at CEMEX, S.A.B. de C.V.'s ordinary general shareholders meeting held on March 28, 2019, CEMEX, S.A.B. de C.V. repurchased 378.2 million CPOs, which represented 2.5% of CEMEX, S.A.B. de C.V.'s outstanding share capital as of December 31, 2019, at a weighted-average price of 5.01 Pesos per CPO, which was equivalent to an amount \$83.2 million, excluding value-added tax. CEMEX, S.A.B. de C.V. did not repurchase any other CPOs between January 1, 2020 and March 10, 2020 and has not repurchased any additional CPOs since March 24, 2020. On April 8, 2020, we announced that, to enhance our liquidity, we suspended the CEMEX, S.A.B. de C.V. share repurchase program for the remainder of 2020.

Other Recent Developments

Closing of CHP's SRO

On January 29, 2020, CHP, the holding company of our main operations in the Philippines, announced the results of its SRO pursuant to which 8,293,831,169 common shares of CHP were issued and listed on the Philippine Stock Exchange on March 4, 2020. As of December 31, 2019, CEMEX España indirectly held 66.78% of CHP's common shares. After giving effect to the SRO, CEMEX España's indirect ownership of CHP's common shares increased to 75.66%.

The net proceeds from the SRO will be used primarily to (i) fund the expansion of CHP's Solid Cement Plant, including to pay outstanding amounts owed to us related to the expansion of the Solid Cement Plant, and (ii) for other general corporate purposes, including paying other outstanding amounts owed to us.

Effectiveness of Mergers between CEMEX, S.A.B. de C.V. and certain direct and indirect subsidiaries in Mexico (the "Mexican Reorganization")

On November 13, 2019, CEMEX, S.A.B. de C.V. and certain of its direct and indirect subsidiaries in Mexico including, among others, CEMEX México and Empresas Tolteca, entered into a merger agreement pursuant to which each such subsidiary merged with and into CEMEX, S.A.B. de C.V., with CEMEX, S.A.B. de C.V. as the surviving entity, effective as of December 1, 2019. In accordance with Mexican Law, the merger of each subsidiary becomes effective against third parties three months after the date of filing of the corresponding merger deed with the Mexican Public Register of Commerce (*Registro Público de Comercio*). The mergers between CEMEX, S.A.B. de C.V. and Empresas Tolteca and CEMEX, S.A.B. de C.V. and CEMEX México became effective against third parties on February 26, 2020 and March 9, 2020, respectively.

As a result of the mergers of CEMEX México and Empresas Tolteca into CEMEX, S.A.B. de C.V., CEMEX México and Empresas Tolteca have ceased to guarantee our indebtedness to the extent that they provided guarantees, and the shares of CEMEX México that were pledged or transferred to trustees under security trusts to benefit certain secured creditors of CEMEX and certain of its subsidiaries are no longer part of the collateral securing our indebtedness as a result of such shares ceasing to exist.

New Climate Action Strategy

On February 19, 2020, we announced a new strategy to address climate change, seeking an intermediate target of reducing 35% of our CO₂ net emissions by 2030 aligned with the Science-Based Targets methodology. In order for us to meet our new target, this objective has been included in the variable compensation of senior management; and we have detailed CO₂ roadmaps developed at each of our cement plants which include a roll-out of proven CO₂ reduction technologies and the investments required for their implementation. Furthermore, we aspire to deliver net-zero CO₂ concrete globally by 2050, which should contribute to the development of smart urban projects, sustainable buildings and climate-resilient infrastructures.

Recent Developments Relating to Our Regulatory Matters and Legal Proceedings

Tax Matters in Colombia

On January 8, 2020, in connection with the tax proceeding in Colombia related to the year 2012, CEMEX Colombia was notified that the DIAN, had, in response to the appeal filed by CEMEX Colombia, confirmed the DIAN's assessment that CEMEX Colombia is required to pay increased taxes and corresponding penalties, as previously notified on April 6, 2018. CEMEX Colombia has four months to appeal this resolution in the corresponding administrative courts in Colombia. No amounts are required to be paid by CEMEX Colombia until all available recourses have been filed and concluded. Notwithstanding this resolution, as of March 31, 2020, CEMEX considers that an adverse resolution after conclusion of all available defense procedures is not probable. However, it is difficult to assess with certainty the likelihood of an adverse result in the proceeding. If this proceeding is adversely resolved, CEMEX believes this could have a material adverse impact on the operating results, liquidity or financial position of CEMEX. See note 19.4 to our 2019 audited consolidated financial statements included elsewhere in this annual report for a description of this proceeding.

Polish Antitrust Investigation

In connection with the antitrust proceeding initiated in 2007 against all cement producers in Poland, including CEMEX Polska and another of our indirect subsidiaries in Poland, on January 16, 2020, the Supreme Court, during the first court hearing, postponed the final ruling on the cassation appeal of CEMEX Polska for an unspecified period until a formal motion on exclusion of one of the judges is resolved by another judge of the Supreme Court. As of March 31, 2020, we do not expect that a final adverse resolution to this matter would have a material adverse impact on our results of operations, liquidity and financial condition.

Antitrust Cases in Georgia and South Carolina

On July 24, 2017, two ready-mix concrete producers filed a lawsuit in a U.S. Federal Court in the state of Georgia against certain of our subsidiaries in the U.S. and other companies alleging customer allocation and price fixing in both the ready-mix concrete and cement markets in the coastal Georgia and southeastern coastal South Carolina areas. In addition, on January 22, 2020, new plaintiffs who were the prior owners of a ready-concrete producer filed a lawsuit in the same court against the same subsidiaries of CEMEX making substantially similar allegations as the suit filed in July 2017. As we do not participate in the ready-mix concrete market in these areas, the lawsuits do not allege any improper actions by us with respect to ready-mix concrete. On October 2, 2017, we filed a motion to dismiss the July 2017 lawsuit. This motion to dismiss was denied on August 21, 2018, and, as a result, CEMEX will continue to defend the allegations in the ongoing proceedings and filed its answer at the end of October 2018. CEMEX has not yet made any filings in connection with the January 2020 lawsuit. As of March 31, 2020, at this stage of the lawsuits, while we cannot assess with certainty the likelihood of an adverse result in these lawsuits, we believe a final adverse resolution to these lawsuits is not probable; however, if adversely resolved, we believe such adverse resolution should not have a material adverse impact on our results of operations, liquidity or financial condition.

Federal Securities Class Action

On February 28, 2020, we informed the MSE that the securities class action complaint filed on March 16, 2018, as amended, against CEMEX, certain officers of CEMEX (one of whom is a member of CEMEX's board of directors), and one of CEMEX's partially-owned subsidiaries, CLH, which was dismissed with prejudice on February 11, 2020, is now closed as a result of the plaintiffs' agreement not to appeal.

Item 6—Directors, Senior Management and Employees

Senior Management and Directors

Senior Management

Set forth below is the name, position and experience of each member of our senior management team as of December 31, 2019. The terms of office of the senior managers are indefinite. For a description of changes to our senior management team, see “Item 5—Operating and Financial Review and Prospects—Recent Developments—Recent Developments Relating to CEMEX, S.A.B. de C.V.’s Senior Management and Board of Directors,” effective as of March 27, 2020, which mainly consists of Joaquín Miguel Estrada Suarez leaving CEMEX, Sergio Mauricio Menendez Medina, being appointed President for CEMEX Europe, Middle East, Africa & Asia, in addition to Mr. Menendez’ current responsibilities, and Jesus Vicente Gonzalez Herrera overseeing CEMEX’s global trading activities, in addition to Mr. Gonzalez’ current responsibilities.

<u>Name, Position (Age as of December 31, 2019)</u>	<u>Experience</u>
Fernando Ángel González Olivieri Chief Executive Officer (Male - 65)	<p>Mr. González Olivieri has been a member of CEMEX, S.A.B. de C.V.’s Board of Directors since March 26, 2015. He has been CEMEX, S.A.B. de C.V.’s Chief Executive Officer since May 15, 2014, and he is also a member of the board of directors of Grupo Cementos de Chihuahua, S.A.B. de C.V., Axtel, S.A.B. de C.V. and EGADE Business School of the Instituto Tecnológico y de Estudios Superiores de Monterrey.</p> <p>With his deep knowledge of CEMEX and the markets in which CEMEX operates, Mr. Gonzalez brings to the CEMEX, S.A.B. de C.V. Board of Directors a global vision and leadership that directly contributes to the formulation and the integral implementation of CEMEX’s global business strategy.</p> <p>He joined CEMEX in 1989 and from that year through 1994 occupied different positions within CEMEX in the Strategic Planning, Business Development and Human Resources departments. He then served as Corporate Vice-President of Strategic Planning from 1994 to 1998, President of CEMEX Venezuela, S.A.C.A. from 1998 to 2000, President of CEMEX Asia from 2000 to May 2003 and President of CEMEX’s South, Central American and the Caribbean region from May 2003 to February 2005. He was appointed President of CEMEX’s former European Region in March 2005, President of CEMEX’s former Europe, Middle East, Africa, Asia and Australia Region in February 2007 and CEMEX’s Executive Vice President of Planning and Development in May 2009. In February 2010, Mr. González Olivieri was appointed CEMEX’s Executive Vice President of Planning and Finance and, in 2011, was also appointed CEMEX’s Chief Financial Officer. He held these positions until he was named Chief Executive Officer in 2014. He was a member of the Board of Directors of CEMEX México until February 2017.</p> <p>Mr. González Olivieri earned his B.A. and M.B.A. degrees from the Instituto Tecnológico y de Estudios Superiores de Monterrey.</p>
Jaime Muguero Domínguez President CEMEX USA (Male - 51)	<p>Joined CEMEX in 1996 and has held several executive positions in the areas of Strategic Planning, Business Development, Ready-mix Concrete, Aggregates and Human Resources. He headed CEMEX’s operations in Egypt and our former Mediterranean Region. He was President of CEMEX South, Central America and the Caribbean and Chief Executive Officer of CLH. Effective as of September 1, 2019, he serves as</p>

Name, Position (Age as of December 31, 2019)

Experience

Ricardo Naya Barba
President CEMEX México
(Male – 47)

President of CEMEX USA, and is no longer President CEMEX South, Central America and the Caribbean and Chief Executive Officer of CLH. He graduated with a Management degree from San Pablo CEU University, holds a Law degree from the Universidad Complutense de Madrid and an M.B.A. from the Massachusetts Institute of Technology.

Joined CEMEX in 1996. He has held several executive positions, including Vice President of Strategic Planning for the South, Central America and the Caribbean region, Vice President of Strategic Planning for the Europe, Middle East, Africa and Asia region, President of CEMEX Poland and the Czech Republic, Vice President of Strategic Planning for the U.S., Vice President of Commercial and Marketing in Mexico, Vice President of Distribution Segment Sales in Mexico, and most recently, President of CEMEX Colombia. He is President of CEMEX México. Mr. Naya Barba holds a B.A. in Economics from Tecnológico de Monterrey and an M.B.A from the Massachusetts Institute of Technology.

Sergio Mauricio Menéndez Medina
President CEMEX Europe
(Male – 49)

Joined CEMEX in 1993. He has held several executive positions, including Director of Planning and Logistics in Asia, Corporate Director of Commercial Development, President of CEMEX Philippines, Vice President of Strategic Planning for the Europe, Middle East, Africa and Asia region, President of CEMEX Egypt, Vice President of Infrastructure Segment and Government Sales in Mexico, and most recently, Vice President of Distribution Segment Sales in Mexico. He is President of CEMEX Europe. Mr. Menéndez holds a B.S. in Industrial Engineering from Tecnológico de Monterrey and an M.B.A from Stanford University.

Joaquín Miguel Estrada Suarez
President CEMEX Asia, Middle East and Africa
(Male - 55)

Joined CEMEX in 1992 and has held several executive positions, including head of operations in Egypt and Spain, as well as head of Trading for Europe, the Middle East and Asia. As of December 31, 2019, he was the President of CEMEX Asia, Middle East and Africa and was also responsible for our global trading activities. As of December 31, 2019, he was also the Chairman of the board of directors of CHP. From 2008 to 2011, he served as a member of the board of directors of COMAC (*Comercial de Materiales de Construcción S.L.*), President and member of the board of OFICEMEN and member of the board of IECA (*Instituto Español del Cemento y sus Aplicaciones*). He was also the President of CEMA (*Fundación Laboral del Cemento y el Medioambiente*) from 2010 to 2011. He graduated with a degree in Economics from the Universidad de Zaragoza and holds an M.B.A. from the Instituto de Empresa.

José Antonio González Flores
Executive Vice President of Finance and Administration and Chief Financial Officer
(Male - 49)

Joined CEMEX in 1998 and has held management positions in corporate and operating areas in Finance, Strategic Planning, and Corporate Communications and Public Affairs. He is responsible for CEMEX's Finance, Controllership, Tax, Process Assessment, Legal and Global Services Organization areas. Mr. González is also a member of the board of directors of GCC and is an alternate director of the board of directors of Axtel. Mr. González has a B.S. in Industrial and Management Systems Engineering from ITESM and an M.B.A. from Stanford University.

Name, Position (Age as of December 31, 2019)	Experience
<p>Juan Pablo San Agustín Rubio Executive Vice President of Strategic Planning and New Business Development (Male - 50)</p>	<p>Joined CEMEX in 1994 and has held executive positions in the Strategic Planning, Continuous Improvement, E-business and Marketing areas. He is the Executive Vice President of Strategic Planning and New Business Development. Mr. San Agustín is Chairman of the board of directors of CLH. He graduated with a B.S. from the Universidad Metropolitana and holds an International M.B.A. from the Instituto de Empresa.</p>
<p>Luis Hernández Echávez Executive Vice President of Digital and Organization Development (Male - 56)</p>	<p>Joined CEMEX in 1996 and has held senior management positions in the Strategic Planning, Human Resources and Administration areas. He is the Executive Vice President of Organization and Human Resources, Information Technology, Digital Innovation, as well as Neoris. He graduated with a degree in Civil Engineering from ITESM and holds a Master's degree in Civil Engineering and an M.B.A. from the University of Texas at Austin.</p>
<p>Maher Al-Haffar Executive Vice President of Investor Relations, Corporate Communications and Public Affairs (Male - 61)</p>	<p>Joined CEMEX in 2000. Prior to his current position, he was Vice President of Investor Relations, Corporate Communications and Public Affairs. He also served as a Managing Director in Finance and Head of Investor Relations for CEMEX. Before joining CEMEX, he spent 19 years with Citicorp Securities Inc. and Santander Investment Securities as an investment banker and capital markets professional. Mr. Al-Haffar holds a B.S. in Economics from the University of Texas and a Master's degree in International Relations and Finance from Georgetown University.</p>
<p>Mauricio Doehner Cobián Executive Vice President of Corporate Affairs and Enterprise Risk Management (Male - 45)</p>	<p>Joined CEMEX in 1996 and has held several executive positions in areas such as Strategic Planning and Enterprise Risk Management for Europe, Asia, the Middle East, South America and Mexico. He is in charge of Corporate Affairs and Enterprise Risk Management, currently under leave of absence for educational purposes. He has also worked in the public sector within the Mexican Presidency. Mr. Doehner is president of the Mexican National Cement Chamber (<i>Cámara Nacional del Cemento</i>) and member of the board of directors of Vista Oil & Gas, S.A.B. de C.V., Editorial Clio, Trust for the Americas, Universidad TecMilenio, Museo de Arte Contemporáneo de Monterrey, A.C., Arzys, S.A. de C.V. and Casa Paterna La Gran Familia, A.C. Mr. Doehner earned his B.A. in Economics from ITESM, holds an M.B.A. from IESE/IPADE and a professional certification in Competitive Intelligence from the FULD Academy of Competitive Intelligence in Boston, Massachusetts.</p>
<p>Juan Romero Torres Executive Vice President of Sustainability, Commercial and Operations Development (Male - 62)</p>	<p>Joined CEMEX in 1989 and has occupied several senior management positions, including President of CEMEX Colombia, President of our operations in Mexico, President of the South America and the Caribbean Regions, President of our former Europe, Middle East, Africa and Asia Region. and President of CEMEX México. Since September 1, 2019, he is the Executive Vice President of Sustainability, Commercial and Operations Development. Mr. Romero was appointed Vice President and representative of the board of directors of the National Chamber of Cement (<i>Cámara Nacional del Cemento</i>) in June 2011, and is also a member of the board of directors of GCC. Mr. Romero graduated from Universidad de Comillas in Spain, where he studied Law and Economic and Enterprise Sciences.</p>

Name, Position (Age as of December 31, 2019)	Experience
<p>Jaime Gerardo Elizondo Chapa Executive Vice President of Global Supply Chain (Male - 56)</p>	<p>Joined CEMEX in 1985 and has headed several operations, including Panama, Colombia, Venezuela and Mexico and was President of CEMEX South America (including Central America) and the Caribbean. As of December 31, 2018, he was the President of CEMEX Europe. Mr. Elizondo served as President and Vice President of the National Chamber of Cement (<i>Cámara Nacional del Cemento</i>) and as Vice President of the Transformation Industry Chamber of Nuevo León (<i>Cámara de la Industria de la Transformación de Nuevo León</i>). He is the Executive Vice President of Global Supply Chain for CEMEX and also a member of CLH’s board of directors. He graduated with a B.S. in Chemical and System Engineering and holds an M.B.A. from ITESM.</p>
<p>Jesús Vicente González Herrera President of CEMEX South, Central America and the Caribbean (Male - 54)</p>	<p>Joined CEMEX in 1998 and has held several senior positions, including Corporate Director of Strategic Planning, Vice President of Strategic Planning in CEMEX USA, President of CEMEX Central America, President of CEMEX UK and, more recently, Executive Vice President of Sustainability and Operations Development. Since September 1, 2019, he is President CEMEX South, Central America and the Caribbean. He is also the Chief Executive Officer of CLH and a member of CLH’s board of directors. He holds a M.Sc. in Naval Engineering from the Polytechnic University of Madrid and an M.B.A. from IESE—University of Navarra, Barcelona.</p>
<p>Rafael Garza Lozano Vice President of Comptrollership (Male - 56)</p>	<p>Joined CEMEX in 1985 and has served as Chief Accounting Officer since 1999. He is a member of the board of directors of Consejo Mexicano para la Investigación y Desarrollo de Normas de Información Financiera and an alternate member of the board of directors of GCC. Mr. Garza is a certified public accountant and he received a Master’s degree in Administration and Finance from ITESM. He also attended executive programs at ITAM, IPADE and Harvard University.</p>
<p>Roger Saldaña Madero Senior Vice President of Legal (Male - 51)</p>	<p>Joined CEMEX in 2000 and served as Legal Counsel of CEMEX and, from 2001 to 2011, as General Counsel of NEORIS, a CEMEX subsidiary specialized in providing information technology services. From 2005 and until 2017, Mr. Saldaña was Senior Corporate Counsel of CEMEX, and was responsible for, among other matters, corporate finance legal affairs and, since June 1, 2017, has served as CEMEX’s Senior Vice President of Legal. On March 30, 2017, Mr. Saldaña was appointed Secretary of the board of directors of CEMEX, S.A.B. de C.V. and the committees to such Board. Prior to joining CEMEX, he served as Legal Counsel in CYDSA, S.A.B. de C.V., was a foreign associate in the law firm Fried, Frank, Harris, Shriver & Jacobson, in New York, N.Y., USA and previously was Chief of the Double Taxation Department in Mexico’s Ministry of Finance and Public Credit (<i>Secretaría de Hacienda y Crédito Público</i>). Mr. Saldaña is a graduate of the Universidad de Monterrey, A.C. (UDEM) with a degree in Law,</p>

Name, Position (Age as of December 31, 2019)

Experience

holds a Master's degree in Law (LLM) from Harvard University and a diploma from Harvard University's International Tax Program.

Board of Directors

Set forth below are the names, position and experience of the members of CEMEX, S.A.B. de C.V.'s board of directors as of December 31, 2019.

No alternate directors were elected at CEMEX, S.A.B. de C.V.'s 2019 annual general ordinary shareholders' meeting that took place on March 26, 2020. Members of CEMEX, S.A.B. de C.V.'s board of directors serve for one-year terms.

Name, Position (Age as of December 31, 2019)

Experience

Rogelio Zambrano Lozano
Chairman
Non-Independent Director
(Male - 63)

Mr. Zambrano Lozano has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since 1987 and Chairman of CEMEX, S.A.B. de C.V.'s Board of Directors since May 15, 2014. He is a member of the Board of Directors of Carza, S.A. de C.V., a member of the advisory board of Citibanamex, a member of the regional council of Banco de México and a member of the Mexican Business Council (*Consejo Mexicano de Negocios*) and the Instituto Tecnológico y de Estudios Superiores de Monterrey. He is also a visiting professor at Instituto Tecnológico y de Estudios Superiores de Monterrey.

With his vast experience and knowledge in the construction, building materials and real estate sectors, since his appointment as Chairman of the Board of CEMEX, S.A.B. de C.V., Mr. Zambrano has focused on strengthening corporate governance practices and guiding the business strategy to enhance the operational and financial performance of CEMEX at a global level, based on the commitment to create long-term value for all CEMEX's stakeholders.

He was President of CEMEX, S.A.B. de C.V.'s Finance Committee from 2009 until March 2015 and he was also Chairman of CEMEX México's Board of Directors until February 2017.

He holds an Industrial and Systems Engineering degree from the Instituto Tecnológico y de Estudios Superiores de Monterrey and an M.B.A. from the Wharton Business School of the University of Pennsylvania (1980).

He is a grandson of the late Mr. Lorenzo Zambrano Gutiérrez, one of CEMEX, S.A.B. de C.V.'s founders, and a son of Mr. Marcelo Zambrano Hellion, who was a member of CEMEX, S.A.B. de C.V.'s Board of Directors from 1957 until his passing away and Chairman of the Board of Directors from 1979 to 1995. He has a family relationship with Tomás Milmo Santos, Ian Christian Armstrong Zambrano and Marcelo Zambrano Lozano, who are all members of CEMEX, S.A.B. de C.V.'s Board of Directors.

Fernando Ángel González Olivieri
Non-Independent Director
(Male - 65)

See "—Senior Management."

Name, Position (Age as of December 31, 2019)

Experience

Marcelo Zambrano Lozano
Non-Independent Director
(Male - 64)

Mr. Zambrano Lozano has been a member of the Board of Directors of CEMEX, S.A.B. de C.V. since March 31, 2017 and a member of the Sustainability Committee of CEMEX, S.A.B. de C.V. from July 27, 2017 to the present date. He is a founding partner and Executive Chairman of the Board of Directors of Carza, S.A. de C.V., a recognized real estate development company mainly in the residential, commercial and industrial sectors. He is also a member of the boards of directors of Banco Regional, S.A.B. de C.V., Institución de Banca Múltiple, BanRegio Grupo Financiero, which is a publicly listed company in Mexico, Green Paper (formerly Productora de Papel, S.A. de C.V.), Fibra Inn (a trust that trades in Mexico and in the U.S.), Grupo Vigia, S.A. de C.V. and Fundación Treviño Elizondo. Furthermore, he is a member of the Real Estate Committee of the Tecnológico de Monterrey, General Council of Universidad de Monterrey, A.C. (UDEM) and of the General Board of Telmex.

His detailed knowledge of the real estate and construction industries, as well as the construction materials sector, provides the CEMEX, S.A.B. de C.V. Board of Directors with an extensive view of the main trends in the sector, thus helping CEMEX to anticipate and satisfy the needs of customers in each of the market segments CEMEX participates in.

He graduated with a degree in Marketing from the Instituto Tecnológico y de Estudios Superiores de Monterrey.

Mr. Zambrano Lozano has a familial relationship with Mr. Rogelio Zambrano Lozano, Chairman of CEMEX, S.A.B. de C.V.'s Board of Directors, Tomás Milmo Santos and Ian Christian Armstrong Zambrano, both members of CEMEX, S.A.B. de C.V.'s Board of Directors.

Ian Christian Armstrong Zambrano
Non-Independent Director
(Male - 39)

Mr. Armstrong Zambrano has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since March 26, 2015, and a member of the Sustainability Committee of CEMEX, S.A.B. de C.V. since it was established on September 25, 2014. He is a founding partner and President of Biopower, which provides the private and public sectors with voltage optimization solutions and services related to quality of energy, as well as a founding member of RIC Energy Mexico, which is a qualified energy services provider and power generator. Mr. Armstrong Zambrano is also member of the Boards of Directors of Tec Salud and Fondo Zambrano Hellión. With his experience in the financial and energy sectors, Mr. Armstrong Zambrano has advised and carried out several projects with leading multinational companies in Mexico. Thus, in addition to contributing his knowledge to CEMEX, S.A.B. de C.V.'s Sustainability Committee to evaluate energy projects, he provides strategic guidance to the CEMEX, S.A.B. de C.V. Board of Directors for the development and global expansion of CEMEX.

He had previously been a provisional member of CEMEX, S.A.B. de C.V.'s Board of Directors since May 15, 2014 until March 2015 and was Vice President of Promotion and Analysis at Evercore Casa de Bolsa.

Name, Position (Age as of December 31, 2019)	Experience
<p>Tomás Milmo Santos (Male – 55) Non-Independent Director</p>	<p>Mr. Armstrong Zambrano is a graduate in Business Administration from the Instituto Tecnológico y de Estudios Superiores de Monterrey and holds an M.B.A. from the IE Business School.</p> <p>He has a familial relationship with Rogelio Zambrano Lozano, Chairman of CEMEX, S.A.B. de C.V.'s Board of Directors, and Marcelo Zambrano Lozano, a member of CEMEX, S.A.B. de C.V.'s Board of Directors.</p> <p>Mr. Milmo Santos has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since 2006. He is Chairman of the Board of Directors and CEO of Grupo Perseus, a company focused on the energy sector, as well as Vice President of the Board of Directors of Thermion Energy Group. He is Co-Chairman of the telecommunications company Axtel, S.A.B. de C.V. (a publicly listed company in Mexico) and member of the Board of Directors of Promotora Ambiental, S.A. Likewise, he is a member of the directive board of the Instituto Tecnológico y de Estudios Superiores de Monterrey and Chairman of the Board of Directors of Tec Salud and Alianza Educativa Ciudadana por Nuevo León, a non-profit organization.</p> <p>Mr. Milmo Santos is an entrepreneur with decades of experience in the industrial, energy and telecommunications sectors, which provides to the CEMEX, S.A.B. de C.V. Board of Directors insight into the various markets where CEMEX, S.A.B. de C.V. operates around the world.</p> <p>He served as an alternate member of CEMEX, S.A.B. de C.V.'s Board of Directors from 2001 to 2006, member of the CEMEX, S.A.B. de C.V.'s Finance Committee from 2009 to 2015, and a member of the Board of Directors of CEMEX México until 2017.</p>
<p>Armando J. García Segovia Independent Director (Male - 67)</p>	<p>He graduated with a degree in economics from Stanford University.</p> <p>Mr. Milmo Santos has a family relationship with Rogelio Zambrano Lozano, Chairman of CEMEX, S.A.B. de C.V.'s Board of Directors, and Marcelo Zambrano Lozano, member of CEMEX, S.A.B. de C.V.'s Board of Directors.</p> <p>Mr. García Segovia has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since 1983 and a member of the Sustainability Committee of CEMEX, S.A.B. de C.V. since it was established on September 25, 2014. He is the alternate director of the board of Grupo Cementos de Chihuahua, S.A.B. de C.V., member of the Board of Directors of Hoteles City Express, S.A.P.I. de C.V. and of Innovación y Conveniencia, S.A. de C.V. (formerly Grupo Chapa, S.A. de C.V.). He is also a member of the Board of Directors of Universidad de Monterrey, A.C. (UDEM), Unidos para la Conservación, Pronatura Noreste, A.C. and Vice President of the Patronato del Museo de la Fauna y Ciencias Naturales, A.B.P., as well as member of the Consejo de Participación Ciudadana de Parques y Vida Silvestre de Nuevo León. Mr. García Segovia is also honorary consul in Monterrey of the Kingdom of Denmark. He is also founder and Chairman of the Board of Directors of Comenzar de Nuevo, A.C. a non-profit organization.</p>

Rodolfo García Muriel
Independent Director
(Male - 74)

He brings to the CEMEX, S.A.B. de C.V. Board of Directors a considerable level of detailed knowledge of different aspects of CEMEX, as well as a commitment to the care and conservation of nature, which allows him to make significant contributions to the constant strengthening of CEMEX's sustainability policy, a central component of CEMEX's business strategy focused on creating long-term value.

He initially joined CEMEX in 1975, was employed at Cydsa, S.A. from 1979 to 1981, at Conek, S.A. de C.V. from 1981 to 1985 and rejoined CEMEX in 1985. During his second stint at CEMEX, he occupied multiple positions from 1985 to March 2010, being Director of Operations, Strategic Planning, Corporate Services and Affiliates, Development, and also Executive Vice President of Development, and of Technology, Energy and Sustainability. He was also Vice President of the Mexican Employers' Association (Confederación Patronal de la República Mexicana or "COPARMEX"), member of the Board and former Chairman of the Private Sector Center for Sustainable Development Studies (Centro de Estudios del Sector Privado para el Desarrollo Sustentable), former Chairman of COPARMEX Nuevo León, Chairman and member of the Board of Directors of Gas Industrial de Monterrey, S.A. de C.V., served as Chairman of an Advisory Board of the School of Engineering and Information Technology of the Instituto Tecnológico y de Estudios Superiores de Monterrey, a member of the Board of Directors of the World Environmental Center and President of the Advisory Council of Flora y Fauna del Estado de Nuevo León, A.C.

He is a graduate of the Instituto Tecnológico y de Estudios Superiores de Monterrey with a degree in Mechanical Engineering and Administration and holds an M.B.A. from the University of Texas.

He has a familial relationship with Rodolfo García Muriel, a member of CEMEX, S.A.B. de C.V.'s Board of Directors.

Mr. García Muriel has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since 1985, a member of the corporate practices and finance committee since March 26, 2015 and member of the audit committee since March 31, 2016. He is Chief Executive Officer of Compañía Industrial de Parras, S.A. de C.V., Chairman of the Board of Directors of Grupo Romacarel, S.A.P.I de C.V., a member of the Board of Directors of Comfort Jet, S.A. de C.V., a member of the Regional Board of Directors of Grupo Financiero CitiBanamex and a member of the directive board of the National Chamber of the Textile Industry (Cámara Nacional de la Industria Textil).

He is a business leader with a long history as a founder, director and president of many different companies in the manufacturing, construction, transport and communications industries, among others, thereby contributing his vast experience to CEMEX, S.A.B. de C.V.'s Board of Directors wide vision of the global business environment.

Name, Position (Age as of December 31, 2019)

Experience

Dionisio Garza Medina
Independent Director
(Male - 65)

He was a member of CEMEX, S.A.B. de C.V.'s Finance Committee from 2009 until March 2015, as well as a member of CEMEX México's Board of Directors until February 2017.

He graduated with a degree in Electric Mechanical Engineering from the Universidad Iberoamericana and completed a specialized program in Business Administration at Harvard University and at the Anderson School of the University of California in Los Angeles (UCLA).

Mr. García Muriel has a familial relationship with Mr. Armando J. García Segovia, a member of CEMEX, S.A.B. de C.V.'s Board of Directors.

Mr. Garza Medina has been a member of CEMEX, S.A.B. of C.V.'s Board of Directors since 1995, and on March 26, 2015 he was appointed member and remained as president of the corporate practices and finance committee until March 28, 2019. He is founder, Chairman of the Board of Directors and CEO of TOPAZ, S.A.P.I. de C.V., a company dedicated to the energy, education and real estate sectors. He is also a member of the Board of Directors of ABC Holding, S.A.P.I. of C.V. and of Autlán, S.A.B. of C.V. (a publicly listed company in Mexico).

With his extensive business experience and in-depth knowledge of the energy, oil and education sectors, the economy and global markets in general, Mr. Garza Medina brings to CEMEX, S.A.B. de C.V.'s Board of Directors a strategic vision that contributes to the achievement of CEMEX's business objectives, including the constant strengthening and improvement of CEMEX's corporate governance practices.

Mr. Garza Medina developed his professional career at ALFA, S.A.B. de C.V., where he held senior executive positions for 35 years, including Chief Executive Officer and Chairman of the Board of Directors, until he retired in March 2010. He was also Chairman of the Board of the University of Monterrey, A.C. for 13 years, as well as member of the Advisory Committee of the David Rockefeller Center for Latin American Studies at Harvard University, the Advisory Council of the Stanford University School of Engineering and the Latin American Advisory Board of the Harvard Business School, where he was President in 2009. He has served as Chairman of the Corporate Practices Committee of CEMEX, S.A.B. of C.V. since 2009.

Mr. Garza Medina graduated as an industrial engineer and holds a Master's degree in Industrial Engineering from Stanford University, where he earned the F. Terman Award. He also holds an M.B.A. from Harvard University.

Francisco Javier Fernández Carbajal
Independent Director
(Male - 64)

Mr. Fernández Carbajal has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since February 2012. On March 26, 2015, he was appointed as a member of CEMEX, S.A.B. de C.V.'s audit committee, corporate practices and finance committee and, on April 28, 2016, was elected by CEMEX, S.A.B. de C.V.'s Board of Directors to participate in its Sustainability Committee. On March 28, 2019, Mr. Carbajal was appointed as president of the corporate practices and finance committee. He remains a member of these committees. Mr. Fernández Carbajal is also the current Chief Executive

Name, Position (Age as of December 31, 2019)

Experience

Armando Garza Sada
Independent Director
(Male - 62)

Officer of Servicios Administrativos Contry, S.A. de C.V., a privately held company that provides investment management and central administrative services. Furthermore, Mr. Fernández Carbajal is a member of the Board of Directors of the following public companies: Alfa, S.A.B. de C.V., Fomento Económico Mexicano, S.A.B. de C.V. and VISA, Inc. (a company that is publicly listed in the U.S.).

He has a 38-year business career that has allowed him to gain substantial knowledge in relation to payment systems, financial services and senior leadership experience from his tenure in Grupo Financiero BBVA Bancomer, Mexico's largest financial services company, in which he served in a diverse array of senior executive roles, including Executive Vice President of Strategic Planning, Deputy President of Systems and Operations, Deputy President and Chief Financial Officer.

His background and career related to the payments and financial services industry enables him to bring a global perspective to CEMEX, S.A.B. de C.V.'s Board of Directors and to provide relevant insights in relation to strategic planning, operations and management and an enhanced understanding of risk management of large, complex organizations. In addition, as the Chief Financial Officer of a large publicly traded company, and through his board and committee membership in several large companies in Mexico and the U.S., he has accumulated extensive experience in corporate finance and accounting, financial reporting and internal controls, and human resources and compensation, which contributes to his service on CEMEX, S.A.B. de C.V.'s Board of Directors.

He graduated with a degree in Electric Mechanical Engineering from the Instituto Tecnológico y de Estudios Superiores de Monterrey and holds an M.B.A. from Harvard Business School.

Mr. Garza Sada has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors and corporate practices and finance committee since March 26, 2015. Mr. Garza Sada is the Chairman of the Board of Directors of ALFA, S.A.B. de C.V., a public company with a business portfolio that includes refrigerated food, petrochemicals, aluminum auto parts, IT and communications, and hydrocarbons, with operations in 28 countries. He is a member of the Board of Directors of Alpek, S.A.B. de C.V., Axtel, S.A.B. de C.V., BBVA Bancomer, Nemak S.A.B. de C.V., El Puerto de Liverpool, S.A.B. de C.V., Grupo Lamosa, S.A.B. de C.V., Fomento Económico Mexicano, S.A.B. de C.V. and Grupo Proeza, S.A.P.I. de C.V., all of which are public companies, as well as Instituto Tecnológico y de Estudios Superiores de Monterrey.

The performance at the highest corporate level of Mr. Garza Sada in companies in the manufacturing sectors provides CEMEX, S.A.B. de C.V.'s Board of Directors a unique insight on the global economic and commercial landscape, thus allowing the constant improvement of CEMEX's business strategy.

He also has participated in university and think tank boards, thus developing some knowledge of education and economic development.

Name, Position (Age as of December 31, 2019)

Experience

David Martínez Guzmán
Independent Director
(Male - 62)

Mr. Garza Sada holds a Bachelor's degree from the Massachusetts Institute of Technology and an M.B.A. from Stanford University.

Mr. Martínez Guzmán has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since March 26, 2015. Mr. Martínez Guzmán is the Principal and founder of Fintech Advisory Inc., successor of Fintech, Inc., and managing director of its London subsidiary Fintech Advisory, Ltd. He serves on the boards of Mexican companies Alfa, S.A.B. de C.V., Vitro, S.A.B. de C.V., ICA Tenedora, S.A. de C.V., as well as the board of Sabadell Bank in Spain, all of which are public companies.

He brings extensive knowledge and expertise in the financial sector and global markets to CEMEX, S.A.B. de C.V.'s Board of Directors, which allows Mr. Martínez Guzmán to provide significant guidance regarding CEMEX's financial strategy and contribute directly to CEMEX's business strategy focused on regaining CEMEX's investment grade credit metrics.

After receiving his M.B.A. in 1984, Mr. Martínez Guzmán joined Citibank, N.A. in New York in the Latin America Sovereign Restructuring unit, where he helped coordinate the 1984 Argentina Financing Plan and subsequent restructuring.

In 1987, he formed Fintech in New York to trade and structure transactions in both sovereign and corporate debt of emerging economies and is recognized as one of the earliest participants in the secondary market for these securities. Since its formation, Fintech has participated in most of the sovereign debt restructurings around the world, starting with the Brady Plan in the 1980s, which was developed to provide substantial debt relief to countries suffering from economic stagnation and to stimulate growth and enable those countries to regain access to global capital markets.

In the corporate sector, over the last three decades, Mr. Martínez Guzmán has consistently pursued high- value strategic investments through numerous restructurings across various industries in Latin America, forging partnerships with local shareholders and management. Over the last decade, Mr. Martínez Guzmán has also pursued strategic investments in the Eurozone periphery. His involvement in the region also includes active participation in the recapitalization process of systemically important banks in Greece, Spain and Italy.

Mr. Martínez Guzmán holds a Master's degree in Business Administration from Harvard Business School. He holds a Bachelor of Arts degree in Philosophy from the Universitas Gregoriana in Rome, Italy, and a Bachelor of Science degree in Mechanical and Electrical Engineering from the Universidad Nacional Autónoma de México.

Everardo Elizondo Almaguer
Independent Director
(Male - 76)

Mr. Elizondo Almaguer has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since March 31, 2016, a member of the Audit Committee since April 5, 2018 and on March 28, 2019, he was appointed Chairman of the Audit Committee. Mr. Elizondo is a professor of economics and international finance at EGADE Business School of the Instituto Tecnológico y de

Name, Position (Age as of December 31, 2019)

Experience

Ramiro Gerardo Villarreal Morales
Independent Director
(Male - 72)

Estudios Superiores de Monterrey. He is also a professor of monetary policy in the School of Economics of the Universidad Autónoma de Nuevo León. He is a member of the Board of Directors of the following public companies: Grupo Financiero Banorte, S.A.B. de C.V., Autlán, S.A.B. de C.V., Rassini, S.A.B. de C.V., and Gruma, S.A.B. de C.V.

With his renowned career as a financial analyst, exemplary public official and university scholar, Mr. Elizondo Almaguer brings to CEMEX, S.A.B. de C.V.'s Board of Directors an extensive knowledge of the financial system and the macroeconomic environment at the international level, contributing to the strategy design and business initiatives to enhance CEMEX's growth. In particular, he is being proposed as the President of CEMEX, S.A.B. de C.V.'s audit committee, where he qualifies as a "financial expert" for purposes of the Sabarnes-Oxley Act of 2002, as a result of the expertise he has gained through experience in, and an understanding of, internal control over financial reporting, as well as oversight of independent auditors in companies that have been publicly listed in Mexico and in the U.S., with respect to the preparation, auditing or evaluation of financial statements, which is supplemented with several decades of experience in the banking/finance industry and academia.

He was the director for economic studies at Alfa, S.A.B. de C.V. and Grupo Financiero BBVA Bancomer, S.A. de C.V. Additionally, he founded and was the director of the Graduate School of Economics of the Universidad Autónoma de Nuevo León and he was deputy governor of the Banco de México from 1998 to 2008.

Mr. Elizondo Almaguer is a graduate in Economics from the Universidad de Nuevo León, and holds a Master's degree in Economics from the University of Wisconsin-Madison and a certificate from Harvard's International Tax Program.

Mr. Villarreal Morales has been a member of the Board of Directors of CEMEX, S.A.B. de C.V. since 2017. He is also a member of the Board of Directors of Grupo Cementos de Chihuahua, S.A.B. de C.V., the real estate development company Vinte Viviendas Integrales, S.A.B. de C.V. and Banco Bancrea, S.A. Institución de Banca Múltiple, all of which are public companies.

With his vast knowledge and experience within CEMEX, Mr. Villarreal Morales offers the CEMEX, S.A.B. de C.V.'s Board of Directors key guidance in regulatory and legal matters, as well as extensive knowledge related to corporate governance and financial transactions issues.

Mr. Villarreal Morales has more than 50 years of professional experience in the legal and financial fields. He joined CEMEX in 1987 as General Legal Director and served in different positions, including Executive Vice President of Legal, Advisor to the Chairman of the Board of Directors and the Chief Executive Officer of CEMEX until December 2017. Prior to this, he served as General Director of Banca Regional de Banpaís, a financial institution where he was responsible for the operation of the bank's 121 branches, and, until February 2012,

Name, Position (Age as of December 31, 2019)

Experience

Gabriel Jaramillo Sanint
Independent Director
(Male - 70)

he was the secretary of the Board of Directors of Enseñanza e Investigación Superior, A.C., a non-profit company that manages the Instituto Tecnológico y de Estudios Superiores de Monterrey. Likewise, he served as Secretary of CEMEX, S.A.B. de C.V.'s Board of Directors from 1995 to March 30, 2017 and was the Secretary of CEMEX México's Board of Directors until February 2017.

He graduated with a degree in Law with honorary citation from the Universidad Autónoma de Nuevo León and received a Master's of Science degree in Finance from the University of Wisconsin-Madison, where he was appointed to the honor roll.

Mr. Jaramillo Sanint has been a member of CEMEX, S.A.B. de C.V.'s Board of Directors since 2018. He is also a member of the boards of Minerva Foods (Brazil), Phoenix Group (USA) and the non-profit organization Medicines For Malaria Ventures, based in Geneva, Switzerland, and founded and manages a program of sustainable economic development in the Orinoco Basin in Colombia.

With an outstanding 35-year career in the financial sector and in the field of philanthropy, being mainly focused on the health sector, as well as a deep knowledge of the overall U.S. and SCA&C regions, Mr. Jaramillo Sanint not only brings to CEMEX, S.A.B. de C.V.'s Board of Directors an extensive experience in financial matters, but also in corporate social responsibility, one of the pillars of CEMEX's global business strategy to achieve sustainable growth and create long-term value.

Among other positions, he was a member of the Board of Directors of CLH. He also served as Chairman of the Board of Directors and CEO of Santander USA (Sovereign Bank), Banco Santander Brasil, Banco Santander Colombia and CEO of Citibank Mexico and Citibank Colombia.

After his retirement, he has concentrated on philanthropic work in Global Health, leading the transformation of the Global Fund to Fight AIDS, TB and Malaria. As a consequence of the turnaround, the Global Fund raised \$13 billion from 2017 to 2020.

Mr. Jaramillo Sanint holds an M.B.A. and Bachelor's degree in Marketing from California State University. In 2015, Mr. Jaramillo received honorary degrees from Universidad Autonoma de Manizales and North Eastern University.

Isabel María Aguilera Navarro
Independent Director
(Female – 59)

Mrs. Aguilera Navarro is an independent consultant and also an associate professor at the ESADE Business School in Barcelona. She is a member of the Board of Directors of the following public companies: Oryzon Genomics, S.A. since November 2015, Spain Real Estate SOCIMI, S.A. since June 2017 and the Italian bank Banca Farmafactoring S.p.A. (BFF) since April 2018. Since April 2019, Mrs. Aguilera Navarro has been a member of the Board of Directors of HPS, and, since December 2019, she has been a member of the non-listed company Making Science.

With her vast experience and extensive knowledge of multinational corporations, Mrs. Aguilera Navarro brings to the

Name, Position (Age as of December 31, 2019)

Experience

CEMEX, S.A.B. de C.V. Board of Directors guidance and strategic vision which contributes to its business strategy and to enhancing CEMEX, S.A.B. de C.V.'s objectives at a global level, including the constant strengthening of information technology and digitalization efforts.

Mrs. Aguilera Navarro was President of General Electric (GE) Spain and Portugal from 2008 to 2009, General Manager of Google Inc. Spain and Portugal (now Alphabet) from 2006 to 2008, Operations Director of NH Hotel Group SA from May 2002 to June 2005 and General Director of Dell Computer Corporation for Spain, Italy and Portugal, from March 1997 to May 2002. The Financial Times named her one of the 25 most important executive women in Europe, while Fortune Magazine rated her as one of the 50 leading women in the world.

Mrs. Aguilera Navarro was also a member of the Board of Directors of Indra Sistemas, S.A. from 2005 to 2017, Banco Mare Nostrum (BMN) from 2013 to 2017, Emergia Contact Center, S.L. from 2011 to 2015, Aegon Spain from 2014 to 2016, Egasa SXXI from 2015 to 2019 and Laureate Education Inc. from 2002 to 2006.

She has also served as a Counselor to several Spanish non-profit organizations, such as the Companies Institute (Instituto de Empresa) and the Association for Management Progress (Asociación para el Progreso de la Gestión). She was a member of the Advisory Board of Farmaindustria, Ikor and Pelayo Mutua de Seguros and a business entrepreneur from 2009 to 2012 at Twindocs International.

Mrs. Aguilera Navarro has a degree in Architecture and Urban Planning from the Escuela Técnica Superior de Arquitectura de Sevilla (ETSA) and a Master's degree in business administration from the IE Business School. Mrs. Aguilera Navarro participated in the Program for General Management by the IESE Business School and the Program for Senior Management of Leading Companies by the San Telmo Institute.

Senior Management and Board Composition

As of December 31, 2019, 93.3% the members of our senior management were male and 6.7% were female. A female was appointed to CEMEX, S.A.B. de C.V.'s board of directors on March 28, 2019.

As of December 31, 2019, there were no alternate members in CEMEX, S.A.B. de C.V.'s board of directors.

Board Practices

In compliance with the Mexican Securities Market Law (*Ley del Mercado de Valores*), which was enacted on December 28, 2005 and became effective on June 28, 2006 (the "Mexican Securities Market Law"), CEMEX, S.A.B. de C.V.'s shareholders approved, at an extraordinary shareholders' meeting held on April 27, 2006, a proposal to amend various articles of CEMEX, S.A.B. de C.V.'s by-laws (*estatutos sociales*), in order to improve our standards of corporate governance and transparency, among other matters. The amendments included outlining the fiduciary duties of the members of CEMEX, S.A.B. de C.V.'s board of directors, who are now required:

- to perform their duties in a value-creating manner for the benefit of CEMEX without favoring a specific shareholder or group of shareholders;
- to act diligently and in good faith by adopting informed decisions; and

- to comply with their duty of care and loyalty, abstaining from engaging in illicit acts or activities.

The Mexican Securities Market Law also eliminated the position of statutory examiner, whose duties of surveillance are now the responsibility of the board of directors, fulfilled through the corporate practices and finance committee the audit committees, as well as through the external auditor who audits the entity's financial statements, each within its professional role. With its surveillance duties, CEMEX, S.A.B. de C.V.'s board of directors is no longer in charge of managing CEMEX; instead, this is the responsibility of CEMEX, S.A.B. de C.V.'s chief executive officer.

Pursuant to the Mexican Securities Market Law and CEMEX, S.A.B. de C.V.'s by-laws, at least 25% of its directors must qualify as independent directors.

Other than any contractual arrangements entered into with any member of CEMEX, S.A.B. de C.V.'s board of directors while employed by us, which provide or may provide for retirement and pension benefits, CEMEX, S.A.B. de C.V. has not entered into any service contracts with its directors that provide for benefits upon termination of employment.

The Audit Committee, the Corporate Practices and Finance Committee and Other Committees

The Mexican Securities Market Law required CEMEX, S.A.B. de C.V. to create a corporate practices committee comprised entirely of independent directors, in addition to its then existing audit committee. In compliance with such requirement, in 2006 CEMEX, S.A.B. de C.V. increased the responsibilities of its audit committee and changed its name to "corporate practices and audit committee." To further enhance the effectiveness of its corporate governance, at CEMEX, S.A.B. de C.V.'s annual general ordinary shareholders' meeting held on April 23, 2009, CEMEX, S.A.B. de C.V.'s shareholders approved the division of this committee into two committees with different members and responsibilities: the audit committee and the corporate practices committee. In addition, at the annual general ordinary shareholders' meeting held on April 29, 2010, CEMEX, S.A.B. de C.V.'s shareholders approved the creation of the finance committee. In addition, at the annual general ordinary shareholders' meeting held on March 26, 2015, CEMEX, S.A.B. de C.V.'s shareholders approved that the then-existing corporate practices committee take over certain responsibilities of the then-existing finance committee and changes its name to "corporate practices and finance committee."

CEMEX, S.A.B. de C.V.'s audit committee is responsible for:

- evaluating our internal controls and procedures and identifying deficiencies;
- following up with corrective and preventive measures in response to any non-compliance with our operation and accounting guidelines and policies;
- evaluating the performance of our external auditors;
- describing and valuing non-audit services performed by our external auditor;
- reviewing CEMEX, S.A.B. de C.V.'s financial statements;
- assessing the effects of any modifications to the accounting policies approved during any fiscal year;
- overseeing measures adopted as a result of any observations made by CEMEX, S.A.B. de C.V.'s shareholders, directors, executive officers, employees or any third parties with respect to accounting, internal controls and internal and external audit, as well as any complaints regarding management irregularities, including anonymous and confidential methods for addressing concerns raised by employees; and
- analyzing the risks identified by CEMEX, S.A.B. de C.V.'s independent auditors, accounting, internal control and process assessment areas.

CEMEX, S.A.B. de C.V.'s corporate practices committee and finance committee is responsible for:

- evaluating the hiring, firing and compensation of CEMEX, S.A.B. de C.V.'s chief executive officer;
- reviewing the hiring and compensation policies for CEMEX, S.A.B. de C.V.'s executive officers;
- reviewing related party transactions;
- reviewing policies regarding use of corporate assets;

- reviewing unusual or material transactions;
- evaluating waivers granted to our directors or executive officers regarding seizure of corporate opportunities;
- identifying, evaluating and following up on the operating risks affecting the company and its subsidiaries;
- evaluating the company’s financial plans;
- reviewing the company’s financial strategy and its implementation; and
- evaluating mergers, acquisitions, review of market information and financial plans, including financing and related transactions.

Under CEMEX, S.A.B. de C.V.’s by-laws and the Mexican Securities Market Law, all members of the corporate practices and finance committee and the audit committee, including their presidents, are required to be independent directors. The president of the audit committee and the corporate practices and finance committee shall be appointed and removed from his or her position only by the general shareholders’ meeting, and the rest of the members may only be removed by a resolution of the general shareholders or of the board of directors.

Set forth below are the names of the members of CEMEX, S.A.B. de C.V.’s audit committee and corporate practices and finance committee as of December 31, 2019 and as of the date of this annual report. Each member of the committees is an independent director. The terms of the members of the committees are indefinite. Everardo Elizondo Almaguer qualifies, as an “audit committee financial expert” for purposes of the Sarbanes Oxley Act of 2002. See “Part II—Item 16A—Audit Committee Financial Expert.”

AUDIT COMMITTEE:

Everardo Elizondo Almaguer	President
Rodolfo García Muriel	
Francisco Javier Fernández Carbajal	

CORPORATE PRACTICES AND FINANCE COMMITTEE:

Francisco Javier Fernández Carbajal	President
Dionisio Garza Medina	
Rodolfo García Muriel	
Armando Garza Sada	

In addition, at a meeting of CEMEX, S.A.B. de C.V.’s board of directors held on September 25, 2014, CEMEX, S.A.B. de C.V.’s directors approved the creation of a sustainability committee. Furthermore, on March 26, 2020, CEMEX, S.A.B. de C.V. held an ordinary general shareholders’ meeting in which the shareholders for the first time approved the appointment of the members of the Sustainability Committee.

CEMEX, S.A.B. de C.V.’s sustainability committee is responsible for:

- ensuring sustainable development in CEMEX’s strategy;
- supporting CEMEX, S.A.B. de C.V.’s board of directors in fulfilling its responsibility to shareholders regarding sustainable growth;
- evaluating the effectiveness of sustainability programs and initiatives;
- proving assistance to CEMEX’s Chief Executive Officer and senior management team regarding the strategic direction on sustainability; and
- endorsing a model of sustainability, priorities and key indicators.

As of December 31, 2019 and as of the date of this annual report, the members of CEMEX, S.A.B. de C.V.’s sustainability committee are:

Armando J. García Segovia
Francisco Javier Fernández Carvajal
Ian Christian Armstrong Zambrano
Marcelo Zambrano Lozano

President
Member
Member
Member

Compensation of CEMEX, S.A.B. de C.V.'s Directors and Members of Our Senior Management

For the year ended December 31, 2019, the aggregate amount of compensation we paid, or our subsidiaries paid, to all members of CEMEX, S.A.B. de C.V.'s board of directors and senior management, as a group, was \$40 million, of which \$34 million was paid as base compensation plus performance bonuses, including pension and post-employment benefits, and \$6 million corresponds to stock-based compensation. During 2019, a trust for the benefit of our employees purchased, with funds provided by us, in the secondary market approximately 1 million CPOs and we issued approximately 13 million CPOs to this group pursuant to the Restricted Stock Incentive Plan ("RSIP") described below under "—Restricted Stock Incentive Plan (RSIP)."

Restricted Stock Incentive Plan (RSIP)

Under the terms of the RSIP, eligible employees are allocated a specific number of restricted CPOs as variable compensation to be vested over a four-year period. CPOs to cover the RSIP are issued pursuant to the corresponding approvals from the CEMEX, S.A.B. de C.V. ordinary general shareholders' meetings. The CPOs are held in an individual account with a third-party supplier. At the end of each year during such four-year period, the restrictions lapse with respect to 25% of the allocated CPOs and such CPOs became freely transferable and subject to withdrawal from the trust. This current variable remuneration plan has been applied to all its applicable participants since 2009, and it constitutes a further development to the variable remuneration plan that started in 2005.

As of the date of this annual report, we have three compensation programs that conform to the RSIP, the first program is known as the "Ordinary Plan," the second as the "KVP Plan" and the third as the "Performance Plan." Most participants participate in only one of the programs, the Ordinary Plan, and only employees in key value positions ("KVPs") participate in both the KVP Plan and the Performance Plan.

As of December 31, 2019, the CPO Ordinary Plan had around 564 participants, which constitute the top employees of the company. The annual award under the Ordinary Plan is calculated based on the result of the gross annual guaranteed compensation of the participants in Dollars as of May 31 of each calendar year, times a management factor, that, depending on the level of the participant, is 28%, 24%, 18% or 12%, and divided by the last 90-day average closing price, converted into Dollars, of CPOs as of June 28 of such calendar year.

As of December 31, 2019, the KVP Plan had around 60 participants, which constitute employees in KVPs. The annual award under the KVP Plan is based on the result of the cash variable compensation bonus in Dollars paid in April 2019 to these participants and divided by the last 90-day average closing price, converted into Dollars, of CPOs as of April 15 of each calendar year.

The total number of CPOs granted for the Ordinary Plan and the KVP Plan during 2019 were approximately 46 million and 35 million, respectively, of which approximately 20 million were related to our senior management. In 2019, approximately 32 million CPOs of the Ordinary Plan were repurchased in the secondary market and 28 million CPOs of the KVP Plan were issued, representing the first 25% of the 2019 compensation program, the second 25% of the 2018 compensation program, the third 25% of the 2017 compensation program and the final 25% of the 2016 compensation program. Of these 60 million CPOs, approximately 13 million CPOs corresponded to our senior management.

Starting in 2017, a third compensation program, known as the Performance Plan, replaced the Ordinary Plan that our KVP Plan participants received prior to 2017. The Performance Plan entails calculating a specific target of CPOs for each plan participant. The final payout under such plan can range from 0% to 200% of the target of CPOs according to CEMEX, S.A.B. de C.V.'s three-year total shareholder return relative to two market references: one market reference is comprised of seven public companies from the global construction and materials industry, and the second market reference is comprised of the 107 companies of the Morgan Stanley Capital International (MSCI) of Emerging Markets – LATAM Industry Index.

Under the Performance Plan, the vesting period occurs at the end of three years in a single 100% block, at which time the resultant number of CPOs become unrestricted immediately. Approximately 23 million CPOs were granted during 2019 under the Performance Plan, with an estimated fair value of 130%, which are expected to vest on July 1, 2022.

See note 21 to our 2019 audited consolidated financial statements included elsewhere in this annual report.

CLH Employee stock-ownership plan

To better align CLH's executives' interests with those of its stockholders, on January 16, 2013, CLH's board of directors approved, effective as of January 1, 2013, a long-term incentive plan available to eligible executives of CLH, which consists of an annual compensation plan based on CLH shares. The underlying shares in this long-term incentive plan, which are held in the CLH's treasury and subject to certain restrictions, are delivered fully vested under each annual program over a service period of four years. During 2019, 2018 and 2017, CLH delivered 393,855 shares, 258,511 shares and 172,981 shares, respectively, corresponding to the vested portion of prior years' grants, which were subscribed and held in CLH's treasury. As of December 31, 2019, there are 1,584,822 shares of CLH associated with these annual programs that are expected to be delivered in the following years as the executives render services.

CEMEX Holdings Philippines Employee Restricted Stock Incentive Plan

Starting in 2018, a CHP compensation plan was granted to Philippines eligible participants. While this plan replaced their ordinary CPO plan, the mechanics of the plan remain the same. As of December 31, 2019 and 2018, there were 11 eligible participants with a total award of 5.7 million and 5.3 million, respectively CHP shares.

Compensation of CEMEX, S.A.B. de C.V.'s Chief Executive Officer and senior management

2019 Chief Executive Officer	%
Salary	20%
Short Term Performance Bonus (Cash)	20%
Short Term Performance Bonus (Restricted Stock)	40%
Long Term Performance Shares	20%
	100%
2019 Senior Management	%
Salary	42%
Short Term Performance Bonus (Cash)	22%
Short Term Performance Bonus (Restricted Stock)	22%
Long Term Performance Shares	14%
	100%

The short-term variable performance bonus is paid in both cash and restricted shares and the long-term variable performance bonus is paid in the form of restricted shares. We use Cash Value Added to measure short-term performance bonus.

CEMEX, S.A.B. de C.V.'s board of directors is compensated in a fixed manner based on participation in board meetings. The Chairman of CEMEX, S.A.B. de C.V.'s board of directors, however, is compensated in a similar manner as CEMEX, S.A.B. de C.V.'s senior management, including through the long-term performance plan based on CEMEX's total shareholder return versus peer groups. The base salary of the Chairman of CEMEX, S.A.B. de C.V.'s board of directors is 27% fixed and the remaining 73% is variable compensation.

The compensation structure, including the competitiveness factor, as well as the mix between base and variable compensation, is reviewed every two years. This review analysis is performed by the firm of Willis, Towers, Watson versus a size adjusted General Industry U.S. Market.

Employees

As of December 31, 2019, we had 40,640 employees worldwide, which represented a decrease of approximately 3.29% from the total number of employees we had as of December 31, 2018. The following table sets forth the number of our employees and a breakdown of their geographic location as of December 31, 2017, 2018 and 2019:

Location	2017	2018	2019
Mexico	11,113	11,818	11,567
United States	8,426	8,702	8,906
Europe			
United Kingdom	2,867	2,937	2,814
France	1,853	1,905	1,839
Germany	1,493	1,532	1,124
Spain	1,843	2,025	1,919
Poland	1,125	1,104	1,057
Rest of Europe	2,128	2,234	1,930
South, Central America and the Caribbean			
Colombia	2,720	2,615	2,788
Panama	707	685	536

Location	2017	2018	2019
Costa Rica	380	377	322
Caribbean TCL	571	673	702
Rest of South, Central America and the Caribbean	2,503	2,310	2,160
Asia, Middle East and Africa			
Egypt	675	576	517
Philippines	688	706	722
Rest of Asia, Middle East and Africa	1,786	1,825	1,737
Total	40,878	42,024	40,640

In Mexico, as of December 31, 2019, we have entered into collective bargaining agreements on a plant-by-plant basis, and such collective bargaining agreements are renewable on an annual basis with respect to salaries and on a biannual basis with respect to benefits. During 2019, we renewed approximately 98 contracts with different labor unions in Mexico. In addition, as of December 31, 2019, we provided new working conditions to our employees and unions as a result of the changes required by the labor law and international conventions, specifically with respect to freedom of association.

In the U.S., as of December 31, 2019, approximately 36% of our employees were represented by unions, with the largest number being members of the International Brotherhood of Teamsters, the Laborers' International Union of North America, United Steelworkers, International Union of Operating Engineers and the International Brotherhood of Boilermakers. We have entered into or are in the process of negotiating various collective bargaining agreements at many of our U.S. plants, which collective bargaining agreements have various expiration dates through January 31, 2024.

In Spain, as of December 31, 2019, (i) our employees in the cement business had a company-specific collective bargaining agreement that is renewable in 2021 on a legal entity and business basis and (ii) some of our employees in the ready-mix concrete, mortar, aggregates and transport sectors had industry-specific collective bargaining agreements.

In the United Kingdom, as of December 31, 2019, our cement manufacturing and cement supply chain operations had collective bargaining agreements with Unite the Union. The rest of our operations in the United Kingdom are not part of collective bargaining agreements. However, there are local agreements for consultations and employees can be represented by a trade union official at specific types of meetings.

In Germany, as of December 31, 2019, most of our employees are working under collective bargaining agreements with the Industriegewerkschaft Bauen Agrar Umwelt—IG B.A.U. union. Most employees are subject to the in-house bargaining agreement with the IG B.A.U., which means salaries are negotiated between the applicable company and the trade union IG B.A.U. Collective bargaining agreement negotiations for cement operations employees occurred between employers' associations Arbeitgeberverband Zement e.V. and IG B.A.U. during the second quarter of 2018. Both negotiations led to the execution of agreements. The period of both agreements began in June 2018 and will end in June 2020. We expect that certain works council and unions will demand salary as a result, and we will need to execute new bargaining agreements during 2020 as a result. In addition, there are internal company agreements, negotiated between the works council and the company itself. The next works council elections for most areas will take place during 2021.

In France, as of December 31, 2019, less than 0.2% of our employees were members of two of the five main unions. At least one representative from one of the five main unions was represented in the following legal entities: CEMEX Granulats (one representative), Cemex Bétons Ile de France (two representatives). All agreements are negotiated with unions and non-union representatives elected in the local workers council (*Comité social et économique*) for periods of four years.

In Panama, as of December 31, 2019, approximately 55% of our workforce were members of Sindicato de Trabajadores de Cemento Bayano, a union which is a legal entity registered before the Panamanian Ministry of Labor. The union's board of directors is elected every two to four years through a general voting process. The collective bargaining agreement that is in full force and effect since January 2020 was entered into in January 2020 and expires in December 2023.

In Colombia, as of December 31, 2019, there were five regional sectionals of a single industry union that represents our employees at the Caracolito, Clemencia, Bucaramanga, Cúcuta and Maceo cement plants and mills, and a minority part of the logistic operations at the national level. Another union represented a minority of the employees in the ready-mix concrete operations, and there was also another union in the logistic operation which as of December 31, 2019 had no affiliated CEMEX employees. There were also collective agreements with non-union workers at the Santa Rosa cement plant, all aggregates operations and the majority of the logistics and ready-mix concrete operations in Colombia. We consider our relationships with labor unions representing our employees in Colombia to be satisfactory.

In Caribbean TCL, as of December 31, 2019, the majority of our employees are party to collective bargaining agreements with the exception of those in the Guyana operations. Collective bargaining agreements in Trinidad and Barbados have all expired, however negotiations are currently ongoing regarding new agreements to replace those that have expired. In Jamaica, as of December 31, 2019, approximately 60% of our employees were represented by unions, with the largest number being members of the National Workers' Union (25%), Union of Clerical And Supervisory Employees (15%) and STAFF Association (20%). The collective bargaining agreement with the National Workers' Union ended in July 2019, and the two remaining collective bargaining agreements ended in December 2019. However, there are ongoing negotiations to discuss the terms governing the new applicable period.

In Israel, as of December 31, 2019, our aggregates manufacturing and lime manufacturing operations had existing special collective bargaining agreements with the "Histadrut"—the largest employee organization in Israel. The rest of our operations in Israel are not part of collective bargaining agreements.

In the Philippines, as of December 31, 2019, approximately 33% of the non-managerial employees of our cement plants were members of, and were represented by, labor unions. Their labor conditions including wages and benefits are governed by collective bargaining agreements negotiated at the plant level. The Solid Cement Plant has one rank and file union and one supervisors' union. The collective bargaining agreement for the Solid Cement Plant supervisors' union will expire on December 31, 2022, while the rank and file union collective bargaining agreement will expire on February 28, 2023. The APO Cement Plant also has one rank and file union and one supervisors' union. The collective bargaining agreements for both supervisors' union and the rank and file union at the APO Cement Plant will expire on December 31, 2021.

In Egypt, as of December 31, 2019, the majority of our eligible employees were represented by the Assiut Cement Labor Union and the General Building Materials Union. The collective bargaining agreement, of which our employees are party to, governs annual profit share and productivity bonus payments. Such agreement will expire on December 31, 2021.

Share Ownership

As of December 31, 2019, to the best of our knowledge, the members of the board of directors of CEMEX, S.A.B. de C.V. and our senior management, including their immediate families, owned, collectively, approximately 1.58% of CEMEX, S.A.B. de C.V.'s outstanding shares, including shares underlying stock options and restricted CPOs under our RSIP. This percentage does not include shares held by the extended families of members of our senior management and directors, since, to the best of our knowledge, no voting arrangements or other agreements exist with respect to those shares. As of December 31, 2019, to the best of our knowledge, no individual member of the board of directors of CEMEX, S.A.B. de C.V. or individual member of our senior management beneficially owned one percent or more of any class of CEMEX, S.A.B. de C.V.'s outstanding capital stock and each such individual's share ownership has not been previously disclosed to shareholders or otherwise made public.

Item 7—Major Shareholders and Related Party Transactions

Major Shareholders

The information contained in Amendment No. 9 to a statement on Schedule 13G filed with the SEC on February 10, 2020, stated that as of December 31, 2019, BlackRock beneficially owned 1,402,789,900 CPOs, representing 9.3% of CEMEX, S.A.B. de C.V.'s outstanding capital stock. BlackRock does not have voting rights different from our other non-Mexican holders of CPOs. As required by CEMEX, S.A.B. de C.V.'s by-laws, CEMEX, S.A.B. de C.V.'s board of directors is required to approve BlackRock beneficial ownership of CEMEX, S.A.B. de C.V.'s outstanding capital stock. Pursuant to the authorizations by Board of Directors, BlackRock is authorized to acquire up to 13% of capital stock.

The information contained in Schedule 13G filed with the SEC on February 13, 2020, stated that as of December 31, 2019, Dodge & Cox, an investment adviser registered under the United States Investment Advisers Act of 1940, as amended, beneficially owned 122,592,090 ADSs, representing 8.3% of CEMEX, S.A.B. de C.V.'s outstanding capital stock. As of the date of this annual report, Dodge & Cox has been authorized by CEMEX, S.A.B. de C.V.'s board of directors to own up to 10% of CEMEX, S.A.B. de C.V.'s outstanding capital stock. Dodge & Cox does not have voting rights different from our other non-Mexican holders of CPOs.

As of December 31, 2019, CEMEX, S.A.B. de C.V.'s outstanding capital stock consisted of 30,214,262,692 Series A shares and 15,107,131,346 Series B shares, in each case including shares held by our subsidiaries.

As of December 31, 2019, a total of 30,179,346,682 Series A shares and 15,089,673,341 Series B shares outstanding were held by the CPO trust. Each CPO represents two Series A shares and one Series B share. A portion of the CPOs is represented by ADSs. As set forth in the Deposit Agreement, holders of ADSs do not have the right to instruct the depository as to the exercise of voting rights in respect of Series A shares underlying CPOs held in the CPO trust. Under the terms of the CPO trust agreement, Series A shares underlying CPOs held by non-Mexican nationals, including all Series A shares underlying CPOs represented by ADSs, will be voted by the trustee according to the majority of all Series A shares held by Mexican nationals and Series B shares voted at the meeting. However, holders of ADSs will have the right to instruct the depository to exercise the voting rights of the Series B shares

underlying the CPOs represented by ADSs. Voting instructions may be given only with respect to ADSs representing an integral number of Series B shares. If the depository shall not have received voting instructions from a holder of ADSs on or prior to the ADS voting instructions deadline, such holder shall be deemed, and the depository and CEMEX, S.A.B. de C.V. shall deem such holder, subject to the terms of the Deposit Agreement, to have instructed the depository to give a discretionary proxy to a person designated by CEMEX, S.A.B. de C.V. (or, if requested by CEMEX, S.A.B. de C.V., a person designated by the technical committee appointed pursuant to the CPO trust agreement) to vote the Series B shares underlying the CPOs represented by such holder's ADSs in his or her discretion. The Series B shares underlying the CPOs represented by ADSs for which no actual or deemed voting instructions have been received will be voted by the trustee for the CPO trust in cooperation with, and under the direction of, a technical committee appointed pursuant to the terms of the CPO trust agreement.

Other than BlackRock, Dodge & Cox and the CPO trust, we are not aware of any person that is the beneficial owner of five percent or more of any class of CEMEX, S.A.B. de C.V.'s voting securities.

As of December 31, 2019, through CEMEX, S.A.B. de C.V.'s subsidiaries, we owned approximately 20.5 million CPOs, representing approximately 0.136% of CEMEX, S.A.B. de C.V.'s outstanding voting stock. These CPOs are voted at the direction of our management. CEMEX, S.A.B. de C.V.'s voting rights, through our subsidiaries that own those CPOs, over those CPOs are the same as those of any other CPO holder. As of the same date, we did not hold any CPOs in derivative instruments hedging expected cash flows of stock options exercises.

CEMEX, S.A.B. de C.V.'s by-laws provide that its board of directors must authorize in advance any transfer of voting shares of its capital stock that would result in any persons, or groups acting in concert, becoming a holder of 2% or more of CEMEX, S.A.B. de C.V.'s voting shares. In the event this requirement is not met, the persons acquiring such shares will not be entitled to any corporate rights with respect to such shares, such shares will not be taken into account for purposes of determining a quorum for shareholders' meetings, CEMEX, S.A.B. de C.V. will not record such persons as holders of such shares in its share registry and the registry undertaken by Indeval (as defined below) shall not have any effect.

Mexican securities regulations provide that our majority-owned subsidiaries may neither directly nor indirectly invest in CEMEX, S.A.B. de C.V.'s CPOs nor other securities representing CEMEX, S.A.B. de C.V.'s capital stock. The Mexican securities authority could require any disposition of the CPOs or of other securities representing our capital stock so owned and/or impose fines on us if it were to determine that the ownership of CEMEX, S.A.B. de C.V.'s CPOs or of other securities representing CEMEX, S.A.B. de C.V.'s capital stock by CEMEX, S.A.B. de C.V.'s subsidiaries, in most cases, negatively affects the interests of CEMEX, S.A.B. de C.V.'s shareholders. Notwithstanding the foregoing, the exercise of all rights pertaining to CEMEX, S.A.B. de C.V.'s CPOs or to other securities representing our capital stock in accordance with the instructions of CEMEX, S.A.B. de C.V.'s subsidiaries does not violate any provisions of CEMEX, S.A.B. de C.V.'s by-laws or the by-laws of its subsidiaries. The holders of these CPOs or of other securities representing CEMEX, S.A.B. de C.V.'s capital stock are entitled to exercise the same rights relating to their CPOs or their other securities representing CEMEX, S.A.B. de C.V.'s capital stock, including all voting rights, as any other holder of the same series.

As of December 31, 2019, we had 491 ADS holders of record, holding 649,287,703 ADRs, representing 6,492,877,030 CPOs, or approximately 42.98% of CEMEX, S.A.B. de C.V.'s outstanding capital stock as of such date.

Related Party Transactions

From January 1, 2019 through the date of this annual report, there were no transactions or proposed transactions that were material to either CEMEX, S.A.B. de C.V. or any related party, nor were there any transactions with any related party that were unusual in their nature or conditions. During the same period, we did not have any outstanding loans to any of CEMEX, S.A.B. de C.V.'s directors or members of senior management.

Item 8—Financial Information

Consolidated Financial Statements and Other Financial Information

See “Part III—Item 18—Financial Statements” and “Part III—Item 18—Index to Consolidated Financial Statements.”

Legal Proceedings

See “Item 4—Information on the Company—Regulatory Matters and Legal Proceedings.”

Dividends

A declaration of any dividend can be made by CEMEX, S.A.B. de C.V.'s shareholders at any general ordinary shareholders' meeting. Any dividend declaration is usually based upon the recommendation of CEMEX, S.A.B. de C.V.'s board of directors. However, CEMEX, S.A.B. de C.V.'s shareholders are not obligated to approve the board's recommendation. CEMEX, S.A.B. de C.V. may only pay dividends from retained earnings included in financial statements that have been approved by CEMEX, S.A.B. de C.V.'s shareholders and after all losses have been paid for. A legal reserve equal to 5% of its paid-in capital has been created and CEMEX, S.A.B. de C.V.'s shareholders have approved the relevant dividend payment. See "Item 10—Additional Information—Taxation—Mexican Tax Considerations—General." Since CEMEX, S.A.B. de C.V. conducts its operations through its subsidiaries, it has no significant assets of its own except for its investments in those subsidiaries. Consequently, CEMEX, S.A.B. de C.V.'s ability to pay dividends to its shareholders is dependent upon its ability to receive funds from its subsidiaries in the form of dividends, management fees or otherwise. The 2017 Facilities Agreement and the indentures governing our outstanding Senior Secured Notes effectively prohibit CEMEX, S.A.B. de C.V. from declaring and paying cash dividends or making other cash distributions to its shareholders. See "Item 3—Key Information—Risk Factors—Risks Relating to Our Business—CEMEX, S.A.B. de C.V.'s ability to repay debt and pay dividends depends on our subsidiaries' ability to transfer income and dividends to us."

The recommendation of CEMEX, S.A.B. de C.V.'s board of directors as to whether to pay and the amount of any annual dividends has been, and will continue to be, in absence of contractual restrictions to pay or declare dividends, based upon, among other things, earnings, cash flow, capital requirements, contractual restrictions, and our financial condition and other relevant factors.

Owners of ADSs on the applicable record date will be entitled to receive any dividends payable in respect of the Series A shares and the Series B shares underlying the CPOs represented by those ADSs. However, as permitted by the Deposit Agreement, CEMEX, S.A.B. de C.V. may instruct the ADS depository not to extend the option to elect to receive cash in lieu of the stock dividend to the holders of ADSs. The ADS depository will fix a record date for the holders of ADSs with respect to each dividend distribution. Unless otherwise stated, the ADS depository has agreed to convert cash dividends received by it with respect to the Series A shares and the Series B shares underlying the CPOs represented by ADSs from Mexican Pesos into Dollars and, after deduction or after payment of expenses of the ADS depository, to pay those dividends to holders of ADSs in Dollars. CEMEX, S.A.B. de C.V. cannot assure holders of its ADSs that the ADS depository will be able to convert dividends received in Mexican Pesos into Dollars.

CEMEX, S.A.B. de C.V. did not declare a dividend for fiscal years 2016 and 2017. For fiscal year 2018 CEMEX, S.A.B. de C.V. declared a cash dividend of \$150 million, to be paid in Mexican Pesos, payable in two installments. The first installment was paid on or around June 17, 2019 and the second installment was paid on or around December 17, 2019. CEMEX, S.A.B. de C.V. did not declare a dividend for fiscal year 2019.

Significant Changes

Except as described herein, no significant change has occurred since the date of our 2019 consolidated financial statements included elsewhere in this annual report.

Item 9—Offer and Listing

Listing Details

CEMEX, S.A.B. de C.V.'s CPOs are listed on the MSE and trade under the symbol "CEMEX.CPO." CEMEX, S.A.B. de C.V.'s ADSs, each of which currently represents ten CPOs, are listed on the NYSE and trade under the symbol "CX."

Item 10—Additional Information

Articles of Association and By-laws

General

Pursuant to the requirements of Mexican corporations law, CEMEX, S.A.B. de C.V.'s articles of association and by-laws (*estatutos sociales*) have been registered with the Mercantile Section of the Public Registry of Property and Commerce in Monterrey, Nuevo León, Mexico, under entry number 21, since June 11, 1920.

CEMEX, S.A.B. de C.V. is an operating and a holding company engaged directly or indirectly, through its operating subsidiaries, primarily in the production, distribution, marketing and sale of cement, ready-mix concrete, aggregates, clinker and other construction materials throughout the world. CEMEX, S.A.B. de C.V.'s corporate purpose can be found in article 2 of CEMEX, S.A.B. de C.V.'s by-laws.

CEMEX, S.A.B. de C.V. has two series of common stock, the Series A common stock, with no par value (“Series A shares”), which can only be owned by Mexican nationals, and the Series B common stock, with no par value (“Series B shares”), which can be owned by both Mexican and non-Mexican nationals. CEMEX, S.A.B. de C.V.’s by-laws state that the Series A shares may not be held by non-Mexican individuals, corporations, groups, units, trusts, associations or governments that are foreign or have participation by foreign governments or their agencies. CEMEX, S.A.B. de C.V.’s by-laws also state that the Series A shares shall at all times account for a minimum of 64% of CEMEX, S.A.B. de C.V.’s total outstanding voting stock and that the Series B shares shall at all times account for a minimum of 36% of CEMEX, S.A.B. de C.V.’s total outstanding voting stock. Other than as described herein, holders of the Series A shares and the Series B shares have the same rights and obligations.

In 1994, CEMEX, S.A.B. de C.V. changed from a fixed capital corporation to a variable capital corporation in accordance with Mexican corporation law. As a result, CEMEX, S.A.B. de C.V. established a fixed capital account and a variable capital account and issued one share of variable capital stock of the same series for each eight shares of fixed capital stock held by any shareholder. Each of our fixed and variable capital accounts is comprised of Series A shares and Series B shares. Under the Mexican Securities Market Law and CEMEX, S.A.B. de C.V.’s by-laws, holders of shares representing variable capital are not entitled to withdraw those shares.

Shareholder authorization is required to increase or decrease either the fixed capital account or the variable capital account. Shareholder authorization to increase or decrease the fixed capital account must be obtained at an extraordinary meeting of shareholders. Shareholder authorization to increase or decrease the variable capital account must be obtained at an ordinary general meeting of shareholders.

On April 29, 1999, CEMEX, S.A.B. de C.V.’s shareholders approved a stock split, and for every one of CEMEX, S.A.B. de C.V.’s shares of any series CEMEX, S.A.B. de C.V. issued two Series A shares and one Series B share. Concurrently with this stock split, CEMEX, S.A.B. de C.V. also consummated an exchange offer to exchange new CPOs and new ADSs representing the new CPOs for CEMEX, S.A.B. de C.V.’s then-existing Series A shares, Series B shares and ADSs, and converted CEMEX, S.A.B. de C.V.’s then existing CPOs into the new CPOs. On June 1, 2001, the then-effective Mexican Securities Market Law was amended, among other things, to increase the protection granted to minority shareholders of Mexican listed companies and to commence bringing corporate governance procedures of Mexican listed companies in line with international standards.

On February 6, 2002, the Mexican securities authority (*Comisión Nacional Bancaria y de Valores*) issued an official communication authorizing the amendment of CEMEX, S.A.B. de C.V.’s by-laws to incorporate additional provisions to comply with the then new provisions of the then-effective Mexican Securities Market Law. Following approval from CEMEX, S.A.B. de C.V.’s shareholders at the 2002 annual shareholders’ meeting, CEMEX, S.A.B. de C.V. amended and restated its by-laws to incorporate these additional provisions, which consisted of, among other things, protective measures to prevent share acquisitions, hostile takeovers, and direct or indirect changes of control.

On March 19, 2003, the Mexican securities authority issued new regulations designed to (i) further implement minority rights granted to shareholders by the then-effective Mexican Securities Market Law and (ii) simplify and consolidate in a single document provisions relating to securities offerings and periodic reports by Mexican-listed companies.

On April 24, 2003, CEMEX, S.A.B. de C.V.’s shareholders approved changes to its by-laws, incorporating additional provisions and removing some restrictions. The changes that are still in force are as follows:

- The limitation on CEMEX, S.A.B. de C.V.’s variable capital was removed. Formerly, CEMEX, S.A.B. de C.V.’s variable capital was limited to ten times CEMEX, S.A.B. de C.V.’s minimum fixed capital.
- Increases and decreases in CEMEX, S.A.B. de C.V.’s variable capital now require the notarization of the minutes of the ordinary general shareholders’ meeting that authorize such increase or decrease, as well as the filing of these minutes with the Mexican National Securities Registry (*Registro Nacional de Valores*), except when such increase or decrease results from (i) shareholders exercising their redemption rights or (ii) stock repurchases.
- The cancelation of registration of our shares in the Securities Section of the Mexican National Securities Registry now involves an amended procedure, which is described below under “—Repurchase Obligation.” In addition, any amendments to the article containing these provisions no longer require the consent of the Mexican securities authority and 95% approval by shareholders entitled to vote.

On December 30, 2005, the Mexican Securities Market Law was published to continue bringing corporate governance requirements of Mexican listed companies in line with international standards. This new law included provisions increasing disclosure information requirements, improving minority shareholder rights and strengthening corporate governance standards, including the introduction of new requirements and fiduciary duties (duties of care and loyalty) applicable to each director, officer, external auditor

and major shareholder of publicly traded companies. The law also provided that each member of the audit committee must be an independent director and required the creation of corporate governance committees integrated by independent directors as well. In addition, the law clarified directors' duties, specified safe harbors for directors' actions, clarified what is deemed as a conflict of interest and clarified what are the confidentiality obligations for directors.

Under the then new Mexican Securities Market Law, CEMEX, S.A.B. de C.V. was required to adopt specific amendments to its by-laws within 180 days of the effective date of the new law. Following approval from CEMEX, S.A.B. de C.V.'s shareholders at its extraordinary shareholders' meeting held on April 27, 2006, CEMEX, S.A.B. de C.V. amended and restated its by-laws to incorporate these amendments. The amendments to CEMEX, S.A.B. de C.V.'s by-laws became effective on July 3, 2006. The most significant of these amendments were as follows:

- The change of its corporate name from CEMEX, S.A. de C.V. to CEMEX, S.A.B. de C.V., which means that it is now called a publicly traded company (*sociedad anónima bursátil or S.A.B.*).
- The creation of a corporate practices committee, which was a new committee of CEMEX, S.A.B. de C.V.'s board of directors and which is comprised exclusively of independent directors.
- The elimination of the position of statutory examiner (*comisario*) and the assumption of its responsibilities by the board of directors through the audit committee and the then new corporate practices committee, as well as through the external auditor who audits CEMEX, S.A.B. de C.V.'s financial statements, each within its professional role.
- The express attribution of certain duties (such as the duty of loyalty and the duty of care) and liabilities on members of the board of directors as well as on certain senior executive officers.
- The implementation of a mechanism for claims of a breach of a director's or officer's duties, to be brought by us or by holders of 5% or more of CEMEX, S.A.B. de C.V.'s shares.
- The chief executive officer is now the person in charge of managing the company. Previously, this was the duty of the board of directors. The board of directors now supervises the chief executive officer.
- Shareholders are given the right to enter into certain agreements with other shareholders.

On March 20, 2014, CEMEX, S.A.B. de C.V. held an extraordinary shareholders' meeting, at which its shareholders approved, among other items, the board of directors' proposal to expand the corporate purpose of CEMEX, S.A.B. de C.V. so that, aside from being a holding company, CEMEX, S.A.B. de C.V. can undertake operating activities related to the production and commercialization of cement, ready-mix concrete and aggregates.

On March 26, 2015, CEMEX, S.A.B. de C.V. held an extraordinary shareholders' meeting, at which its shareholders approved, among other items, changes to CEMEX, S.A.B. de C.V.'s by-laws, incorporating additional provisions and removing some restrictions. The changes, among other items, are the following: extend CEMEX, S.A.B. de C.V.'s corporate existence for an indefinite period of time; adopt the electronic system established by the Ministry of Economy (*Secretaría de Economía*) for the publication of notices and other legal matters; remove a redundancy in minority rights; adopt additional considerations that CEMEX, S.A.B. de C.V.'s board of directors shall consider in order to authorize purchases of 2% or more of shares; adopt provisions to improve corporate governance with respect to the presidency at shareholders' meetings and corporate bodies; separation of roles of chairman of the board and chief executive officer; include the possibility of electing an alternate secretary of the board of directors; authorization to formalize CEMEX, S.A.B. de C.V.'s restated by-laws; and authorization to exchange the share certificates that represent CEMEX, S.A.B. de C.V.'s then outstanding capital stock.

On March 28, 2019, CEMEX, S.A.B. de C.V. held an extraordinary shareholders' meeting, at which its shareholders approved, among other items, changes to articles 2 and 28 of CEMEX, S.A.B. de C.V.'s by-laws, incorporating additional provisions and removing some restrictions. The changes, among other items, are the following: broadening CEMEX, S.A.B. de C.V.'s corporate purpose, which would permit CEMEX to transport goods; amending the provision regarding seaport related services for its marine terminals; the manufacture and commercialization of cement bags, etc.; and clarifying that CEMEX, S.A.B. de C.V.'s Relevant Executives (as defined under the laws of Mexico) are entitled to indemnification and liability protection only for liability arising from the lack of diligence when acting in good faith and pursuant to our best interests.

Changes in Capital Stock and Preemptive Rights

Subject to certain exceptions discussed below, CEMEX, S.A.B. de C.V.'s by-laws allow for a decrease or increase in its capital stock if it is approved by its shareholders at a shareholders' meeting. Additional shares of CEMEX, S.A.B. de C.V.'s capital stock, having no voting rights or limited voting rights, are authorized by its by-laws and may be issued upon the approval of its shareholders at a shareholders' meeting, with the prior approval of the Mexican securities authority. CEMEX, S.A.B. de C.V.'s by-laws provide that, subject to certain exceptions, shareholders have preemptive rights with respect to the class and in proportion to the number of shares of our capital stock they hold, in connection with any capital increase in the number of outstanding Series A shares, Series B shares or any other existing series of shares, as the case may be. Subject to certain requirements: (i) under article 53 of the Mexican Securities Market Law, this preemptive right to subscribe is not applicable to increases of CEMEX, S.A.B. de C.V.'s capital through public offers and (ii) under article 210 of the General Law of Negotiable Instruments and Credit Operations (*Ley General de Títulos y Operaciones de Crédito*), this preemptive right to subscribe is not applicable when issuing shares under convertible notes. Preemptive rights give shareholders the right, upon any issuance of shares by us, to purchase a sufficient number of shares to maintain their existing ownership percentages. Preemptive rights must be exercised within the period and under the conditions established for that purpose by the shareholders, and CEMEX, S.A.B. de C.V.'s by-laws and applicable law provide that this period must be 15 days following the publication of the notice of the capital increase through the electronic system established by the Ministry of Economy (*Secretaría de Economía*) or, in its absence, in the Official Gazette of the State of Nuevo León (*Periódico Oficial del Estado de Nuevo León*) or in any major newspaper published and distributed in the city of Monterrey, Nuevo León, México.

Holders of ADSs that are U.S. persons or are located in the U.S. may be restricted in their ability to participate in the exercise of such preemptive rights. See "Item 3—Key Information—Risk Factors—Risks Relating to Our Business—Preemptive rights may be unavailable to ADS holders."

Pursuant to CEMEX, S.A.B. de C.V.'s by-laws, significant acquisitions of shares of CEMEX, S.A.B. de C.V.'s capital stock and changes of control of CEMEX, S.A.B. de C.V. require prior approval from CEMEX, S.A.B. de C.V.'s board of directors. CEMEX, S.A.B. de C.V.'s board of directors must authorize in advance any transfer of, or creation of any encumbrance or lien on, voting shares of CEMEX, S.A.B. de C.V.'s capital stock that would result in any person or group becoming a holder of 2% or more of CEMEX, S.A.B. de C.V.'s shares. CEMEX, S.A.B. de C.V.'s board of directors shall consider the following when determining whether to authorize such transfer of voting shares: a) the type of investors involved; b) if stock prices may be affected or if the number of CEMEX, S.A.B. de C.V.'s shares outstanding would be reduced in such way that marketability may be affected; c) whether the acquisition would result in the potential acquirer exercising a significant influence or being able to obtain control; d) whether all applicable rules and CEMEX, S.A.B. de C.V.'s by-laws have been observed by the potential acquirer; e) whether the potential acquirers are our competitors or are persons or legal entities participating in companies, entities or persons that are or competitors and whether there is a risk of affecting market competition, or the potential acquirers could have access to confidential and privileged information; f) the morality and economic solvency of the potential acquirers; g) the protection of minority rights and the rights of our employees; and h) whether an adequate base of investors would be maintained. If CEMEX, S.A.B. de C.V.'s board of directors denies the authorization, or the transfer had been authorized on the basis of false or incorrect information or information had been withheld or the requirements established in CEMEX, S.A.B. de C.V.'s by-laws are not complied with, the persons involved in the transfer shall not be entitled to exercise the voting rights corresponding to the transferred shares, such shares shall not be taken into account for the determination of the quorums of attendance and voting at shareholders' meetings and the transfers shall not be recorded or have any effect in our share registry and the registry undertaken by S.D. Indeval, Institución para el Depósito de Valores, S.A. de C.V. ("Indeval"), the Mexican securities depository.

Any acquisition of shares of CEMEX, S.A.B. de C.V.'s capital stock representing 30% or more of its capital stock by a person or group of persons requires prior approval from CEMEX, S.A.B. de C.V.'s board of directors and, in the event approval is granted, the acquirer has an obligation to make a public offer to purchase all of the outstanding shares of CEMEX, S.A.B. de C.V.'s capital stock.

In the event the requirements for significant acquisitions of shares of CEMEX, S.A.B. de C.V.'s capital stock are not met, the persons acquiring such shares will not be entitled to any corporate rights with respect to such shares, such shares will not be taken into account for purposes of determining a quorum for shareholders' meetings, CEMEX, S.A.B. de C.V. will not record such persons as holders of such shares in its share registry and the registry undertaken by Indeval shall not have any effect. CEMEX, S.A.B. de C.V.'s by-laws require the stock certificates representing shares of its capital stock to make reference to the provisions in its by-laws relating to the prior approval of the CEMEX, S.A.B. de C.V. board of directors for significant share transfers and the requirements for recording share transfers in its share registry. In addition, shareholders are responsible for informing CEMEX, S.A.B. de C.V. within five business days whenever their shareholdings exceed 5%, 10%, 15%, 20%, 25% and 30% of CEMEX, S.A.B. de C.V.'s capital stock. If a person acquires beneficial ownership (within the meaning of Rule 13d-3 promulgated by the SEC under the Exchange Act) of 20% or more in voting power of the outstanding voting stock of CEMEX, S.A.B. de C.V., a change of control will be deemed to have occurred under the 2017 Facilities Agreement and other debt agreements of CEMEX.

CEMEX, S.A.B. de C.V. is required to maintain a share registry to record the names, nationalities and domiciles of all significant shareholders, and any shareholder that meets or exceeds these thresholds must be recorded in this registry if such shareholder is to be recognized or represented at any shareholders' meeting. If a shareholder fails to inform CEMEX, S.A.B. de C.V. of its shareholdings reaching a threshold as described above, we will not record the transactions that cause such threshold to be met or exceeded in CEMEX, S.A.B. de C.V.'s share registry, and such transaction will have no legal effect and will not be binding on us.

CEMEX, S.A.B. de C.V.'s by-laws also require that its shareholders comply with legal provisions regarding acquisitions of securities and certain shareholders' agreements that require disclosure to the public.

Repurchase Obligation

In accordance with Mexican securities regulations, CEMEX, S.A.B. de C.V. is obligated to make a public offer for the purchase of stock to its shareholders if CEMEX, S.A.B. de C.V.'s registration with the Mexican securities registry is canceled, either by resolution of its shareholders or by an order of the Mexican securities authority. The minimum price at which we must purchase the stock is the higher of:

- the weighted average price per share based on the weighted average trading price of CEMEX, S.A.B. de C.V.'s CPOs on the MSE during the latest period of 30 trading days preceding the date of the offer, for a period not to exceed six months; or
- the book value per share, as reflected in the last quarterly report filed with the Mexican securities authority and the MSE before the date of the offer.

CEMEX, S.A.B. de C.V.'s board of directors shall prepare and disclose to the public through the MSE, within ten business days after the day the public offer begins, and after consulting the corporate practices and finance committee, its opinion regarding the price of the offer and any conflicts of interests that each of its members may have regarding such offer. This opinion may be accompanied by an additional opinion issued by an independent expert that we may hire.

Following the cancellation of CEMEX, S.A.B. de C.V.'s registration with the Mexican securities registry, it must place in a trust set up for that purpose for a six-month period an amount equal to that required to purchase the remaining shares held by investors who did not participate in the offer.

Shareholders' Meetings and Voting Rights

Shareholders' meetings may be called by:

- CEMEX, S.A.B. de C.V.'s board of directors or the corporate practices and finance committee and audit committee;
- shareholders representing at least 10% of outstanding and fully paid shares, by making a request to the chairman of CEMEX, S.A.B. de C.V.'s board of directors or CEMEX, S.A.B. de C.V.'s corporate practices and finance committee and audit committee;
- any shareholder (i) if no meeting has been held for two consecutive years or when the matters referred to in Article 181 of the Mexican corporations law have not been dealt with or (ii) when, for any reason, the required quorum for valid sessions of the corporate practices and finance committee and audit committee was not reached and the board of directors failed to make the appropriate provisional appointments; or
- a Mexican court of competent jurisdiction, in the event CEMEX, S.A.B. de C.V.'s board of directors or the corporate practices and finance committee and audit committee do not comply with the valid shareholders' request described above.

Notice of shareholders' meetings must be published through the electronic system established by the Ministry of Economy (*Secretaría de Economía*) or, in its absence, in the Official Gazette of the State of Nuevo León (*Periódico Oficial del Estado de Nuevo León*), Mexico or in any major newspaper published and distributed in the city of Monterrey, Nuevo León, Mexico. The notice must be published at least 15 days prior to the date of any shareholders' meeting. Consistent with Mexican law, CEMEX, S.A.B. de C.V.'s by-laws further require that all information and documents relating to the shareholders' meeting be available to shareholders from the date the notice of the meeting is published.

General shareholders' meetings can be ordinary or extraordinary. At every general shareholders' meeting, each qualified holder of Series A shares and Series B shares is entitled to one vote per share. Shareholders may vote by proxy duly appointed in writing. Under the CPO trust agreement, holders of CPOs who are not Mexican nationals cannot exercise voting rights corresponding to the Series A shares represented by their CPOs, in which case, the CPO trustee will vote the underlying Series A shares in the same manner as the holders of the majority of the voting shares.

An annual general ordinary shareholders' meeting must be held during the first four months after the end of each of CEMEX, S.A.B. de C.V.'s fiscal year to consider the approval of a report of its board of directors regarding CEMEX, S.A.B. de C.V.'s performance and its financial statements for the preceding fiscal year and to determine the allocation of profits from the preceding year. In addition, CEMEX, S.A.B. de C.V.'s annual general ordinary shareholders' meeting must:

- review the annual reports of CEMEX, S.A.B. de C.V.' corporate practices and finance committee and audit committee, its chief executive officer and its board of directors;
- elect, remove, or substitute the members of CEMEX, S.A.B. de C.V.'s board of directors;
- determine the level of independence of the members of CEMEX, S.A.B. de C.V.'s board of directors;
- elect or remove the chairman of CEMEX, S.A.B. de C.V.'s corporate practices and finance and the audit committees;
- approve any transaction that represents 20% or more of CEMEX, S.A.B. de C.V. consolidated assets; and
- resolve any issues not reserved for extraordinary shareholders' meetings.

A general extraordinary shareholders' meeting may be called at any time to deal with any of the matters specified by Article 182 of the Mexican corporations law, which include, among other things:

- extending CEMEX, S.A.B. de C.V.'s corporate existence;
- CEMEX, S.A.B. de C.V.'s voluntary dissolution;
- increasing or reducing CEMEX, S.A.B. de C.V.'s fixed capital stock;
- changing CEMEX, S.A.B. de C.V.'s corporate purpose;
- changing CEMEX, S.A.B. de C.V.'s country of incorporation;
- changing CEMEX, S.A.B. de C.V.'s form of organization;
- a proposed merger;
- issuing preferred shares;
- redeeming CEMEX, S.A.B. de C.V.'s own shares;
- any amendment to CEMEX, S.A.B. de C.V.'s by-laws; and
- any other matter for which a special quorum is required by law or by CEMEX, S.A.B. de C.V.'s by-laws.

In order to vote at a meeting of shareholders, shareholders must (i) appear on the list that Indeval and Indeval participants holding shares on behalf of the shareholders prepare prior to the meeting, or (ii) prior to the meeting, deposit the certificates representing their shares at CEMEX, S.A.B. de C.V.'s offices or in a Mexican credit institution or brokerage house that operates in accordance with applicable laws in Mexico. The certificate of deposit with respect to the share certificates must be presented to CEMEX, S.A.B. de C.V.'s company secretary at least 48 hours before a meeting of shareholders. CEMEX, S.A.B. de C.V.'s company secretary verifies that the person in whose favor any certificate of deposit was issued is named in CEMEX, S.A.B. de C.V.'s share registry and issues an admission pass authorizing that person's attendance at the meeting of shareholders.

CEMEX, S.A.B. de C.V.'s by-laws provide that a shareholder may only be represented by proxy in a shareholders' meeting with a duly completed form provided by CEMEX, S.A.B. de C.V. authorizing the proxy's presence. In addition, CEMEX, S.A.B. de C.V.'s by-laws require that the secretary acting at the shareholders' meeting publicly affirm the compliance by all proxies with this requirement. A shareholders' resolution is required to take action on any matter presented at a shareholders' meeting.

At an ordinary shareholders' meeting, the affirmative vote of the holders of a majority of the shares present at the meeting is required to adopt a shareholders' resolution. At an extraordinary meeting of shareholders, the affirmative vote of at least 50% of the capital stock is required to adopt a shareholders' resolution, except that when amending Article 7 (with respect to measures limiting shareholding ownership), Article 10 (relating to the register of shares and significant participations) or Article 22 (specifying the impediments to being appointed a member of CEMEX, S.A.B. de C.V.'s board of directors) of CEMEX, S.A.B. de C.V.'s by-laws, the affirmative vote of at least 75% of the voting stock is required.

The attendance quorum for a general ordinary shareholders' meeting upon the first call is 50% of CEMEX, S.A.B. de C.V.'s outstanding and fully paid shares and, for the second call, is any number of CEMEX, S.A.B. de C.V.'s outstanding and fully paid shares. If the quorum is not met upon the first call, a subsequent meeting may be called and the quorum for the second ordinary shareholders' meeting is any number of CEMEX, S.A.B. de C.V.'s outstanding and fully paid shares represented at the meeting. The attendance quorum for the extraordinary shareholders' meeting upon the first call is 75% of CEMEX, S.A.B. de C.V.'s outstanding and fully paid shares and, upon the second and subsequent calls, is 50% of CEMEX, S.A.B. de C.V.'s outstanding and fully paid shares.

Rights of Minority Shareholders

At CEMEX, S.A.B. de C.V.'s annual general ordinary shareholders' meeting, any shareholder or group of shareholders representing 10% or more of its voting stock has the right to appoint or remove one member of CEMEX, S.A.B. de C.V.'s board of directors, in addition to the directors appointed by the majority. Such appointment may only be revoked by other shareholders when the appointment of all other directors is also revoked. CEMEX, S.A.B. de C.V.'s by-laws provide that holders of at least 10% of its outstanding capital stock are entitled to demand the postponement of the voting on any resolution of which they deem they have not been sufficiently informed.

Under Mexican law, holders of at least 20% of CEMEX, S.A.B. de C.V.'s outstanding capital stock are entitled to vote on a particular matter they oppose on any resolution at a shareholders' meeting by filing a petition with a court of law for a court order to suspend the resolution temporarily within 15 days after the adjournment of the meeting at which that action was taken and showing that the challenged action violates Mexican law or CEMEX, S.A.B. de C.V.'s by-laws, provided the opposing shareholders deliver a bond to the court to secure payment of any damages that we suffer as a result of suspending the resolution in the event that the court ultimately rules against the opposing shareholders. Relief under these provisions is only available to holders who were entitled to vote on, or whose rights as shareholders were adversely affected by, the challenged shareholder action and whose shares were not represented when the action was taken or, if represented, voted against it.

Under Mexican law, an action for civil liabilities against directors may be initiated by a shareholders' resolution for violation of their duty of loyalty to shareholders. In the event shareholders decide to bring an action of this type, the persons against whom that action is brought will immediately cease to be directors. Additionally, shareholders representing not less than 33% of the outstanding shares may directly exercise that action against the directors; provided that:

- those shareholders shall not have voted against exercising such action at the relevant shareholders' meeting; and
- the claim covers all of the damage alleged to have been caused to us and not merely the damage suffered by the plaintiffs.

Under CEMEX, S.A.B. de C.V.'s by-laws, shareholders representing 5% or more of its outstanding capital stock may initiate actions exclusively on behalf of CEMEX, S.A.B. de C.V. against members of its board of directors, its corporate practices and finance committee and audit committee, its chief executive officer, or any relevant executives, for breach of their duty of care or duty of loyalty to shareholders or for committing illicit acts or activities. The only requirement is that the claim covers all of the damage alleged to have been caused to us or any entities on which we have a significant influence and not merely the damage suffered by the plaintiffs. Actions initiated on these grounds have a five-year statute of limitations from the day of the act or action that caused the damage.

Any recovery of damages with respect to these actions will be for CEMEX, S.A.B. de C.V.'s benefit and not that of the shareholders bringing the action.

Registration and Transfer

CEMEX, S.A.B. de C.V.'s common stock is evidenced by share certificates in registered form with registered dividend coupons attached. Shareholders who have not deposited their shares into the CPO trust may hold their shares in the form of physical certificates or through institutions that have accounts with Indeval. Accounts may be maintained at Indeval by brokers, banks and other entities approved by the Mexican securities authority. CEMEX, S.A.B. de C.V. maintains a stock registry, and, in accordance with Mexican Law, only those holders listed in CEMEX, S.A.B. de C.V.'s stock registry and those holding certificates issued by Indeval and by Indeval participants indicating ownership are recognized as CEMEX, S.A.B. de C.V. shareholders.

Pursuant to Mexican law, any transfer of shares must be registered in CEMEX, S.A.B. de C.V.'s stock registry, if effected physically, or through book entries that may be tracked back from CEMEX, S.A.B. de C.V.'s stock registry to the records of Indeval.

Redemption

CEMEX, S.A.B. de C.V.'s capital stock is subject to redemption upon approval of our shareholders at an extraordinary shareholders' meeting.

Share Repurchases

If approved by CEMEX, S.A.B. de C.V.'s shareholders at a general shareholders' meeting, we may purchase CEMEX, S.A.B. de C.V.'s outstanding shares. The economic and voting rights corresponding to repurchased shares cannot be exercised during the period the shares are owned by us and the shares will be deemed outstanding for purposes of calculating any quorum or vote at any shareholders' meeting. We may also repurchase our equity securities on the MSE at the then prevailing market prices in accordance with Mexican securities law. If we intend to repurchase shares representing more than 1% of CEMEX, S.A.B. de C.V.'s outstanding shares at a single trading session, we must inform the public of such intention at least ten minutes before submitting our bid. If we intend to repurchase shares representing 3% or more of CEMEX, S.A.B. de C.V.'s outstanding shares during a period of 20 trading days, we are required to conduct a public tender offer for such shares. We must conduct share repurchases as per the framework authorized by CEMEX, S.A.B. de C.V.'s board of directors and through the person or persons approved by CEMEX, S.A.B. de C.V.'s board of directors, through a single broker dealer during the relevant trading session and without submitting bids during the first and the last 30 minutes of each trading session. We must inform the MSE of the results of any share repurchase no later than the business day following any such share repurchase.

Directors' and Shareholders' Conflict of Interest

Under Mexican law, any shareholder who has a conflict of interest with CEMEX, S.A.B. de C.V. with respect to any transaction is obligated to disclose such conflict and is prohibited from voting on that transaction. A shareholder who violates this prohibition may be liable for damages if the relevant transaction would not have been approved without that shareholder's vote.

Under Mexican law, any director who has a conflict of interest with CEMEX, S.A.B. de C.V. in any transaction must disclose that fact to the other directors and is prohibited from participating and being present during the deliberations and voting on that transaction. A director who violates this prohibition will be liable for damages and lost profits. Additionally, CEMEX, S.A.B. de C.V.'s directors may not represent shareholders in our shareholders' meetings.

Withdrawal Rights

Whenever CEMEX, S.A.B. de C.V.'s shareholders approve a change of corporate purpose, change of nationality or transformation from one form of corporate organization to another, Mexican law provides that any shareholder entitled to vote on that change who has voted against it may withdraw from CEMEX, S.A.B. de C.V. and receive an amount equal to the book value (in accordance with the latest statement of financial position approved by the annual general ordinary shareholders' meeting) attributable to such shareholder's shares, provided that such shareholder exercises that right within 15 days following the meeting at which the change was approved.

Dividends

At each annual general ordinary shareholders' meeting, CEMEX, S.A.B. de C.V.'s board of directors submits, for approval by its shareholders, its financial statements together with a report on them prepared by its board of directors and the statutory auditors. CEMEX, S.A.B. de C.V.'s shareholders, once they have approved the financial statements, determine the allocation of our net income, after provision for income taxes, legal reserve and statutory employee profit sharing payments, for the preceding year. All shares of CEMEX, S.A.B. de C.V.'s capital stock outstanding at the time a dividend or other distribution is declared are entitled to share equally in that dividend or other distribution.

Liquidation Rights

In the event CEMEX, S.A.B. de C.V. is liquidated, the surplus assets remaining after payment of all its creditors will be divided among CEMEX, S.A.B. de C.V.'s shareholders in proportion to the respective shares held by them. The liquidator may, with the approval of CEMEX, S.A.B. de C.V.'s shareholders, distribute the surplus assets in kind among CEMEX, S.A.B. de C.V.'s shareholders, sell the surplus assets and divide the proceeds among CEMEX, S.A.B. de C.V.'s shareholders or put the surplus assets to any other uses agreed to by a majority of CEMEX, S.A.B. de C.V.'s shareholders voting at an extraordinary shareholders' meeting.

Differences Between Our Corporate Governance Practices and NYSE Standards for Domestic Companies

For a description of significant ways in which CEMEX, S.A.B. de C.V.'s corporate governance practices differ from those required of domestic companies under NYSE standards, see "Part II—Item 16G—Corporate Governance."

You may find additional information in the corporate governance section of our website www.cemex.com, or you may contact our investment relations team, by writing to or telephoning us as follows:

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The information on our website is not, and is not intended to be, part of this annual report and is not incorporated into this annual report by reference.

Share Capital

CEMEX, S.A.B. de C.V. did not declare a dividend for fiscal years 2016 and 2017. See "Item 8—Financial Information—Dividends" for a description of CEMEX, S.A.B. de C.V.'s policy on dividend distributions and dividend restrictions.

At CEMEX, S.A.B. de C.V.'s 2016 annual general ordinary shareholders' meeting, held on March 30, 2017, CEMEX, S.A.B. de C.V.'s shareholders approved a recapitalization of retained earnings. New CPOs issued pursuant to such recapitalization were allocated to shareholders on a pro-rata basis. As a result, shares equivalent to approximately 562 million CPOs were allocated to shareholders on a pro-rata basis in connection with the 2016 recapitalization. CPO holders received one new CPO for each 25 CPOs held and ADS holders received one new ADS for each 25 ADSs held. There was no cash distribution and no entitlement to fractional shares. No recapitalization of retained earnings was approved at CEMEX, S.A.B. de C.V.'s 2017 annual general ordinary shareholders' meeting held on April 5, 2018.

At CEMEX, S.A.B. de C.V.'s 2018 annual general ordinary shareholders' meeting, held on March 28, 2020, CEMEX, S.A.B. de C.V. declared a cash dividend in the amount of \$150 million, paid in Mexican Pesos in two equal installments, in June 2019 and December 2019.

As of December 31, 2019, CEMEX, S.A.B. de C.V.'s common stock was represented as follows:

Shares ⁽¹⁾	2019	
	Series A ⁽²⁾	Series B ⁽²⁾
Subscribed and paid shares	30,214,262,692	15,107,131,346
Unissued shares authorized for stock compensation programs	881,442,830	440,721,415
Repurchased shares ⁽³⁾	315,400,000	157,700,000
Shares that guarantee the issuance of convertible securities ⁽⁴⁾	2,842,339,760	1,421,169,880
Shares authorized for the issuance of stock or convertible securities ⁽⁵⁾	302,144,720	151,072,360
	<u>34,555,590,002</u>	<u>17,277,795,001</u>

(1) As of December 31, 2019, 13,068,000,000 shares correspond to the fixed portion, and 38,765,385,003 shares, correspond to the variable portion.

(2) Series "A" or Mexican shares must represent at least 64% of CEMEX, S.A.B. de C.V.'s capital stock and Series "B" or free subscription shares must represent at most 36% of CEMEX, S.A.B. de C.V.'s capital stock.

(3) Shares repurchased under the share repurchase program authorized by our shareholders.

(4) Refers to those shares that guarantee the conversion of both the outstanding voluntary and mandatorily convertible securities and new securities issues.

(5) Shares authorized for issuance in a public offer or private placement and/or by issuance of new convertible securities.

Material Contracts

On December 18, 2006, CEMEX, through two special purpose vehicles, issued two tranches of fixed-to-floating rate callable Perpetual Debentures. C5 Capital (SPV) Limited issued \$350 million original principal amount of Perpetual debentures under the first tranche, with the issuer

having the option to redeem such Perpetual debentures on December 31, 2011 and on each interest payment date thereafter, of which \$61 million principal amount were outstanding as of December 31, 2018 (excluding Perpetual debentures

held by us). C10 Capital (SPV) Limited issued \$900 million original principal amount of Perpetual debentures under the second tranche, with the issuer having the option to redeem such Perpetual debentures on December 31, 2016 and on each interest payment date thereafter, of which \$175 million principal amount were outstanding as of December 31, 2018 (excluding Perpetual debentures held by us). Both tranches pay coupons denominated in Dollars at a fixed rate until the call date and at a floating rate thereafter. On February 12, 2007, CEMEX, through a special purpose vehicle, issued a third tranche of fixed-to-floating rate callable debentures. C8 Capital (SPV) Limited issued \$750 million original principal amount of Perpetual debentures under this third tranche, with the issuer having the option to redeem such Perpetual debentures on December 31, 2014 and on each interest payment date thereafter, of which \$135 million principal amount were outstanding as of December 31, 2018 (excluding Perpetual debentures held by us). This third tranche also pays coupons denominated in Dollars at a fixed rate until the call date and at a floating rate thereafter. On May 9, 2007, CEMEX, through a special purpose vehicle, issued a fourth tranche of fixed-to-floating rate callable Perpetual Debentures. C10-EUR Capital (SPV) Limited issued €730 million original principal amount of Perpetual debentures under this fourth tranche, with the issuer having the option to redeem such Perpetual debentures on June 30, 2017, and on each interest payment date thereafter, of which €64 million principal amount were outstanding as of December 31, 2018 (excluding Perpetual debentures held by us). This fourth tranche pays coupons denominated in Euros at a fixed rate until the call date and at a floating rate thereafter. Due to their perpetual nature and optional deferral of coupons, these transactions, in accordance with IFRS, qualify as equity.

For a description of the material terms relating to the November 2019 Mandatory Convertible Mexican Peso Notes and the March 2020 Optional Convertible Subordinated Dollar Notes, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments.”

In connection with the 2017 Facilities Agreement, we are also parties to the amendment and restatement agreement, dated July 19, 2017 related to the Intercreditor Agreement; the Dutch law share pledge, dated as of September 12, 2012; the Dutch law share pledge, dated as of December 15, 2015; the security confirmation agreement to Dutch law share pledges, dated as of July 19, 2017; the Swiss law share pledge, dated as of September 17, 2012; the security confirmation agreement to the Swiss law share pledge, dated as of July 19, 2017; the Spanish law share pledge, dated as of November 8, 2012; the ratification and extension deed to the Spanish law share pledge, dated as of July 19, 2017; and the amendment and restatement agreement, dated July 19, 2017 to the Mexican law security trust agreement, dated as of September 17, 2012. For a description of the material terms of the 2017 Facilities Agreement and related agreements, see “Item 5—Operating and Financial Review and Prospects—Liquidity and Capital Resources—Our Indebtedness.”

For a description of the material terms relating to the Senior Secured Notes, see “Item 5—Operating and Financial Review and Prospects—Summary of Material Contractual Obligations and Commercial Commitments—Senior Secured Notes.”

Exchange Controls

Not applicable.

Taxation

Mexican Tax Considerations

General

The following is a summary of certain Mexican federal income tax considerations relating to the ownership and disposition of CEMEX, S.A.B. de C.V.’s CPOs or ADSs.

This summary is based on Mexican income tax law that is in effect on the date of this annual report, which is subject to change. This summary is limited to non-residents of Mexico, as defined below, who own CEMEX, S.A.B. de C.V.’s CPOs or ADSs. This summary does not address all aspects of Mexican income tax law. Holders are urged to consult their tax counsel as to the tax consequences that the purchase, ownership and disposition of CEMEX, S.A.B. de C.V.’s CPOs or ADSs may have.

For purposes of Mexican taxation, an individual is a resident of Mexico if he or she has established his or her home in Mexico. If the individual also has a home in another country, he or she will be considered a resident of Mexico if his or her center of vital interests is in Mexico. Under Mexican law, an individual’s center of vital interests is in Mexico if, among other things:

- more than 50% of the individual’s total income in the relevant year comes from Mexican sources; or
- the individual’s main center of professional activities is in Mexico.

A Mexican national that is employed by the Mexican government is deemed resident of Mexico, even if his or her center of vital interests is located outside of Mexico. Unless otherwise proven, Mexican nationals are deemed residents of Mexico for tax purposes.

A legal entity is a resident of Mexico if it is organized under the laws of Mexico or if it maintains the principal administration of its business or the effective location of its management in Mexico. A Mexican citizen is presumed to be a resident of Mexico for tax purposes unless such person or entity can demonstrate otherwise. If a legal entity or an individual is deemed to have a permanent establishment in Mexico for tax purposes, all income attributable to such permanent establishment will be subject to Mexican taxes, in accordance with relevant tax provisions.

Individuals or legal entities that cease to be residents of Mexico must notify the tax authorities within 15 business days before their change of residency.

A non-resident of Mexico is a legal entity or individual that does not satisfy the requirements to be considered a resident of Mexico for Mexican federal income tax purposes.

Taxation of Dividends

Dividends from earnings generated before January 1, 2014, either in cash or in any other form, paid to non-residents of Mexico with respect to Series A shares or Series B shares represented by the CPOs (or in the case of holders who hold CPOs represented by ADSs), will not be subject to withholding tax in Mexico.

As a result of the enactment of certain tax provisions in Mexico, as of January 1, 2014, dividends in cash from identified pre-tax retained earnings generated after January 1, 2014 will be subject to a 10% withholding tax. This tax is considered as a definitive payment.

Disposition of CPOs or ADSs

As a result of the enactment of certain tax provisions in Mexico, as of January 1, 2014, in the case of individuals, capital gains of shares issued by Mexican companies on the MSE will be subject to a 10% withholding tax, which will be withheld by the intermediary acting as a withholding agent. If the individual is a tax resident in a country with a tax treaty in force with Mexico, such individual will not be subject to any withholding tax.

Gains on the sale or disposition of CPOs by a holder who is a non-resident of Mexico will not be subject to any Mexican tax, if the sale is carried out through the MSE or other recognized securities market, as determined by Mexican tax authorities. Gains realized on sales or other dispositions of CPOs by non-residents of Mexico made in other circumstances would be subject to Mexican income tax. However, gains on the sale or disposition of ADSs by a holder who is a non-resident of Mexico will not be subject to Mexican tax.

Under the terms of the Convention Between the U.S. and Mexico for Avoidance of Double Taxation and Prevention of Fiscal Evasion with Respect to Income Taxes, and a protocol thereto (together, the "Tax Treaty"), gains obtained by a U.S. Shareholder (as defined below) eligible for benefits under the Tax Treaty on the disposition of CPOs will generally not be subject to Mexican tax, provided that such gains are not attributable to a permanent establishment of such U.S. Shareholder in Mexico and that the eligible U.S. Shareholder did not own, directly or indirectly, 25% or more of our outstanding stock during the 12-month period preceding the disposition. In the case of non-residents of Mexico eligible for the benefits of a tax treaty, gains derived from the disposition of ADSs or CPOs may also be exempt, in whole or in part, from Mexican taxation under a treaty to which Mexico is a party.

Deposits and withdrawals of ADSs will not give rise to any Mexican tax or transfer duties.

The term "U.S. Shareholder" shall have the same meaning ascribed below under the section "—U.S. Federal Income Tax Considerations."

Estate and Gift Taxes

There are no Mexican inheritance or succession taxes applicable to the ownership, transfer or disposition of ADSs or CPOs by holders that are non-residents of Mexico, although gratuitous transfers of CPOs may, in some circumstances, cause a Mexican federal tax to be imposed upon a recipient. There are no Mexican stamp, issue, registration or similar taxes or duties payable by holders of ADSs or CPOs.

U.S. Federal Income Tax Considerations

General

The following is a summary of certain U.S. federal income tax considerations generally applicable to the ownership and disposition of CEMEX, S.A.B. de C.V.'s CPOs and ADSs.

This summary is based on provisions of Title 26 of the U.S. Code (Internal Revenue Code), as amended (the "Internal Revenue Code"), United States Department of the Treasury regulations promulgated under the Internal Revenue Code, administrative rulings, and judicial interpretations of the Internal Revenue Code, all as in effect on the date of this annual report and all of which are subject to change, possibly retroactively. This summary is limited to U.S. Shareholders (as defined below) who hold our ADSs or CPOs, as the case may be, as capital assets. This summary does not discuss all aspects of U.S. federal income taxation that may be important to an investor in light of its individual circumstances, for example, an investor subject to special tax rules (e.g., banks, thrifts, real estate investment trusts, regulated investment companies, insurance companies, dealers in securities or currencies, expatriates, tax-exempt investors, persons who own 10% or more of our voting stock, or holders whose functional currency is not the Dollar or U.S. Shareholders who hold a CPO or an ADS as a position in a "straddle," as part of a "synthetic security" or "hedge," as part of a "conversion transaction" or other integrated investment, or as other than a capital asset). In addition, this summary does not address the Medicare tax imposed on certain net investment income or any aspect of state, local foreign, gift, estate or alternative minimum tax considerations.

For purposes of this summary, a "U.S. Shareholder" means a beneficial owner of CPOs or ADSs, who is for U.S. federal income tax purposes:

- an individual citizen or resident of the U.S.;
- a corporation or other entity taxable as a corporation that is created or organized in the U.S. or under the laws of the U.S. or any political subdivision thereof;
- an estate the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (i) is subject to the primary supervision of a court within the U.S. and the control of one or more U.S. persons are authorized to control all substantial decisions or (ii) has a valid election in effect under applicable United States Department of the Treasury regulations to be treated as a U.S. person.

If a partnership (including any entity arrangement treated as a partnership for U.S. federal income tax purposes) is the beneficial owner of CPOs or ADSs, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. A partner in a partnership that is the beneficial owner of CPOs or ADSs should consult its tax advisor regarding the associated tax consequences.

U.S. Shareholders should consult their tax advisors as to the particular tax consequences to them under U.S. federal, state and local, and foreign laws relating to the ownership and disposition of CEMEX, S.A.B. de C.V.'s CPOs and ADSs.

Ownership of CPOs or ADSs in general

In general, for U.S. federal income tax purposes, U.S. Shareholders who own ADSs will be treated as the beneficial owners of the CPOs represented by those ADSs, and each CPO will represent a beneficial interest in two Series A shares and one Series B share.

Taxation of distributions with respect to CPOs and ADSs

A distribution of cash or property with respect to the Series A shares or Series B shares represented by CPOs, including CPOs represented by ADSs, generally will be treated as a dividend to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles, and will be includible in the gross income of a U.S. Shareholder as foreign source "passive" income on the date the distribution is received by the CPO trustee or successor thereof. Any such dividend will not be eligible for the dividends-received deduction allowed to corporate U.S. Shareholders. To the extent, if any, that the amount of any distribution by us exceeds our current and accumulated earnings and profits as determined under U.S. federal income tax principles, it will be treated first as a tax-free return of the U.S. Shareholder's adjusted tax basis in the CPOs or ADSs, as applicable, and thereafter as capital gain. For more on the treatment of capital gain with respect to the CPOs and ADSs, see "Taxation—U.S. Federal Income Tax Considerations—Taxation of capital gains on disposition of CPOs or ADSs" below.

The gross amount of any dividends paid in Mexican Pesos will be includible in the income of a U.S. Shareholder in a Dollar amount calculated by reference to the exchange rate in effect the day the Mexican Pesos are received by the CPO trustee or successor thereof whether or not the Mexican Pesos are converted into Dollars on that day. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date the dividend payment is includible in income to the date such payment is converted into Dollars will be treated as ordinary income or loss. Such gain or loss will generally be income from sources within the U.S. for foreign tax credit limitation purposes.

Dividend income is generally taxed as ordinary income. However “qualified dividend income” received by U.S. Shareholders that are individuals (as well as certain trusts and estates) is generally eligible for preferential U.S. federal income tax rates (provided that certain holding period requirements are met). “Qualified dividend income” includes dividends paid on shares of “qualified foreign corporations” if, among other things: (i) the shares of the foreign corporation are readily tradable on an established securities market in the U.S., or (ii) the foreign corporation is eligible with respect to substantially all of its income for the benefits of a comprehensive income tax treaty with the U.S. which contains an exchange of information program.

We believe that we are a “qualified foreign corporation” because (i) the ADSs trade on the New York Stock Exchange and (ii) we are eligible for the benefits of the comprehensive income tax treaty between Mexico and the U.S. which includes an exchange of information program. Accordingly, we believe that any dividends we pay should constitute “qualified dividend income” for U.S. federal income tax purposes. However, we cannot assure you that we will continue to be considered a “qualified foreign corporation” and that our dividends will continue to be “qualified dividend income.”

Taxation of capital gains on disposition of CPOs or ADSs

The sale, exchange, redemption, or other disposition of CPOs or ADSs will result in the recognition of gain or loss by a U.S. Shareholder for U.S. federal income tax purposes in an amount equal to the difference between the amount realized on the disposition and the U.S. Shareholder’s tax basis in the CPOs or ADSs, as applicable. Such gain or loss will be long-term capital gain or loss if the U.S. Shareholder’s holding period for the CPOs or ADSs exceeds one year at the time of disposition. Long-term capital gain recognized by a U.S. Shareholder that is an individual (as well as certain trusts and estates) upon the sale or exchange of CPOs or ADSs is generally eligible for preferential U.S. federal income tax rates. The deduction of capital losses is subject to limitations. Gain from the disposition of CPOs or ADSs generally will be treated as U.S. source for foreign tax credit purposes; losses will generally be allocated against U.S. source income. Deposits and withdrawals of CPOs by U.S. Shareholders in exchange for ADSs will not result in the realization of gain or loss for U.S. federal income tax purposes. U.S. backup withholding and information reporting

A U.S. Shareholder may, under certain circumstances, be subject to information reporting with respect to some payments to that U.S. Shareholder such as dividends or the proceeds of a sale or other disposition of the CPOs or ADSs. Backup withholding also may apply to amounts paid to such holder unless such holder (i) is a corporation or comes within certain exempt categories and demonstrates this fact when so required, or (ii) provides a correct taxpayer identification number and otherwise complies with applicable requirements of the backup withholding rules. Backup withholding is not an additional tax. Amounts withheld as backup withholding may be creditable against the U.S. Shareholder’s federal income tax liability, and the U.S. Shareholder may obtain a refund of any excess amounts withheld under the backup withholding rules by filing the appropriate claim for refund with the IRS and timely furnishing any required information.

An individual U.S. Shareholder may be required to submit to the IRS certain information with respect to his or her beneficial ownership of CPOs or ADSs, unless such CPOs or ADSs are held on his or her behalf by a U.S. financial institution. The law also imposes penalties if an individual U.S. Shareholder is required to submit such information to the IRS and fails to do so. U.S. Shareholders should consult their tax advisors regarding the application of the new law in their particular circumstances.

Documents on Display

We are subject to the informational requirements of the Exchange Act and, in accordance with these requirements, file reports and information statements and other information with the SEC. These reports and information statements and other information filed by us with the SEC are available at the SEC’s website www.sec.gov.

In reviewing the agreements included as exhibits to this annual report, please remember they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about us or the other parties to the agreements.

The agreements may contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other parties to the applicable agreement and:

- should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate;

- have been qualified by disclosures that were made to the other party in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and are subject to more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time.

Item 11—Quantitative and Qualitative Disclosures About Market Risk

See “Item 5—Operating and Financial Review and Prospects—Quantitative and Qualitative Market Disclosure.”

Item 12—Description of Securities Other than Equity Securities

Item 12A—Debt Securities

Not applicable.

Item 12B—Warrants and Rights

Not applicable.

Item 12C—Other Securities

Not applicable.

Item 12D—American Depositary Shares

Depository Fees and Charges

Under the terms of the Deposit Agreement for CEMEX, S.A.B. de C.V.’s ADSs, an ADS holder may have to pay the following service fees to the depository:

Services	Fees
Issuance of ADSs upon deposit of eligible securities	Up to 5¢ per ADS issued.
Surrender of ADSs for cancelation and withdrawal of deposited securities	Up to 5¢ per ADS surrendered.
Exercise of rights to purchase additional ADSs	Up to 5¢ per ADS issued.
Distribution of cash (i.e., upon sale of rights and other entitlements)	Up to 2¢ per ADS held.

An ADS holder also is responsible to pay fees and expenses incurred by the ADS depository and taxes and governmental charges including, but not limited to:

- transfer and registration fees charged by the registrar and transfer agent for eligible and deposited securities, such as upon deposit of eligible securities and withdrawal of deposited securities;
- expenses incurred for converting foreign currency into Dollars;
- expenses for cable, telex and fax transmissions and for delivery of securities;
- expenses incurred in connection with compliance with exchange control regulations and other applicable regulatory requirements;
- fees and expenses incurred in connection with the delivery of deposited securities; and
- taxes and duties upon the transfer of securities, such as when eligible securities are deposited or withdrawn from deposit.

We have agreed to pay some of the other charges and expenses of the ADS depository. Note that the fees and charges that a holder of ADSs is required to pay may vary over time and may be changed by us and by the ADS depository. ADS holders will receive notice of the changes. The fees described above may be amended from time to time.

Depository Payments for the Year Ended December 31, 2019

In 2019, we received approximately \$1,786,734.50 million (after applicable U.S. taxes and including payments to third parties) from our Depository Bank, Citibank, N.A., to reimburse us for contributions towards our investor relations activities (including but not limited to investor meetings, conferences and fees to investor relations service vendors) and other miscellaneous expenses related to the listing of our ADSs on the NYSE.

PART II

Item 13—Defaults, Dividend Arrearages and Delinquencies

None.

Item 14—Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15—Controls and Procedures

Disclosure Controls and Procedures

Our management has evaluated, with the participation of CEMEX, S.A.B. de C.V.'s CEO and CFO, the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this annual report, and has concluded that our disclosure controls and procedures were effective as of December 31, 2019.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Internal control over financial reporting refers to a process designed by, or under the supervision of, the CEO and CFO and effected by CEMEX, S.A.B. de C.V.'s board of directors and our management to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and members of CEMEX, S.A.B. de C.V.'s board of directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Under the supervision and with the participation of our management, including the CEO and CFO and principal financial and accounting officers, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019, using the criteria established in "Internal Control—Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2019.

Attestation Report of the Independent Registered Public Accounting Firm

The report on the audit of the effectiveness of our internal control over financial reporting issued by KPMG Cárdenas Dosal, S.C., a registered public accounting firm appears on page F-74 of this annual report.

Changes in Internal Control Over Financial Reporting

We have not identified changes in our internal control over financial reporting during 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16—RESERVED

Item 16A—Audit Committee Financial Expert

CEMEX, S.A.B. de C.V.'s board of directors has determined that it has at least one "audit committee financial expert" (as defined in Item 16A of Form 20-F) serving on its audit committee. Mr. Everardo Elizondo Almaguer meets the requisite qualifications.

Item 16B—Code of Ethics

We have adopted a written code of ethics that applies to all board members, employees, including our principal executive officer, principal financial officer and principal accounting officer, third parties (including but not limited to customers, suppliers, and contractors) and other stakeholders. All of our employees are expected to comply with this code in their daily interactions.

Our code of ethics provides the following main guidelines:

- (i) Our purpose and scope: we look to act with integrity in our day-to-day work. This is important for CEMEX's sustained success and to create a workplace in which our people can thrive. Our code of ethics aims to provide guidance on what is expected from all of us as part of CEMEX;
- (ii) Our people: we believe our people are our greatest assets. Therefore, we aim to provide a great place to work, we encourage an atmosphere of openness, courage, generosity and respect, so that all employees feel free to come forward with their questions, ideas, and concerns;
- (iii) Health and safety in the workplace: we plan to prevent incidents and safeguard the health and safety of our workforce and are committed to carrying out our business activities in a safe and efficient manner to care for the well-being of all those on our sites and those who may be impacted by our activities;
- (iv) Human rights: we look to support and respect the protection of internationally proclaimed human rights principles and we do not tolerate any violation of human rights in our business, our supply chain or partnerships;
- (v) Harassment and workplace respect: we look to have an environment of mutual respect should always be fostered, and we should provide support and encouragement to each other;
- (vi) Diversity and inclusion: we seek to support differences and provide an inclusive work environment for everyone. Recruitment, promotion, training, compensation and benefits should be based on ability, career experience and alignment with our values;
- (vii) Customer relations: we work to be our customers' best option and aim to conduct our business dealings fairly, professionally and with integrity. We expect our customers to act with the same integrity;
- (viii) Supplier relations: we look to manage our supplier relationships with honesty, respect and integrity, offering equal opportunities for all parties;
- (ix) Government relations: our operations require a wide range of interactions with government agencies in many countries; these agencies may act as regulators, customers, suppliers, stockholders and/or promoters; we plan to always conduct our interactions with these agencies consistent with our values, with particular emphasis on integrity;
- (x) Community relations: we are committed to promoting and contributing to the development of our communities by preserving the environment, fostering mutually beneficial relationships and maintaining open lines of communication. When considering CEMEX's participation in economic, social, and environmental programs, we should always comply with the law;
- (xi) Environment: our business should be carried out in an environmentally responsible and sustainable manner, aiming to mitigate the environmental and social impacts of our business;
- (xii) Antitrust compliance: we are committed to conducting all of our business activities in compliance with applicable laws. We operate in many countries and are subject to different antitrust laws and regulations. Therefore, our country managers seek that our business activities conform to local laws and regulations, and to our own policies;

(xiii) Anti-corruption: we forbid our personnel from promising or providing anything of value to government officials or any third parties to secure any undue advantage or unduly influence any decisions;

(xiv) Preventing money laundering: we prohibit money laundering, understood as the process of disguising the nature and source of money or other property connected with criminal activity, such as drug trafficking, terrorism, bribery or corruption, by integrating the illicit money or property into the stream of commerce so that it appears legitimate or its true source or owner cannot be identified;

(xv) Conflicts of interest and corporate opportunities: our employees, officers and directors have an obligation to conduct themselves in an honest and ethical manner and to act in our best interest. Our employees, officers and directors are expected to avoid situations that present or could present a potential or actual conflict between their interests and our interests;

(xvi) Gifts and hospitalities: we, our employees, officers and directors look to avoid accepting or giving courtesies of any kind that may influence, or appear to compromise, decision-making on current or future negotiations. We should never seek or structure a negotiation on the basis of any gift, service or courtesy from a customer, supplier, consultant, service provider or other third-party;

(xvii) Use of CEMEX's assets: employees should never use CEMEX assets for their own benefit, and we look to ensure that company assets are not misused by others, stolen or damaged. When using company devices it is prohibited for employees to create, view, store, request or distribute anything of an offensive, illegal or inappropriate nature;

(xviii) Political activities: we acknowledge and respect the right of our employees to participate in activities external to the company, such as politics, provided that they are legal in their jurisdiction. We look to avoid conducting political activities at company facilities, use company resources for these activities or engage in these activities on company time. We can make political contributions as long as the contributions are allowed by local law and pre-approved internally;

(xix) Data privacy and protection: we plan to protect the confidentiality and integrity of personal data to foster trustworthy business relationships. We aim to process personal data fairly and lawfully and provide access to it within our organization only on a need-to-know basis;

(xx) Insider trading: we should never buy or sell the stock of CEMEX while in possession of non-public material information about the company. We should never "tip" others or share non-public material information even if we do not intend to profit for ourselves or others;

(xxi) Intellectual property: we look to ensure the protection of CEMEX's intellectual property and capture innovation to ensure added value and freedom to operate. CEMEX recognizes and respects the intellectual property of third parties and intends to prevent and avoid consequences of potential infringement of third parties' rights;

(xxii) Accurate records: we look to provide our stakeholders with correct and complete information in a timely manner; anyone responsible for financial records, or any other CEMEX records or reporting, must aim to ensure that those records accurately reflect our business activities, are supported by evidence, and are complete, accurate, and timely; and

(xxiii) Communication and use of social media: we should not make any statements outside of CEMEX about company performance, initiatives or any other internal matters. We look to keep all confidential matters safe.

We promote awareness and enforcement of our code of ethics through our ethics committees, training programs and secured internal communications channels. We periodically evaluate and update the provisions of our code of ethics.

You may view our code of ethics in the corporate governance section of our website (www.cemex.com), or you may request a copy of our code of ethics, at no cost, by writing to or telephoning us as follows:

CEMEX, S.A.B. de C.V. Avenida
Ricardo Margáin Zozaya #325
Colonia Valle del Campestre
San Pedro Garza García, Nuevo León, 66265, México
Attn: Luis Hernández
Telephone: +52 81 8888-8888

Item 16C—Principal Accountant Fees and Services

Audit Fees: KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$13 million in fiscal year 2019 in connection with the professional services rendered for the audit of our annual financial statements and services normally provided by them relating to statutory and regulatory filings or engagements. In fiscal year 2018, KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$14 million for these services.

Audit-Related Fees: KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$1 million in fiscal year 2019 for assurance and related services reasonably related to the performance of our audit. In fiscal year 2018, KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$1 million for audit-related services.

Tax Fees: KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$1 million in fiscal year 2019 for tax compliance, tax advice and tax planning. In fiscal year 2019, KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$1 million for tax-related services.

All other fees: KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$2 million in fiscal year 2018 for products and services other than those comprising audit fees, audit-related fees and tax fees. In fiscal year 2018, KPMG Cárdenas Dosal, S.C. in Mexico and KPMG firms worldwide charged us \$1 million for products and services in this category. These fees relate mainly to services provided by KPMG to us with respect to our due diligence activities around the world.

Audit Committee Pre-Approval Policies and Procedures

Our audit committee is responsible for, among other things, the appointment, compensation and oversight of our external auditors. To assure the independence of our independent auditors, our audit committee pre-approves annually a catalog of specific audit and non-audit services in the categories Audit Services, Audit-Related Services, Tax-Related Services and Other Services that may be performed by our auditors, as well as the budgeted fee levels for each of these categories. All other permitted services must receive a specific approval from our audit committee. Our external auditor periodically provides a report to our audit committee in order for our audit committee to review the services that our external auditor is providing, as well as the status and cost of those services.

During 2019, there were no services provided to us by our external auditors that were performed pursuant to the de minimis exception.

Item 16D—Exemptions from the Listing Standards for Audit Committees

Not applicable.

Item 16E—Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not applicable.

Item 16F—Change in Registrant’s Certifying Accountant

Not applicable.

Item 16G—Corporate Governance

Section 303A.11 of the NYSE Listed Company Manual (“LCM”) requires that listed foreign private issuers, such as CEMEX, disclose any significant ways in which their corporate governance practices differ from those followed by U.S. companies under NYSE listing standards.

CEMEX’s corporate governance practices are governed by its by-laws, by the corporate governance provisions set forth in the Mexican Securities Market Law, the Mexican Regulation for Issuers (*Circular de Emisoras*) issued by the Mexican Banking and Securities Commission (*Comisión Nacional Bancaria y de Valores*) and the MSE Rules (*Reglamento Interior de la Bolsa Mexicana de Valores*) and by applicable U.S. securities laws. CEMEX is also subject to the rules of the NYSE to the extent they apply to foreign private issuers. Except for those specific rules, foreign private issuers are permitted to follow home country practice in lieu of the provisions of Section 303A of the LCM.

CEMEX, on a voluntary basis, also complies with the Mexican Code of Best Corporate Practices (*Código de Mejores Prácticas Corporativas*) which, as indicated below, was promulgated by a committee established by the Mexican Corporate Coordination Board (*Consejo Coordinador Empresarial*). The Mexican Corporate Coordination Board provides recommendations for better corporate governance practices for listed companies in Mexico, and the Mexican Code of Best Corporate Practices has been endorsed by the Mexican Banking and Securities Commission.

The following is a summary of significant ways in which our corporate governance practices differ from those required to be followed by U.S. domestic companies under the NYSE's listing standards.

NYSE LISTING STANDARDS

CEMEX CORPORATE GOVERNANCE PRACTICE

303A.01

Listed companies must have a majority of independent directors.

Pursuant to the Mexican Securities Market Law, CEMEX, S.A.B. de C.V. is required to have a board of directors with a maximum of 21 members, 25% of whom must be independent. Determination as to the independence of CEMEX, S.A.B. de C.V.'s directors is made upon their election by CEMEX, S.A.B. de C.V.'s shareholders at the corresponding meeting. As of December 31, 2019, CEMEX, S.A.B. de C.V.'s board of directors had 15 members, of which more than 65% are independent under the Mexican Securities Market Law.

The Mexican Securities Market Law sets forth, in article 26, the definition of "independence," which differs from the one set forth in Section 303A.02 of the LCM. Generally, under the Mexican Securities Market Law, a director is not independent if such director is an employee or officer of the company or its subsidiaries; an individual that has significant influence over the company or its subsidiaries; a shareholder that is part of a group that controls the company; or, if there exist certain relationships between a company and a director, entities with which the director is associated or family members of the director.

303A.03

Non-management directors must meet at regularly scheduled executive sessions without management.

Under CEMEX, S.A.B. de C.V.'s by-laws and Mexican laws and regulations, our non-management and independent directors are not required to meet in executive sessions. CEMEX, S.A.B. de C.V.'s board of directors must meet at least once every three months.

303A.04

Listed companies must have a nominating/ corporate governance committee composed of independent directors.

Under CEMEX, S.A.B. de C.V.'s by-laws and Mexican laws and regulations, we are not required to have a nominating committee. We do not have such a committee.

Our corporate practices and finance committee operates pursuant to the provisions of the Mexican Securities Market Law and CEMEX, S.A.B. de C.V.'s by-laws. Our corporate practices and finance committee is composed of four independent directors.

Our corporate practices and finance committee is responsible for evaluating the performance of our executive officers; reviewing related party transactions; reviewing the compensation paid to executive officers; evaluating any waivers granted to directors or executive officers for their taking of corporate opportunities; and carrying out the activities described under Mexican law. Our corporate practices and finance committee meets as required by CEMEX, S.A.B. de C.V.'s by-laws and by Mexican laws and regulations.

303A.05

Listed companies must have a compensation committee composed of independent directors.

Under CEMEX, S.A.B. de C.V.'s by-laws and Mexican laws and regulations, we are not required to have a compensation committee. We do not have such a committee.

Compensation committee members must satisfy additional independence requirements specific to compensation committee membership.

See above.

Listed companies must have an audit committee that satisfies the requirements of Rule 10A-3 under the Exchange Act.

CEMEX, S.A.B. de C.V.'s audit committee operates pursuant to the provisions of the Mexican Securities Market Law and CEMEX, S.A.B. de C.V.'s by-laws.

CEMEX, S.A.B. de C.V.'s audit committee is composed of three members. According to CEMEX, S.A.B. de C.V.'s by-laws, all of the members must be independent.

CEMEX, S.A.B. de C.V.'s audit committee is responsible for evaluating the company's internal controls and procedures, identifying any material deficiencies it finds; following up with any corrective or preventive measures adopted with respect to the non-compliance with the operation and accounting guidelines and policies; evaluating the performance of the external auditors; describing and valuating those non-audit services rendered by the external auditor; reviewing the company's financial statements; assessing the effects of any modifications to the accounting policies approved during a fiscal year; overseeing measures adopted as result of any observations made by shareholders, directors, executive officers, employees or any third parties with respect to accounting, internal controls and internal and external audit, as well as any complaints regarding irregularities in management, including anonymous and confidential methods for addressing concerns raised by employees; and assuring the execution of resolutions adopted at shareholders' or board of directors' meetings.

CEMEX, S.A.B. de C.V.'s board of directors has determined that it has an "audit committee financial expert," for purposes of the Sarbanes-Oxley Act of 2002, serving on its audit committee.

CEMEX, S.A.B. de C.V.'s audit committee meets as required by CEMEX, S.A.B. de C.V.'s by-laws and by Mexican laws and regulations.

303A.09

Listed companies must adopt and disclose corporate governance guidelines.

Under CEMEX, S.A.B. de C.V.'s by-laws and Mexican laws and regulations, we are not required to adopt corporate governance guidelines, but, on an annual basis, we file a report with the MSE regarding our compliance with the Mexican Code of Best Corporate Practices.

303A.10

Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.

CEMEX, S.A.B. de C.V. has adopted a written code of ethics that applies to all of our employees, including our principal executive officer, principal financial officer and principal accounting officer.

Equity compensation plans

Equity compensation plans require shareholder approval, subject to limited exemptions.

Shareholder approval is not expressly required under CEMEX, S.A.B. de C.V.'s by-laws for the adoption and amendment of an equity compensation plan. However, at our 2017 annual shareholders' meeting held on April 5, 2018, CEMEX, S.A.B. de C.V.'s shareholders resolved to extend our current stock program for our employees, officers and administrators until December 31, 2023

Item 16H—Mine Safety Disclosure

The information concerning mine safety violations and other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act is included in Exhibit 15.1 to this annual report.

PART III

Item 17—Financial Statements

Not applicable.

Item 18—Financial Statements

See pages F-1 through F-74, incorporated herein by reference.

Item 19—Exhibits

- 1.1 [Amended and Restated By-laws of CEMEX, S.A.B. de C.V.\(i\)](#)
- 1.2 [Extract of the Resolutions of the Extraordinary General Shareholders' Meeting of CEMEX, S.A.B. de C.V. held on March 28, 2019.\(j\)](#)
- 2.1 [Form of Certificate for shares of Series A Common Stock of CEMEX, S.A.B. de C.V.\(k\)](#)
- 2.2 [Form of Certificate for shares of Series B Common Stock of CEMEX, S.A.B. de C.V.\(k\)](#)
- 2.3 [English Translation of Amended and Restated Agreement to the Trust Agreement, dated as of November 27, 2014, between CEMEX, S.A.B. de C.V., as founder of the trust, and Banco Nacional de México, S.A. regarding the CPOs.\(f\)](#)
- 2.4 [Form of CPO Certificate.\(k\)](#)
- 2.5 Form of Second Amended and Restated Deposit Agreement (Series A and Series B share CPOs), dated August 10, 1999, among CEMEX, S.A. de C.V., Citibank, N.A. and holders and beneficial owners of American Depositary Shares.(a)(p)
- 2.5.1 [Amendment No. 1 to the Second Amended and Restated Deposit Agreement, dated as of July 1, 2005, by and among CEMEX, S.A. de C.V., Citibank, N.A., as Depositary, and all holders and beneficial owners from time to time of American Depositary Shares evidenced by American Depositary Receipts issued thereunder, including the form of ADR attached thereto.\(b\)](#)
- 2.5.2 [Amendment No. 2 to the Second Amended and Restated Deposit Agreement, dated as of February 11, 2015, by and among CEMEX, S.A.B. de C.V., Citibank, N.A., as Depositary, and all holders and beneficial owners from time to time of American Depositary Shares evidenced by American Depositary Receipts issued thereunder, including the form of ADR attached thereto.\(g\)](#)
- 2.5.3 [Letter Agreement, dated October 12, 2007, by and between CEMEX, S.A.B. de C.V. and Citibank, N.A., as Depositary, supplementing the Second Amended and Restated Deposit Agreement, as amended, to enable the Depositary to establish a direct registration system for the ADSs.\(b\)](#)
- 2.5.4 [Letter Agreement, dated March 30, 2010 by and between CEMEX, S.A.B. de C.V. and Citibank, N.A., as Depositary, supplementing the Second Amended and Restated Deposit Agreement, as amended, to set forth the terms upon which CEMEX, S.A.B. de C.V. is to establish a restricted ADS series.\(e\)](#)
- 2.5.5 [Letter Agreement, dated March 15, 2011 by and between CEMEX, S.A.B. de C.V. and Citibank, N.A., as Depositary, supplementing the Second Amended and Restated Deposit Agreement, as amended, to set forth the terms upon which CEMEX, S.A.B. de C.V. is to deposit CPOs upon conversion of the 3.75% Subordinated Convertible Notes due 2018, and the Depositary is to issue ADSs upon deposit of such CPOs.\(e\)](#)
- 2.5.6 [Letter Agreement, dated March 15, 2011 by and between CEMEX, S.A.B. de C.V. and Citibank, N.A., as Depositary, supplementing the Second Amended and Restated Deposit Agreement, as amended, to set forth the terms upon which CEMEX, S.A.B. de C.V. is to establish a restricted ADS series.\(e\)](#)
- 2.6 [Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.\(k\)](#)

2.7 Form of American Depositary Receipt evidencing American Depositary Shares.(g)

4.1 Note Indenture, dated as of December 18, 2006, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$350,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.1.1 First Supplemental Note Indenture, dated as of August 10, 2009, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$350,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.1.2 Second Supplemental Note Indenture, dated as of May 12, 2010, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, The Bank of New York Mellon, as trustee, Swap 5 Capital (SPV) Limited and C5 Capital (SPV) Limited., supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$350,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.1.3 Third Supplemental Note Indenture, dated as of February 24, 2020, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors, and The Bank of New York, as trustee, supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$350,000,000 Callable Perpetual Dual-Currency Notes. (k)

4.2 Note Indenture, dated as of December 18, 2006, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$900,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.2.1 First Supplemental Note Indenture, dated as of August 10, 2009, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$900,000,000 aggregate principal amount of Callable Perpetual Dual- Currency Notes.(b)

4.2.2 Second Supplemental Note Indenture, dated as of May 12, 2010, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, The Bank of New York Mellon, as trustee, Swap 10 Capital (SPV) Limited and C10 Capital (SPV) Limited., supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$900,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.2.3 Third Supplemental Note Indenture, dated as of February 24, 2020, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and The Bank of New York, as trustee, supplementing the Note Indenture, dated as of December 18, 2006, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$900,000,000 Callable Perpetual Dual-Currency Notes.(k)

4.3 Note Indenture, dated as of February 12, 2007, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$750,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.3.1 First Supplemental Note Indenture, dated as of August 10, 2009, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, supplementing the Note Indenture, dated as of February 12, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$750,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.3.2 Second Supplemental Note Indenture, dated as of May 12, 2010, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, The Bank of New York Mellon, as trustee, Swap 8 Capital (SPV) Limited and 8 Capital (SPV) Limited., supplementing the Note Indenture, dated as of February 12, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$750,000,000 aggregate principal amount of Callable Perpetual Dual-Currency Notes.(b)

4.3.3 Third Supplemental Note Indenture, dated as of February 24, 2020, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors, and The Bank of New York, as trustee, supplementing the Note Indenture, dated as of February 12, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s \$750,000,000 Callable Perpetual Dual-Currency Notes.(k)

4.4 Note Indenture, dated as of May 9, 2007, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s €730,000,000 Callable Perpetual Dual-Currency Notes.(b)

4.4.1 First Supplemental Note Indenture, dated as of August 10, 2009, by and among New Sunward Holding Financial Ventures B.V., as issuer, and CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and the Bank of New York, as trustee, supplementing the Note Indenture, dated as of May 9, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s €730,000,000 Callable Perpetual Dual-Currency Notes.(b)

4.4.2 Second Supplemental Note Indenture, dated as of May 12, 2010, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, The Bank of New York Mellon, as trustee, Swap C10-EUR Capital (SPV) Limited and C10-EUR Capital (SPV) Limited., supplementing the Note Indenture, dated as of February 12, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s €730,000,000 Callable Perpetual Dual-Currency Notes.(b)

4.4.3 Third Supplemental Note Indenture, dated as of February 24, 2020, by and among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., and New Sunward Holding B.V., as guarantors and The Bank of New York, as trustee, supplementing the Note Indenture, dated as of May 9, 2007, among New Sunward Holding Financial Ventures B.V., as issuer, CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V. and New Sunward Holding B.V., as guarantors, and The Bank of New York Mellon, as trustee, relating to New Sunward Holding Financial Ventures B.V.'s €730,000,000 Callable Perpetual Dual-Currency Notes.(k)

4.5 Amendment and Restatement Deed, dated July 19, 2017, by and among CEMEX, S.A.B. de C.V. and certain of its subsidiaries, the Intra-Group Lenders (as named therein), Citibank Europe plc, UK Branch (formerly Citibank International Ltd), as Facilities Agent, and Wilmington Trust (London) Limited, as Security Agent, relating to the Intercreditor Agreement, dated September 17, 2012 and amended October 31, 2014, and July 23, 2015.(i)

4.6 Dutch law Share Pledge over the registered shares in New Sunward Holding B.V., dated September 17, 2012, among CEMEX International Finance Company Ltd. (formerly CEMEX International Finance Company) which merged into New Sunward Holding B.V., Corporación Gouda S.A. de C.V. and Mexcement Holdings, S.A. de C.V., both which merged into Cemex Operaciones México, S.A. de C.V., and CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.) (as Pledgors) and Wilmington Trust (London) Limited (as Pledgee).(c)

- 4.6.1 Dutch law Share Pledge over the registered shares in New Sunward Holding B.V., dated December 15, 2015, between Cemex Operaciones México, S.A. de C.V. (as Pledgor) and Wilmington Trust (London) Limited (as Pledgee).(g)
- 4.6.2 Security Confirmation Agreement of Dutch law Share Pledges over the registered shares in New Sunward Holding B.V., dated July 19, 2017, among Cemex Operaciones México, S.A. de C.V. and CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.) (as Security Providers), New Sunward Holding B.V. and Wilmington Trust (London) Limited (as Security Agent).(i)
- 4.7 Swiss law Share Pledge over 1,938,958,014 shares in CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.), dated September 17, 2012, among CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., Interamerican Investments Inc. and Empresas Tolteca de México, S.A. de C.V. (as Pledgors) and Wilmington Trust (London) Limited (as Pledgee).(c)
- 4.7.1 Security Confirmation Agreement of Swiss law Share Pledge over 1,938,958,014 shares in CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.), dated July 23, 2015, among CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., Interamerican Investments Inc. and Empresas Tolteca de México, S.A. de C.V. (as Pledgors) and Wilmington Trust (London) Limited (as Pledgee).(g)
- 4.7.2 Security Confirmation Agreement of Swiss law Share Pledge over 1,938,958,014 shares in CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.), dated July 19, 2017, among CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., Interamerican Investments Inc. and Empresas Tolteca de México, S.A. de C.V. (as Pledgors) and Wilmington Trust (London) Limited (as Pledgee).(i)
- 4.7.3 Swiss law Share Pledge over 8,424,037 shares in CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.), dated July 19, 2017, between CEMEX, S.A.B. de C.V. (as Pledgor) and Wilmington Trust (London) Limited (as Security Agent).(i)
- 4.7.4 Security Confirmation Agreement of Swiss law Share Pledge over 1,947,382,051 shares in CEMEX Innovation Holding Ltd. (formerly known as CEMEX TRADEMARKS HOLDING Ltd.), dated April 2, 2019, among CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., Interamerican Investments Inc. and Empresas Tolteca de México, S.A. de C.V. (as Pledgors) and Wilmington Trust (London) Limited (as Pledgee).(j)
- 4.8 Spanish law Share Pledge over the shares in CEMEX España, S.A., dated November 8, 2012, among New Sunward Holding B.V., CEMEX, S.A.B. de C.V., CEMEX España, S.A. and Wilmington Trust (London) Limited (as Security Agent).(c)
- 4.9 Extension Agreement to Spanish law Share Pledge over the shares in CEMEX España, S.A., dated July 19, 2017, among New Sunward Holding B.V., CEMEX, S.A.B. de C.V., CEMEX España, S.A., Wilmington Trust (London) Limited (as Security Agent), Banco Bilbao Vizcaya Argentaria, S.A. (as Custodian) and the Lenders (as named therein).(i)
- 4.10 English translation of the Second Amendment and Restatement Agreement of the Mexican law Security Trust Agreement, dated July 25, 2017, entered into by CEMEX, S.A.B. de C.V., Empresas Tolteca de Mexico, S.A. de C.V., CEMEX Central, S.A. de C.V., Interamerican Investments Inc., Cemex México, S.A. de C.V., and CEMEX Operaciones México, S.A. de C.V., regarding the shares that each of them owned in: CEMEX México, S.A. de C.V. and CEMEX Operaciones México, S.A. de C.V.(i)
- 4.11 Indenture, dated as of April 1, 2014, among CEMEX Finance LLC, as issuer, the Note Guarantors party thereto and The Bank of New York Mellon, as trustee, in connection with the issuance of \$1,000,000,000 aggregate principal amount of 6.000% U.S. Dollar-Denominated Senior Secured Notes due 2024.(d)
- 4.12 English Translation of Accession Deed, dated April 1, 2014, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX Finance LLC of \$1,000,000,000 aggregate principal amount of 6.000% U.S. Dollar-Denominated Senior Secured Notes due 2024.(d)
- 4.13 Indenture, dated as of September 11, 2014, among CEMEX, S.A.B. de C.V., as issuer, the Note Guarantors party thereto and The Bank of New York Mellon, as trustee, in connection with the issuance of \$1,100,000,000 aggregate principal amount of 5.700% Dollar-Denominated Senior Secured Notes due 2025.(f)
- 4.14 English Translation of Accession Deed, dated September 11, 2014, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX, S.A.B. de C.V. of \$1,100,000,000 aggregate principal amount of 5.700% Dollar-Denominated Senior Secured Notes due 2025.(f)

- 4.15 Indenture, dated as of March 13, 2015, among CEMEX, S.A.B. de C.V., as issuer, The Bank of New York Mellon, as trustee, CIBanco S.A., Institución de Banca Múltiple, as Mexican trustee, in connection with the issuance of \$200,000,000 aggregate principal amount of 3.72% Convertible Subordinated Notes due 2020.(f)
- 4.16 Indenture, dated as of May 28, 2015, among CEMEX, S.A.B. de C.V. as issuer, The Bank of New York Mellon, as trustee, and CIBanco S.A., Institución de Banca Múltiple, as Mexican trustee, with respect to the issuance of 3.72% Convertible Subordinated Notes due 2020.(g)
- 4.17 Note Indenture, dated as of March 16, 2016, among CEMEX, S.A.B. de C.V., the guarantors listed therein, and The Bank of New York Mellon, as trustee, with respect to the issuance of 7.750% Senior Secured Notes due 2026.(g)
- 4.18 English Translation of Accession Deed, dated March 16, 2016, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX, S.A.B. de C.V. of \$1,000,000,000 aggregate principal amount of 7.750% Senior Secured Notes due 2026.(g)
- 4.19 Indenture, dated as of June 14, 2016, among CEMEX Finance LLC, the guarantors listed therein, The Bank of New York Mellon, as trustee, and The Bank of New York Mellon, London Branch, as paying agent and transfer agent, with respect to the issuance of 4.625% Senior Secured Notes due 2024.(h)
- 4.20 Indenture, dated as of December 5, 2017, among CEMEX, S.A.B. de C.V., the guarantors listed therein, and The Bank of New York Mellon, as trustee, in connection with the issuance of €650,000,000 aggregate principal amount of 2.750% Euro-Denominated Senior Secured Notes due 2024.(i)
- 4.21 English Translation of Accession Deed, dated December 5, 2017, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX, S.A.B. de C.V. of €650,000,000 aggregate principal amount of 2.750% Euro-Denominated Senior Secured Notes due 2024.(i)
- 4.22 Indenture, dated as of March 19, 2019, among CEMEX, S.A.B. de C.V., the guarantors listed therein, and The Bank of New York Mellon, as trustee, in connection with the issuance of €400,000,000 aggregate principal amount of 3.125% Euro-Denominated Senior Secured Notes due 2026.(j)
- 4.23 English Translation of Accession Deed, dated March 19, 2019, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX, S.A.B. de C.V. of €400,000,000 aggregate principal amount of 3.125% Euro-Denominated Senior Secured Notes due 2026.(j)
- 4.24 Amendment and Restatement Agreement, dated as of November 4, 2019, by and among CEMEX S.A.B. de C.V. and certain of its subsidiaries, the financial institutions named therein as Original Lenders, Citibank Europe, plc, UK Branch, as Agent, and Wilmington Trust (London) Limited, as Security Agent, relating to the Facilities Agreement, dated July 19, 2017.(k)
- 4.25 Indenture, dated as of November 12, 2019, among CEMEX, S.A.B. de C.V., the guarantors listed therein, and The Bank of New York Mellon, as trustee, in connection with the issuance of \$1,000,000,000 aggregate principal amount of 5.450% Senior Secured Notes due 2029.(k)
- 4.26 English Translation of Accession Deed, dated November 19, 2019, issued by The Bank of New York Mellon, as Trustee, and CEMEX España, S.A., concerning the shares of CEMEX España, S.A. relating to the issuance by CEMEX, S.A.B. de C.V. of \$1,000,000,000 aggregate principal amount of 5.450% Senior Secured Notes due 2029.(k)
- 4.27 English Translation of Share Pledges Extension Agreement, dated April 9, 2019, among CEMEX, S.A.B. de C.V., CEMEX España, S.A., New Sunward Holding B.V., Wilmington Trust (London) Limited (as Security Agent) and the Lenders (as named therein). (k)
- 8.1 List of subsidiaries of CEMEX, S.A.B. de C.V.(k)
- 12.1 Certification of the Principal Executive Officer of CEMEX, S.A.B. de C.V. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.(k)
- 12.2 Certification of the Principal Financial Officer of CEMEX, S.A.B. de C.V. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.(k)
- 13.1 Certification of the Principal Executive and Financial Officers of CEMEX, S.A.B. de C.V. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.(k)

14.1 [Consent of KPMG Cárdenas Dosal, S.C. to the incorporation by reference into the effective registration statements of CEMEX, S.A.B. de C.V. under the Securities Act of their report with respect to the consolidated financial statements of CEMEX, S.A.B. de C.V., which appears in this annual report.\(k\)](#)

15.1 [Mine safety and health administration safety data.\(k\)](#)

101. INS XBRL Instance Document.(k)

101. SCH XBRL Taxonomy Extension Schema Document.(k)

101. CAL XBRL Taxonomy Extension Calculation Linkbase Document.(k)

101. LAB XBRL Taxonomy Extension Label Linkbase Document.(k)

101. PRE XBRL Taxonomy Extension Presentation Linkbase Document.(k)

101. DEF XBRL Taxonomy Extension Definition Document.(k)

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- (a) Incorporated by reference to the Registration Statement on Form F-4 of CEMEX, S.A.B. de C.V. (Registration No. 333-10682), filed with the SEC on August 10, 1999.
- (b) Incorporated by reference to the 2009 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on June 30, 2010.
- (c) Incorporated by reference to the 2012 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on April 23, 2013.
- (d) Incorporated by reference to the 2013 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on April 28, 2014.
- (e) Incorporated by reference to the Registration Statement on Form F-6 of CEMEX, S.A.B. de C.V. (Registration No. 333-174743), filed with the SEC on June 6, 2011.
- (f) Incorporated by reference to the 2014 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on April 27, 2015.
- (g) Incorporated by reference to the 2015 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on April 22, 2016.
- (h) Incorporated by reference to the 2016 annual report on Form 20-F of CEMEX, S.A.B. de C.V. filed with the SEC on April 28, 2017.
- (i) Incorporated by reference to the 2017 annual report on Form 20-F of CEMEX, S.A.B. de C. V. filed with the SEC on April 30, 2018.
- (j) Incorporated by reference to the 2018 annual report on Form 20-F of CEMEX, S.A.B. de C. V. filed with the SEC on April 25, 2019.
- (k) Filed herewith.
- (p) This was a paper filing, and it is not available on the SEC website.

In reviewing the agreements included as exhibits to this annual report, please remember they are included to provide you with information regarding their terms and are not intended to provide any other factual or disclosure information about us or the other parties to the agreements.

The agreements may contain representations and warranties by each of the parties to the applicable agreement. These representations and warranties have been made solely for the benefit of the other parties to the applicable agreement and:

- should not in all instances be treated as categorical statements of fact, but rather as a way of allocating the risk to one of the parties if those statements prove to be inaccurate;
- have been qualified by disclosures that were made to the other party in connection with the negotiation of the applicable agreement, which disclosures are not necessarily reflected in the agreement;
- may apply standards of materiality in a way that is different from what may be viewed as material to you or other investors; and
- were made only as of the date of the applicable agreement or such other date or dates as may be specified in the agreement and are subject to more recent developments.

Accordingly, these representations and warranties may not describe the actual state of affairs as of the date they were made or at any other time.

SIGNATURES

CEMEX, S.A.B. de C.V. hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

CEMEX, S.A.B. de C.V.

By: /s/ Fernando Ángel González Oliveri

Name: Fernando Ángel González Oliveri

Title: Chief Executive Officer

Date: April 29, 2020

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CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Income Statements
(Millions of U.S. dollars, except for earnings per share)

	Notes	Years ended December 31,		
		2019	2018*	2017*
Revenues	3	\$13,130	13,531	12,926
Cost of sales	2.16	(8,825)	(8,849)	(8,365)
Gross profit		4,305	4,682	4,561
Operating expenses	2.16, 5	(2,972)	(2,979)	(2,826)
Operating earnings before other expenses, net	2.1	1,333	1,703	1,735
Other expenses, net	6	(347)	(296)	(205)
Operating earnings		986	1,407	1,530
Financial expense	7.1, 16	(711)	(722)	(1,086)
Financial income and other items, net	7.2	(71)	(2)	184
Share of profit of equity accounted investees	13.1	49	34	33
Earnings before income tax		253	717	661
Income tax	19	(162)	(224)	(16)
Net income from continuing operations		91	493	645
Discontinued operations	4.2	88	77	222
CONSOLIDATED NET INCOME		179	570	867
Non-controlling interest net income		36	42	75
CONTROLLING INTEREST NET INCOME		\$ 143	528	792
Basic earnings per share	22	\$0.0031	0.0114	0.0174
Basic earnings per share from continuing operations	22	\$0.0012	0.0098	0.0125
Diluted earnings per share	22	\$0.0031	0.0114	0.0174
Diluted earnings per share from continuing operations	22	\$0.0012	0.0098	0.0125

The accompanying notes are part of these consolidated financial statements.

* The Company's comparative financial statements were re-presented, see note 2.1 for a description of main changes.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income (Loss)
(Millions of U.S. dollars)

	Notes	Years ended December 31,		
		2019	2018*	2017*
CONSOLIDATED NET INCOME		\$ 179	570	867
Items that will not be reclassified subsequently to the income statement				
Net actuarial gains (losses) from remeasurements of defined benefit pension plans	18	(210)	176	—
Effects from strategic equity investments	13.2	(8)	(3)	(10)
Income tax recognized directly in other comprehensive income	19	29	(31)	—
		(189)	142	(10)
Items that are or may be reclassified subsequently to the income statement				
Derivative financial instruments designated as cash flow hedges	16.4	(137)	(119)	15
Currency translation results of foreign subsidiaries	20.2	60	(91)	(14)
Income tax recognized directly in other comprehensive income	19	49	43	13
		(28)	(167)	14
Total items of other comprehensive income, net		(217)	(25)	4
TOTAL COMPREHENSIVE INCOME (LOSS)		(38)	545	871
Non-controlling interest comprehensive income (loss)		(69)	1	12
CONTROLLING INTEREST COMPREHENSIVE INCOME		\$ 31	544	859

The accompanying notes are part of these consolidated financial statements.

* The Company's comparative financial statements were re-presented, see note 2.1 for a description of main changes.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Financial Position
(Millions of U.S. dollars)

	Notes	December 31, 2019	2018*	January 1, 2018*
ASSETS				
CURRENT ASSETS				
Cash and cash equivalents	8	\$ 788	309	699
Trade accounts receivable	9	1,521	1,488	1,557
Other accounts receivable	10	325	312	252
Inventories	11	989	1,081	959
Assets held for sale	12.1	839	107	70
Other current assets	12.2	117	124	99
Total current assets		<u>4,579</u>	<u>3,421</u>	<u>3,636</u>
NON-CURRENT ASSETS				
Equity accounted investees	13.1	481	484	436
Other investments and non-current accounts receivable	13.2	236	268	293
Property, machinery and equipment, net and assets for the right-of-use, net	14	11,850	12,454	12,782
Goodwill and intangible assets, net	15	11,590	11,936	11,954
Deferred income tax assets	19.2	627	618	783
Total non-current assets		<u>24,784</u>	<u>25,760</u>	<u>26,248</u>
TOTAL ASSETS		<u>\$29,363</u>	<u>29,181</u>	<u>29,884</u>
LIABILITIES AND STOCKHOLDERS' EQUITY				
CURRENT LIABILITIES				
Short-term debt	16.1	\$ 62	45	864
Other financial obligations	16.2	1,381	855	1,176
Trade payables		2,526	2,537	2,363
Income tax payable		219	212	261
Other current liabilities	17	1,184	1,130	1,242
Liabilities directly related to assets held for sale	12.1	37	16	—
Total current liabilities		<u>5,409</u>	<u>4,795</u>	<u>5,906</u>
NON-CURRENT LIABILITIES				
Long-term debt	16.1	9,303	9,266	9,009
Other financial obligations	16.2	1,044	1,592	1,577
Employee benefits	18	1,138	967	1,204
Deferred income tax liabilities	19.2	720	748	795
Other non-current liabilities	17	925	760	795
Total non-current liabilities		<u>13,130</u>	<u>13,333</u>	<u>13,380</u>
TOTAL LIABILITIES		<u>18,539</u>	<u>18,128</u>	<u>19,286</u>
STOCKHOLDERS' EQUITY				
Controlling interest:				
Common stock and additional paid-in capital	20.1	10,424	10,331	10,297
Other equity reserves	20.2	(2,724)	(2,472)	(2,385)
Retained earnings	20.3	1,621	1,622	1,115
Total controlling interest		9,321	9,481	9,027
Non-controlling interest and perpetual debentures	20.4	1,503	1,572	1,571
TOTAL STOCKHOLDERS' EQUITY		<u>10,824</u>	<u>11,053</u>	<u>10,598</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY		<u>\$29,363</u>	<u>29,181</u>	<u>29,884</u>

The accompanying notes are part of these consolidated financial statements.

* The Company's comparative financial statements were re-presented, see note 2.1 for a description of main changes.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(Millions of U.S. dollars)

	Notes	Years ended December 31,		
		2019	2018*	2017*
OPERATING ACTIVITIES				
Consolidated net income		\$ 179	570	867
Discontinued operations		88	77	222
Net income from continuing operations		\$ 91	493	645
Non-cash items:				
Depreciation and amortization of assets	5	1,045	982	963
Impairment losses	6	64	62	151
Share of profit of equity accounted investees	13.1	(49)	(34)	(33)
Results on sale of subsidiaries, other disposal groups and others		(49)	(13)	(216)
Financial expense, financial income and other items, net		782	724	902
Income taxes	19	162	224	16
Changes in working capital, excluding income taxes		98	(55)	431
Net cash flow provided by operating activities from continuing operations before financial expense, coupons on perpetual debentures and income taxes		2,144	2,383	2,859
Interest and coupons on perpetual debentures paid	20.4	(694)	(741)	(899)
Income taxes paid		(168)	(207)	(246)
Net cash flow provided by operating activities from continuing operations		1,282	1,435	1,714
Net cash flow provided by operating activities from discontinued operations		71	132	131
Net cash flows provided by operating activities		1,353	1,567	1,845
INVESTING ACTIVITIES				
Property, machinery and equipment, net	14	(651)	(601)	(567)
Acquisition and disposal of subsidiaries and other disposal groups, net	4.1, 13.1	469	(26)	1,202
Intangible assets	15	(116)	(187)	(86)
Non-current assets and others, net		5	(1)	4
Net cash flows used in investing activities		(293)	(815)	553
FINANCING ACTIVITIES				
Dividends paid		(150)	—	—
Derivative financial instruments		(56)	20	16
Proceeds from (repayment) of debt, net	16.1	47	(420)	(2,056)
Other financial obligations, net	16.2	(233)	(578)	(190)
Share repurchase program	20.1	(50)	(75)	—
Securitization of trade receivables		(6)	32	25
Non-current liabilities, net		(96)	(142)	(185)
Net cash flows used in financing activities		(544)	(1,163)	(2,390)
Increase (decrease) in cash and cash equivalents from continuing operations		445	(543)	(123)
Increase in cash and cash equivalents from discontinued operations		71	132	131
Foreign currency translation effect on cash		(37)	21	130
Cash and cash equivalents at beginning of period		309	699	561
CASH AND CASH EQUIVALENTS AT END OF PERIOD	8	\$ 788	309	699
Changes in working capital, excluding income taxes:				
Trade receivables		\$ (8)	15	1
Other accounts receivable and other assets		33	(82)	47
Inventories		96	(148)	(19)
Trade payables		(41)	231	286
Other accounts payable and accrued expenses		18	(71)	116
Changes in working capital, excluding income taxes		\$ 98	(55)	431

The accompanying notes are part of these consolidated financial statements.

* The Company's comparative financial statements were re-presented, see note 2.1 for a description of main changes.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Statements of Changes in Stockholders' Equity
(Millions of U.S. dollars)

	Notes	Common stock	Additional paid-in capital	Other equity reserves	Retained earnings	Total controlling interest	Non-controlling interest	Total stockholders' equity
Balance as of December 31, 2016		\$ 318	9,038	(2,354)	933	7,935	1,559	9,494
Effects from adoption of IFRS 16	2.1	—	—	—	(104)	(104)	—	(104)
Balance as of January 1, 2017 *		318	9,038	(2,354)	829	7,831	1,559	9,390
Net income for the period		—	—	—	792	792	75	867
Other comprehensive income for the period	20.2	—	—	67	—	67	(63)	4
Total of other comprehensive income for the period		—	—	67	792	859	12	871
Capitalization of retained earnings		—	506	—	(506)	—	—	—
Effects of early conversion of convertible subordinated notes	16.2	—	393	(74)	—	319	—	319
Share-based compensation	21	—	42	1	—	43	—	43
Coupons paid on perpetual debentures		—	—	(25)	—	(25)	—	(25)
Balance as of December 31, 2017 *		318	9,979	(2,385)	1,115	9,027	1,571	10,598
Effects from adoption of IFRS 9	2.1	—	—	—	(21)	(21)	—	(21)
Balance as of January 1, 2018 *		318	9,979	(2,385)	1,094	9,006	1,571	10,577
Net income for the period		—	—	—	528	528	42	570
Other comprehensive income for the period	20.2	—	—	16	—	16	(41)	(25)
Total of other comprehensive income for the period		—	—	16	528	544	1	545
Own shares purchased under share repurchase program	20.1	—	—	(75)	—	(75)	—	(75)
Share-based compensation		—	34	1	—	35	—	35
Coupons paid on perpetual debentures		—	—	(29)	—	(29)	—	(29)
Balance as of December 31, 2018 *		318	10,013	(2,472)	1,622	9,481	1,572	11,053
Effects from adoption of IFRIC 23	2.1	—	—	—	6	6	—	6
Balance as of January 1, 2019		318	10,013	(2,472)	1,628	9,487	1,572	11,059
Net income for the period		—	—	—	143	143	36	179
Other comprehensive income for the period	20.2	—	—	(112)	—	(112)	(105)	(217)
Total of other comprehensive income for the period		—	—	(112)	143	31	(69)	(38)
Dividends		—	—	—	(150)	(150)	—	(150)
Effects of mandatorily convertible securities	16.2	—	151	(151)	—	—	—	—
Own shares purchased under share repurchase program		—	(75)	25	—	(50)	—	(50)
Share-based compensation		—	17	15	—	32	—	32
Coupons paid on perpetual debentures		—	—	(29)	—	(29)	—	(29)
Balance as of December 31, 2019		\$ 318	10,106	(2,724)	1,621	9,321	1,503	10,824

The accompanying notes are part of these consolidated financial statements.

* The Company's comparative financial statements were re-presented, see note 2.1 for a description of main changes.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
As of December 31, 2019, 2018 and 2017
(Millions of U.S. dollars)

1) DESCRIPTION OF BUSINESS

CEMEX, S.A.B. de C.V., founded in 1906, is a publicly traded variable stock corporation (*Sociedad Anónima Bursátil de Capital Variable*) organized under the laws of the United Mexican States, or Mexico, and is a holding company (parent) of entities whose main activities are oriented to the construction industry, through the production, marketing, sale and distribution of cement, ready-mix concrete, aggregates and other construction materials and services. In addition, CEMEX, S.A.B. de C.V. carries out substantially all businesses and operational activities in Mexico.

The shares of CEMEX, S.A.B. de C.V. are listed on the Mexican Stock Exchange (“MSE”) as Ordinary Participation Certificates (“CPOs”) under the symbol “CEMEXCPO”. Each CPO represents two series “A” shares and one series “B” share of common stock of CEMEX, S.A.B. de C.V. In addition, CEMEX, S.A.B. de C.V.’s shares are listed on the New York Stock Exchange (“NYSE”) as *American Depositary Shares* (“ADSs”) under the symbol “CX.” Each ADS represents ten CPOs.

The terms “CEMEX, S.A.B. de C.V.” and/or the “Parent Company” used in these accompanying notes to the financial statements refer to CEMEX, S.A.B. de C.V. without its consolidated subsidiaries. The terms the “Company” or “CEMEX” refer to CEMEX, S.A.B. de C.V. together with its consolidated subsidiaries. The issuance of these consolidated financial statements was authorized by the Board of Directors of CEMEX, S.A.B. de C.V. on February 5, 2020 considering the favorable recommendation of its Audit Committee. These financial statements were approved by the Annual General Ordinary Shareholders’ Meeting of the Parent Company on March 26, 2020.

2) SIGNIFICANT ACCOUNTING POLICIES

2.1) BASIS OF PRESENTATION AND DISCLOSURE

The consolidated financial statements as of December 31, 2019 and 2018 and for the years ended December 31, 2019, 2018 and 2017, were prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”).

Presentation currency and definition of terms

Beginning March 31, 2019 and for all subsequent periods, as permitted by International Accounting Standard 21, *The Effects of Changes in Foreign Exchange Rates* (“IAS 21”) under IFRS and with the authorization of CEMEX, S.A.B. de C.V.’s Board of Directors, considering the previous favorable opinion of its Audit Committee, CEMEX changed its presentation currency from the Mexican peso to the dollar of the United States of America (“U.S. dollar”) considering the following factors:

- For a consolidated group that comprises operations with a number of functional currencies, it is a decision of each entity to select its presentation currency under IAS 21, which may be the currency that management uses when controlling and monitoring the performance and financial position of the group. In the case of CEMEX, management uses the U.S. dollar for these purposes;
- The Company believes that presenting its consolidated financial information using the U.S. dollar will improve and facilitate the analysis to a broad range of users (rating agencies, analysts, investors and lenders, among others) of the Company’s consolidated financial statements; and
- The use of the U.S. dollar as presentation currency will also improve the comparison of CEMEX’s consolidated financial statements with those of other global entities.

The consolidated financial statements, including comparative amounts and the accompanying notes to the consolidated financial statements, are presented as if the new presentation currency had always been CEMEX’s presentation currency. All currency translation adjustments have been set to zero as of January 1, 2010, which was the date of CEMEX’s transition to IFRS. Translation adjustments and cumulative translation adjustments recognized in other comprehensive income have been presented as if CEMEX had used U.S. dollars as the presentation currency from that date. Comparative financial statements and their related notes were re-presented for the change in presentation currency by applying the methodology set out in IAS 21, using the closing exchange rates for the consolidated statements of financial position and the closing exchange rates of each month within the respective periods for consolidated income statements, consolidated statements of comprehensive income and consolidated statements of cash flows. Historic equity transactions were translated at the foreign exchange rate on the date of the transactions and were subsequently carried at historical value. The exchange rates used in translation were as described in note 2.4. In addition, resulting from this change in presentation currency and in compliance with IAS 1, *Presentation of Financial Statements* (“IAS 1”), CEMEX includes a third statement of financial position as of January 1, 2018, which incorporates the effects for the adoption of IFRS 16, *Leases* (“IFRS 16”) described below.

When reference is made to U.S. dollars or “\$” it means dollars of the United States of America (“United States”). The amounts in the financial statements and the accompanying notes are stated in millions, except when references are made to earnings per share and/or prices per share. When reference is made to “Ps” or “pesos”, it means Mexican pesos. When reference is made to “€” or “euros,” it means the currency in circulation in a significant number of European Union (“EU”) countries. When reference is made to “£” or “pounds”, it means British pounds sterling. When it is deemed relevant, certain amounts in foreign currency presented in the notes to the financial statements include between parentheses a convenience translation into dollars and/or into pesos, as applicable. Previously reported convenience translations of prior years are not restated unless the transaction is still outstanding, in which case those are restated using the closing exchange rates as of the reporting date. These translations should not be construed

as representations that the amounts in dollars or pesos, as applicable, represent those dollar or peso amounts or could be converted into dollar or peso at the rate indicated.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
As of December 31, 2019, 2018 and 2017
(Millions of U.S. dollars)

Presentation currency and definition of terms – continued

Amounts disclosed in the notes in connection with outstanding tax and/or legal proceedings (notes 19.4 and 24), which are originated in jurisdictions where currencies are different from the dollar, are presented in dollar equivalents as of the closing of the most recent year presented. Consequently, without any change in the original currency, such dollar amounts will fluctuate over time due to changes in exchange rates.

Discontinued operations (note 4.2)

Considering the disposal of entire reportable operating segments as well as the sale of significant businesses, CEMEX's income statements present in the single line item of "Discontinued operations," the results of: a) the assets held for sale in the United Kingdom for the years 2019, 2018 and 2017; b) the assets held for sale in the United States for the years 2019, 2018 and 2017; c) the white cement business held for sale in Spain for the years 2019, 2018 and 2017, d) the French assets sold for the period from January 1 to June 28, 2019 and for the years ended 2018 and 2017, e) the German assets sold for the period from January 1 to May 31, 2019 and for the years 2018 and 2017, f) the Baltic and Nordic businesses sold for the period from January 1 to March 29, 2019 and for the years 2018 and 2017, g) the operating segment in Brazil sold for the period from January 1 to September 27, 2018 and for the year 2017, h) CEMEX's Pacific Northwest Materials Business operations in the United States sold on June 30, 2017 for the six-months ended June 30, 2017; and i) CEMEX's Concrete Pipe Business operations in the United States sold on January 31, 2017 for the one-month ended January 31, 2017.

Income statements

CEMEX includes the line item titled "Operating earnings before other expenses, net" considering that it is a relevant operating measure for CEMEX's management. The line item "Other expenses, net" consists primarily of revenues and expenses not directly related to CEMEX's main activities, including impairment losses of long-lived assets, results on disposal of assets and restructuring costs, among others (note 6). Under IFRS, the inclusion of certain subtotals such as "Operating earnings before other expenses, net" and the display of the statement of operations vary significantly by industry and company according to specific needs.

Considering that it is an indicator of CEMEX's ability to internally fund capital expenditures and to measure its ability to service or incur debt under its financing agreements, for purposes of notes 4.4 and 16, CEMEX presents "Operating EBITDA" (operating earnings before other expenses, net, plus depreciation and amortization). This is not an indicator of CEMEX's financial performance, an alternative to cash flows, a measure of liquidity or comparable to other similarly titled measures of other companies. In addition, this indicator is used by CEMEX's management for decision-making purposes.

Statements of cash flows

The statements of cash flows exclude the following transactions that did not represent sources or uses of cash:

Financing activities:

- In 2019, 2018 and 2017, the increases in other financing obligations in connection with lease contracts negotiated during the year for \$220, \$229 and \$317, respectively (note 16.2);
- In 2019, 2018 and 2017, in connection with the CPOs issued as part of the executive share-based compensation programs (note 21), the total increases in equity for \$17 in 2019, \$34 in 2018 and \$42 in 2017;
- In 2017, in connection with the capitalization of retained earnings (note 20.1), the increases in common stock and additional paid-in capital against retained earnings for \$506;
- In 2017, in connection with the early conversion of part of the 2018 optional convertible subordinated notes (note 16.2), the decrease in debt for \$301, the net decrease in other equity reserves for \$74 and the increase in additional paid-in capital for \$393; and

Investing activities:

- In 2019, 2018 and 2017, in connection with the leases negotiated during the year, the increases in assets for the right-of-use related to lease contracts for \$222, \$287 and \$327, respectively (note 14.2).

Newly issued IFRS adopted in the reported periods

IFRS 16 (notes 2.6, 14 and 16.2)

Beginning January 1, 2019, IFRS 16 superseded all existing guidance related to lease accounting including IAS 17, *Leases* ("IAS 17") and introduced a single lessee accounting model that requires a lessee to recognize, for all leases, allowing exemptions in the case of leases with a term of less than 12 months or when the underlying asset is of low value, assets for the right-of-use of the underlying asset against a corresponding financial liability, representing the net present value of estimated lease payments under the contract. Under this model, the lessee recognizes in the income statement

depreciation of the asset for the right-of-use and interest on the lease liability. After concluding the inventory and measurement of its leases, CEMEX adopted IFRS 16 using the full retrospective approach by means of which it determined an opening cumulative effect in its statement of financial position as of January 1, 2017, that is at the beginning of the oldest comparative period.

The effects of IFRS 16 in the Company's opening balance sheet as of January 1, 2017 were as follows:

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Condensed Consolidated Statement of Financial Position	As of January 1, 2017 Original	IFRS 16 adoption adjustments	As of January 1, 2017 Re-presented
Total current assets	\$ 4,273	—	4,273
Property, machinery and equipment, net and assets for the right-of-use, net	11,107	851	11,958
Deferred income tax assets	751	23	774
Other items of non-current assets	12,813	—	12,813
Total non-current assets	24,671	874	25,545
TOTAL ASSETS	\$ 28,944	874	29,818
Short-term other financial obligations	\$ 562	163	725
Other items of current liabilities	3,571	—	3,571
Total current liabilities	4,133	163	4,296
Long-term other financial obligations	1,253	815	2,068
Deferred income tax liabilities	946	—	946
Other items of non-current liabilities	13,118	—	13,118
Total non-current liabilities	15,317	815	16,132
TOTAL LIABILITIES	19,450	978	20,428
Retained earnings 1	933	(104)	829
Other items of controlling interest	7,002	—	7,002
Total controlling interest	7,935	(104)	7,831
Non-controlling interest and perpetual debentures	1,559	—	1,559
TOTAL STOCKHOLDERS' EQUITY	9,494	(104)	9,390
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 28,944	874	29,818

- 1 The initial effect refers to a temporary difference between the straight-line amortization expense of the right-of-use asset against the amortization of the financial liability under the effective interest rate method since origination of the contracts. This difference will reverse over the remaining term of the contracts.

Moreover, resulting from the adoption of IFRS 16, CEMEX re-presented its previously reported statement of financial position as of December 31, 2018, as follows:

Condensed Consolidated Statement of Financial Position	As of December 31, 2018 Original	IFRS 16 adjustments	As of December 31, 2018 Re-presented
Total current assets	\$ 3,421	—	3,421
Property, machinery and equipment, net and assets for the right-of-use, net	11,423	1,031	12,454
Deferred income tax assets	592	26	618
Other items of non-current assets	12,688	—	12,688
Total non-current assets	24,703	1,057	25,760
TOTAL ASSETS	\$ 28,124	1,057	29,181
Short-term other financial obligations	\$ 648	207	855
Other items of current liabilities	3,940	—	3,940
Total current liabilities	4,588	207	4,795
Long-term other financial obligations	612	980	1,592
Deferred income tax liabilities	758	(10)	748
Other items of non-current liabilities	10,993	—	10,993
Total non-current liabilities	12,363	970	13,333
TOTAL LIABILITIES	16,951	1,177	18,128
Retained earnings	1,742	(120)	1,622
Other items of controlling interest	7,859	—	7,859
Total controlling interest	9,601	(120)	9,481
Non-controlling interest and perpetual debentures	1,572	—	1,572

TOTAL STOCKHOLDERS' EQUITY	<u>11,173</u>	<u>(120)</u>	<u>11,053</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	<u>\$ 28,124</u>	<u>1,057</u>	<u>29,181</u>

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In addition, resulting from the adoption of IFRS 16, CEMEX re-presented its previously reported income statements and statements of cash flows for the years ended December 31, 2018 and 2017, as follows:

Condensed Consolidated Income Statements	For the years ended December 31,					
	2018 Original	IFRS 16 effects	2018 Re-presented	2017 Original	IFRS 16 effects	2017 Re-presented
Revenues	\$13,531	—	13,531	12,926	—	12,926
Cost of sales	(8,883)	34	(8,849)	(8,397)	32	(8,365)
Operating expenses	(3,003)	24	(2,979)	(2,846)	20	(2,826)
Other expenses, net	(296)	—	(296)	(205)	—	(205)
Financial expense	(653)	(69)	(722)	(1,023)	(63)	(1,086)
Financial income and other items, net	35	(3)	32	219	(2)	217
Earnings before income tax	731	(14)	717	674	(13)	661
Income tax	(226)	2	(224)	(10)	(6)	(16)
Net income from continuing operations	505	(12)	493	664	(19)	645
Discontinued operations	77	—	77	222	—	222
CONSOLIDATED NET INCOME	582	(12)	570	886	(19)	867
Non-controlling interest net income	42	—	42	75	—	75
CONTROLLING INTEREST NET INCOME	\$ 540	(12)	528	811	(19)	792

Condensed Consolidated Statements of Cash Flows	For the years ended December 31,					
	2018 Original	IFRS 16 effects	2018 Re-presented	2017 Original	IFRS 16 effects	2017 Re-presented
OPERATING ACTIVITIES						
Net income from continuing operations	\$ 513	(20)	493	673	(28)	645
Non-cash items:						
Depreciation and amortization of assets	763	219	982	787	176	963
Other non-cash items	896	67	963	759	61	820
Changes in working capital, excluding income taxes	(55)	—	(55)	431	—	431
Operating cash flows from continuing operations before financial expense, coupons on perpetual debentures and income taxes	2,117	266	2,383	2,650	209	2,859
Interest on debt and coupons on perpetual debentures paid	(672)	(69)	(741)	(836)	(63)	(899)
Income taxes paid	(208)	1	(207)	(240)	(6)	(246)
Operating cash flows from continuing operations	1,237	198	1,435	1,574	140	1,714
Operating cash flows from discontinued operations	132	—	132	131	—	131
Net cash flows provided by operating activities	1,369	198	1,567	1,705	140	1,845
INVESTING ACTIVITIES						
Property, machinery and equipment and assets for the right-of-use, net	(601)	—	(601)	(567)	—	(567)
Other items of investing activities	(214)	—	(214)	1,120	—	1,120
Net cash flows provided by (used in) investing activities	(815)	—	(815)	553	—	553
FINANCING ACTIVITIES						
Other financial obligations, net	(388)	(190)	(578)	(78)	(112)	(190)
Other items of financing activities	(585)	—	(585)	(2,200)	—	(2,200)
Net cash flows used in financing activities	(973)	(190)	(1,163)	(2,278)	(112)	(2,390)
Decrease in cash and cash equivalents from continuing operations	(551)	8	(543)	(151)	28	(123)
Increase in cash and cash equivalents from discontinued operations	132	—	132	131	—	131
Foreign currency translation effect on cash	29	(8)	21	158	(28)	130
Cash and cash equivalents at beginning of period	699	—	699	561	—	561
CASH AND CASH EQUIVALENTS AT END OF PERIOD	\$ 309	—	309	699	—	699

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IFRS 9, *Financial Instruments: classification and measurement* (“IFRS 9”)

CEMEX adopted IFRS 9 beginning January 1, 2018, which sets forth the guidance relating to the classification and measurement of financial assets and financial liabilities, the accounting for expected credit losses of financial assets and commitments to extend credits, as well as the requirements for hedge accounting; and replaced IAS 39, *Financial instruments: recognition and measurement* (“IAS 39”). CEMEX applied IFRS 9 prospectively. The Company’s accounting policies were changed to comply with IFRS 9.

Among other aspects of presentation that had no impact on the valuation or the book value of the Company’s financial assets and liabilities and therefore on the retained earnings of CEMEX, regarding the new impairment model under IFRS 9 based on expected credit losses, impairment losses for the entire lifetime of financial assets, including trade accounts receivable, are recognized on initial recognition of the asset, and in each subsequent reporting period, even in the absence of a credit event or if a loss has not yet been incurred, considering for their measurement the history of credit losses and current conditions, as well as reasonable and supportable forecasts affecting collectability. CEMEX developed an expected credit loss model applicable to its trade accounts receivable that considers the historical performance and economic environment, as well as the credit risk and expected developments for each group of customers and applied the simplified approach upon adoption of IFRS 9. The effects of the adoption of IFRS 9 on January 1, 2018 related to the expected credit loss model represented an increase in the allowance of expected credit losses of \$29 recognized against retained earnings, net of a deferred income tax asset of \$8. The balances of such allowance of expected credit losses and deferred tax assets increased from the reported amounts as of December 31, 2017 of \$109 and \$754, respectively, to \$138 and \$762 as of January 1, 2018, respectively, after the adoption effects.

Other newly issued IFRS adopted in the reported periods

In addition, there were other new standards, interpretations and standard amendments adopted as of January 1, 2019 prospectively, that did not result in any material impact on CEMEX’s results or financial position, and which are explained as follows:

Standard	Main topic
IFRIC 23, <i>Uncertainty over income tax treatments</i> (note 19.4)	When an entity concludes that it is not probable that a particular tax treatment is accepted, the decision should be based on which method provides better predictions of the resolution of the uncertainty.
Amendments to IAS 28, <i>Long-term interests in associates and joint ventures</i>	The amendment clarifies that IFRS 9, including its impairment requirements, applies to long-term interests.
Amendments to IAS 12, <i>Income taxes</i>	Clarify that an entity should recognize the income tax consequences of dividends in profit or loss, other comprehensive income or equity according to where the entity originally recognized the transactions that generated the distributable profits.
Amendments to IAS 23, <i>Borrowing costs</i>	Clarify that if any specific borrowing remains outstanding after the related asset is ready for its intended use or sale, that borrowing becomes part of the funds that an entity borrows generally when calculating the capitalization rate on general borrowings.
Amendments to IFRS 9, <i>Prepayment features with negative compensation</i>	Clarify that financial assets with prepayment features with negative compensation do not automatically fail to meet the ‘solely payments of principal and interest’ condition.
IFRS 11, <i>Joint Arrangements – Previously held Interests in a joint operation</i>	Clarify that a party that participates in, but does not have joint control of, a joint operation does not remeasure its previously held interest in the joint operation when it obtains joint control.
Amendments to IFRS 3, <i>Business combinations</i>	Clarify that when an entity obtains control of a business that is a joint operation, the entity applies the requirements for a business combination achieved in stages, including remeasuring its previously held interest in the joint operation at fair value.
Amendments to IAS 19, <i>Employee benefits</i>	Clarify that the past service cost (or of the gain or loss on settlement) is calculated by measuring the defined benefit liability (asset) using updated assumptions and comparing benefits offered and plan assets before and after the plan amendment (or curtailment or settlement) but ignoring the effect of the asset ceiling (that may arise when the defined benefit plan is in a surplus position).

2.2) PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include those of CEMEX, S.A.B. de C.V. and those of the entities in which the Parent Company exercises control, including structured entities (special purpose entities), by means of which the Parent Company, directly or indirectly, is exposed, or has rights, to variable returns from its involvement with the investee, and has the ability to affect those returns through its power over the investee’s relevant activities. Balances and operations between related parties are eliminated in consolidation.

Investments are accounted for by the equity method when CEMEX has significant influence which is generally presumed with a minimum equity interest of 20%. The equity method reflects in the financial statements, the investee's original cost and CEMEX's share of the investee's equity and earnings after acquisition. The financial statements of joint ventures, which relate to those arrangements in which CEMEX and other third-party investors have joint control and have rights to the net assets of the arrangements, are recognized under the equity method. During the reported periods, CEMEX did not have joint operations, referring to those cases in which the parties that have joint control of the arrangement have rights over specific assets and obligations for specific liabilities relating to the arrangements. The equity method is discontinued when the carrying amount of the investment, including any long-term interest in the investee or joint venture, is reduced to zero, unless CEMEX has incurred or guaranteed additional obligations of the investee or joint venture.

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2.3) USE OF ESTIMATES AND CRITICAL ASSUMPTIONS

The preparation of financial statements in accordance with IFRS requires management to make estimates and assumptions that affect reported amounts of assets and liabilities, and the disclosure of contingent assets and liabilities at the date of the financial statements; as well as the reported amounts of revenues and expenses during the period. These assumptions are reviewed on an ongoing basis using available information. Actual results could differ from these estimates. The items subject to significant estimates and assumptions by management include impairment tests of long-lived assets, recognition of deferred income tax assets, as well as the measurement of financial instruments at fair value, and the assets and liabilities related to employee benefits. Significant judgment is required by management to appropriately assess the amounts of these concepts.

2.4) FOREIGN CURRENCY TRANSACTIONS AND TRANSLATION OF FOREIGN CURRENCY FINANCIAL STATEMENTS

Transactions denominated in foreign currencies are recorded in the functional currency at the exchange rates prevailing on the dates of their execution. Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the exchange rates prevailing at the statement of financial position date, and the resulting foreign exchange fluctuations are recognized in earnings, except for exchange fluctuations arising from: 1) foreign currency indebtedness associated with the acquisition of foreign entities; and 2) fluctuations associated with related parties' balances denominated in foreign currency, whose settlement is neither planned nor likely to occur in the foreseeable future and as a result, such balances are of a permanent investment nature. These fluctuations are recorded against "Other equity reserves", as part of the foreign currency translation adjustment (note 20.2) until the disposal of the foreign net investment, at which time, the accumulated amount is recognized through the statement of operations as part of the gain or loss on disposal.

The financial statements of foreign subsidiaries, as determined using their respective functional currency, are translated to U.S. dollars at the closing exchange rate for statement of financial position accounts and at the closing exchange rates of each month within the period for statements of operations accounts. The functional currency is that in which each consolidated entity primarily generates and expends cash. The corresponding translation effect is included within "Other equity reserves" and is presented in the statement of other comprehensive income for the period as part of the foreign currency translation adjustment (note 20.2) until the disposal of the net investment in the foreign subsidiary.

Considering its integrated activities, for purposes of functional currency, the Parent Company is considered to have two divisions, one related with its financial and holding company activities, in which the functional currency is the dollar for all assets, liabilities and transactions associated with these activities, and another division related with the Parent Company's operating activities in Mexico, in which the functional currency is the peso for all assets, liabilities and transactions associated with these activities.

The most significant closing exchange rates for statement of financial position accounts and the approximate average exchange rates (as determined using the closing exchange rates of each month within the period) for income statement accounts for the main functional currencies to the U.S. dollar as of December 31, 2019, 2018 and 2017, were as follows:

Currency	2019		2018		2017	
	Closing	Average	Closing	Average	Closing	Average
Mexican peso	18.92	19.35	19.65	19.2583	19.65	18.8825
Euro	0.8917	0.8941	0.8727	0.8483	0.8331	0.8817
British Pound Sterling	0.7550	0.7831	0.7843	0.7521	0.7405	0.7707
Colombian Peso	3,277	3,300	3,250	2,972	2,984	2,958
Egyptian Pound	16.0431	16.7382	17.9559	17.8223	17.7308	17.7785
Philippine Peso	50.6350	51.5650	52.58	52.6925	49.9300	50.3817

2.5) CASH AND CASH EQUIVALENTS (note 8)

The balance in this caption is comprised of available amounts of cash and cash equivalents, mainly represented by highly-liquid short-term investments, which are readily convertible into known amounts of cash, and which are not subject to significant risks of changes in their values, including overnight investments, which yield fixed returns and have maturities of less than three months from the investment date. These fixed-income investments are recorded at cost plus accrued interest. Accrued interest is included in the income statement as part of "Financial income and other items, net."

To the extent that any restriction will be lifted in less than three months from the statement of financial position reporting date, the amount of cash and cash equivalents in the statement of financial position includes restricted cash and investments, when applicable, comprised of deposits in margin accounts that guarantee certain of CEMEX's obligations, except when contracts contain provisions for net settlement, in which case, these restricted amounts of cash and cash equivalents are offset against the liabilities that CEMEX has with its counterparties. When the restriction period is greater than three months, any restricted balance of cash and investments is not considered cash equivalents and is included within short-term or long-term "Other accounts receivable," as appropriate.

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2.6) FINANCIAL INSTRUMENTS

Classification and measurement of financial instruments

The financial assets that meet both of the following conditions and are not designated as at fair value through profit or loss: a) are held within a business model whose objective is to hold assets to collect contractual cash flows; and b) its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, are classified as “Held to collect” and measured at amortized cost. Amortized cost represents the net present value (“NPV”) of the consideration receivable or payable as of the transaction date. This classification of financial assets comprises the following captions:

- Cash and cash equivalents (notes 2.5 and 8).
- Trade receivables, other current accounts receivable and other current assets (notes 9 and 10). Due to their short-term nature, CEMEX initially recognizes these assets at the original invoiced or transaction amount less expected credit losses, as explained below.
- Trade receivables sold under securitization programs, in which certain residual interest in the trade receivables sold in case of recovery failure and continued involvement in such assets is maintained, do not qualify for derecognition and are maintained in the statement of financial position (notes 9 and 16.2).
- Investments and non-current accounts receivable (note 13.2). Subsequent changes in effects from amortized cost are recognized in the income statement as part of “Financial income and other items, net”.

Certain strategic investments are measured at fair value through other comprehensive income within “Other equity reserves” (note 13.2). CEMEX does not maintain financial assets “Held to collect and sell” whose business model has the objective of collecting contractual cash flows and then selling those financial assets.

The financial assets that are not classified as “Held to collect” or that do not have strategic characteristics fall into the residual category of held at fair value through the income statement as part of “Financial income and other items, net” (note 13.2).

Debt instruments and other financial obligations are classified as “Loans” and measured at amortized cost (notes 16.1 and 16.2). Interest accrued on financial instruments is recognized within “Other accounts payable and accrued expenses” against financial expense. During the reported periods, CEMEX did not have financial liabilities voluntarily recognized at fair value or associated with fair value hedge strategies with derivative financial instruments.

Derivative financial instruments are recognized as assets or liabilities in the statement of financial position at their estimated fair values, and the changes in such fair values are recognized in the income statement within “Financial income and other items, net” for the period in which they occur, except in the case of hedging instruments as described below (note 16.4).

Impairment of financial assets

Impairment losses of financial assets, including trade accounts receivable, are recognized using the expected credit loss model (“ECL”) for the entire lifetime of such financial assets on initial recognition, and at each subsequent reporting period, even in the absence of a credit event or if a loss has not yet been incurred, considering for their measurement past events and current conditions, as well as reasonable and supportable forecasts affecting collectability. For purposes of the ECL model of trade accounts receivable, CEMEX segments its accounts receivable in a matrix by country, type of client or homogeneous credit risk and days past due and determines for each segment an average rate of ECL, considering actual credit loss experience over the last 24 months and analyses of future delinquency, that is applied to the balance of the accounts receivable. The average ECL rate increases in each segment of days past due until the rate is 100% for the segment of 365 days or more past due.

Costs incurred in the issuance of debt or borrowings

Direct costs incurred in debt issuances or borrowings, as well as debt refinancing or non-substantial modifications to debt agreements that did not represent an extinguishment of debt by considering that the holders and the relevant economic terms of the new instrument are not substantially different to the replaced instrument, adjust the carrying amount of the related debt and are amortized as interest expense as part of the effective interest rate of each instrument over its maturity. These costs include commissions and professional fees. Costs incurred in the extinguishment of debt, as well as debt refinancing or modifications to debt agreements, when the new instrument is substantially different from the old instrument according to a qualitative and quantitative analysis, are recognized in the income statement as incurred.

Leases (notes 2.8, 14 and 16.2)

As mentioned in note 2.1, CEMEX adopted IFRS 16 beginning January 1, 2019 using the full retrospective approach. At the inception of a lease contract, CEMEX assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period in exchange for consideration. CEMEX uses the definition of a lease in IFRS 16 to assess whether a contract conveys the right to control the use of an identified asset.

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Leases (notes 2.8, 14 and 16.2) – continued

Based on IFRS 16, leases are recognized as financial liabilities against assets for the right-of-use, measured at their commencement date as the net present value (“NPV”) of the future contractual fixed payments, using the interest rate implicit in the lease or, if that rate cannot be readily determined, CEMEX’s incremental borrowing rate. CEMEX determines its incremental borrowing rate by obtaining interest rates from its external financing sources and makes certain adjustments to reflect the term of the lease, the type of the asset leased and the economic environment in which the asset is leased.

CEMEX does not separate the non-lease component from the lease component included in the same contract. Lease payments included in the measurement of the lease liability comprise contractual rental fixed payments, less incentives, fixed payments of non-lease components and the value of a purchase option, to the extent that option is highly probable to be exercised or is considered a bargain purchase option. Interest incurred under the financial obligations related to lease contracts is recognized as part of the “Interest expense” line item in the income statement.

At commencement date or on modification of a contract that contains a lease component, CEMEX allocates the consideration in the contract to each lease component based on their relative stand-alone prices. CEMEX applies the recognition exception for lease terms of 12 months or less and contracts of low-value assets and recognizes the lease payment of these leases as rental expense in the income statement over the lease term. CEMEX defined the lease contracts related to office and computer equipment as low-value assets.

The lease liability is amortized using the effective interest method as payments are incurred and is remeasured when: a) there is a change in future lease payments arising from a change in an index or rate, b) if there is a change in the amount expected to be payable under a residual guarantee, c) if the Company changes its assessment of whether it will exercise a purchase, extension or termination option, or d) if there is a revised in-substance fixed lease payment. When the lease liability is remeasured, an adjustment is made to the carrying amount of the asset for the right-of-use or is recognized within “Financial income and other items, net” if such asset has been reduced to zero.

Financial instruments with components of both liabilities and equity (note 16.2)

Financial instruments that contain components of both liability and equity, such as notes convertible into a fixed number of the issuer’s shares and denominated in its same functional currency, are accounted for by each component being recognized separately in the statement of financial position according to the specific characteristics of each transaction. In the case of instruments mandatorily convertible into shares of the issuer, the liability component represents the NPV of interest payments on the principal amount using a market interest rate, without assuming early conversion, and is recognized within “Other financial obligations,” whereas the equity component represents the difference between the principal amount and the liability component, and is recognized within “Other equity reserves”, net of commissions. In the case of instruments that are optionally convertible into a fixed number of shares, the equity component represents the difference between the total proceeds received for issuing the financial instruments and the fair value of the financial liability component (note 2.14). When the transaction is denominated in a currency different than the functional currency of the issuer, the conversion option is accounted for as a derivative financial instrument at fair value in the income statement.

Hedging instruments (note 16.4)

A hedging relationship is established to the extent the entity considers, based on the analysis of the overall characteristics of the hedging and hedged items, that the hedge will be highly effective in the future and the hedge relationship at inception is aligned with the entity’s reported risk management strategy (note 16.5). The accounting categories of hedging instruments are: a) cash flow hedge, b) fair value hedge of an asset or forecasted transaction; and c) hedge of a net investment in a subsidiary.

In cash flow hedges, the effective portion of changes in fair value of derivative instruments are recognized in stockholders’ equity within other equity reserves and are reclassified to earnings as the interest expense of the related debt is accrued, in the case of interest rate swaps, or when the underlying products are consumed in the case of contracts on the price of raw materials and commodities. In hedges of the net investment in foreign subsidiaries, changes in fair value are recognized in stockholders’ equity as part of the foreign currency translation result within other equity reserves (note 2.4), whose reversal to earnings would take place upon disposal of the foreign investment. During the reported periods, CEMEX did not have derivatives designated as fair value hedges. Derivative instruments are negotiated with institutions with significant financial capacity; therefore, CEMEX believes the risk of non-performance of the obligations agreed to by such counterparties to be minimal.

Embedded derivative financial instruments

CEMEX reviews its contracts to identify the existence of embedded derivatives. Identified embedded derivatives are analyzed to determine if they need to be separated from the host contract and recognized in the statement of financial position as assets or liabilities, applying the same valuation rules used for other derivative instruments.

Put options granted for the purchase of non-controlling interests

Under IFRS 9, represent agreements by means of which a non-controlling interest has the right to sell, at a future date using a predefined price formula or at fair market value, its shares in a consolidated subsidiary. When the obligation should be settled in cash or through the delivery of another financial asset, an entity should recognize a liability for the NPV of the redemption amount as of the reporting date against the controlling interest within

stockholders' equity. A liability is not recognized under these agreements when the redemption amount is determined at fair market value at the exercise date and the entity has the election to settle using its own shares. As of December 31, 2019 and 2018, CEMEX did not have written put options.

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Fair value measurements (note 16.3)

Under IFRS, fair value represents an “Exit Value” which is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, considering the counterparty’s credit risk in the valuation. The concept of Exit Value is premised on the existence of a market and market participants for the specific asset or liability. When there are no market and/or market participants willing to make a market, IFRS establishes a fair value hierarchy that gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements).

The three levels of the fair value hierarchy are as follows:

- Level 1.- represent quoted prices (unadjusted) in active markets for identical assets or liabilities that CEMEX has the ability to access at the measurement date. A quoted price in an active market provides the most reliable evidence of fair value and is used without adjustment to measure fair value whenever available.
- Level 2.- are inputs other than quoted prices in active markets that are observable for the asset or liability, either directly or indirectly, and are used mainly to determine the fair value of securities, investments or loans that are not actively traded. Level 2 inputs included equity prices, certain interest rates and yield curves, implied volatility and credit spreads, among others, as well as inputs extrapolated from other observable inputs. In the absence of Level 1 inputs, CEMEX determined fair values by iteration of the applicable Level 2 inputs, the number of securities and/or the other relevant terms of the contract, as applicable.
- Level 3.- inputs are unobservable inputs for the asset or liability. CEMEX used unobservable inputs to determine fair values, to the extent there are no Level 1 or Level 2 inputs, in valuation models such as Black-Scholes, binomial, discounted cash flows or multiples of Operative Ebitda, including risk assumptions consistent with what market participants would use to arrive at fair value.

2.7) INVENTORIES (note 11)

Inventories are valued using the lower of cost or net realizable value. The cost of inventories is based on weighted average cost formula and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. CEMEX analyzes its inventory balances to determine if, as a result of internal events, such as physical damage, or external events, such as technological changes or market conditions, certain portions of such balances have become obsolete or impaired. When an impairment situation arises, the inventory balance is adjusted to its net realizable value. In such cases, these adjustments are recognized against the results of the period. Advances to suppliers of inventory are presented as part of other current assets.

2.8) PROPERTY, MACHINERY AND EQUIPMENT AND ASSETS FOR THE RIGHT-OF-USE (note 14)

Property, machinery and equipment are recognized at their acquisition or construction cost, as applicable, less accumulated depreciation and accumulated impairment losses. Depreciation of fixed assets is recognized as part of cost and operating expenses (note 5) and is calculated using the straight-line method over the estimated useful lives of the assets, except for mineral reserves, which are depleted using the units-of-production method. As of December 31, 2019, the average useful lives by category of fixed assets, which are reviewed at each reporting date and adjusted if appropriate, were as follows:

	<u>Years</u>
Administrative buildings	31
Industrial buildings	31
Machinery and equipment in plant	17
Ready-mix trucks and motor vehicles	8
Office equipment and other assets	<u>7</u>

Assets for the right-of-use related to leases are initially measured at cost, which comprises the initial amount of the lease liability adjusted by any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle, remove or restore the underlying asset, less any lease incentives received. The asset for the right-of-use is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to CEMEX by the end of the lease term or if the cost of the asset for the right-of-use reflects that CEMEX will exercise a purchase option. In that case the asset for the right-of-use would be depreciated over the useful life of the underlying asset, on the same basis as those of property, plant and equipment. In addition, assets for the right-of-use may be reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

CEMEX capitalizes, as part of the related cost of fixed assets, interest expense from existing debt during the construction or installation period of significant fixed assets, considering CEMEX’s corporate average interest rate and the average balance of investments in process for the period.

All waste removal costs or stripping costs incurred in the operative phase of a surface mine in order to access the mineral reserves are recognized as part of the carrying amount of the related quarries. The capitalized amounts are further amortized over the expected useful life of exposed ore body based on the units-of-production method.

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Property, machinery and equipment and assets for the right-of-use (note 14) – continued

Costs incurred in respect of operating fixed assets that result in future economic benefits, such as an extension in their useful lives, an increase in their production capacity or in safety, as well as those costs incurred to mitigate or prevent environmental damage, are capitalized as part of the carrying amount of the related assets. The capitalized costs are depreciated over the remaining useful lives of such fixed assets. Periodic maintenance of fixed assets is expensed as incurred. Advances to suppliers of fixed assets are presented as part of other long-term accounts receivable.

2.9) BUSINESS COMBINATIONS, GOODWILL AND OTHER INTANGIBLE ASSETS (notes 4.1 and 15)

Business combinations are recognized using the acquisition method, by allocating the consideration transferred to assume control of the entity to all assets acquired and liabilities assumed, based on their estimated fair values as of the acquisition date. Intangible assets acquired are identified and recognized at fair value. Any unallocated portion of the purchase price represents goodwill, which is not amortized and is subject to periodic impairment tests (note 2.10). Goodwill may be adjusted for any change to the preliminary assessment given to the assets acquired and/or liabilities assumed within the twelve-month period after purchase. Costs associated with the acquisition are expensed in the income statement as incurred.

CEMEX capitalizes intangible assets acquired, as well as costs incurred in the development of intangible assets, when probable future economic benefits associated are identified and there is evidence of control over such benefits. Intangible assets are recognized at their acquisition or development cost, as applicable. Indefinite life intangible assets are not amortized since the period in which the benefits associated with such intangibles will terminate cannot be accurately established. Definite life intangible assets are amortized on a straight-line basis as part of operating costs and expenses (note 5).

Startup costs are recognized in the income statement as they are incurred. Costs associated with research and development activities (“R&D activities”), performed by CEMEX to create products and services, as well as to develop processes, equipment and methods to optimize operational efficiency and reduce costs are recognized in the operating results as incurred. Direct costs incurred in the development stage of computer software for internal use are capitalized and amortized through the operating results over the useful life of the software, which on average is approximately 5 years.

Costs incurred in exploration activities such as payments for rights to explore, topographical and geological studies, as well as trenching, among other items incurred to assess the technical and commercial feasibility of extracting a mineral resource, which are not significant to CEMEX, are capitalized when probable future economic benefits associated with such activities are identified. When extraction begins, these costs are amortized during the useful life of the quarry based on the estimated tons of material to be extracted. When future economic benefits are not achieved, any capitalized costs are subject to impairment.

CEMEX’s extraction rights have a weighted-average useful lives of 83 years, depending on the sector and the expected life of the related reserves. As of December 31, 2019, except for extraction rights and/or as otherwise indicated, CEMEX’s intangible assets are amortized on a straight-line basis over their useful lives that range on average from 3 to 20 years.

2.10) IMPAIRMENT OF LONG-LIVED ASSETS (notes 14 and 15)

Property, machinery and equipment, assets for the right-of-use, intangible assets of definite life and other investments

These assets are tested for impairment upon the occurrence of internal or external indicators of impairment, such as changes in CEMEX’s operating business model or in technology that affect the asset, or expectations of lower operating results, to determine whether their carrying amounts may not be recovered. An impairment loss is recorded in the income statement for the period within “Other expenses, net,” for the excess of the asset’s carrying amount over its recoverable amount, corresponding to the higher of the fair value less costs to sell the asset, as generally determined by an external appraiser, and the asset’s value in use, the latter represented by the NPV of estimated cash flows related to the use and eventual disposal of the asset. The main assumptions utilized to develop estimates of NPV are a discount rate that reflects the risk of the cash flows associated with the assets and the estimations of generation of future income. Those assumptions are evaluated for reasonableness by comparing such discount rates to available market information and by comparing to third-party expectations of industry growth, such as governmental agencies or industry chambers.

When impairment indicators exist, for each intangible asset, CEMEX determines its projected revenue streams over the estimated useful life of the asset. To obtain discounted cash flows attributable to each intangible asset, such revenue is adjusted for operating expenses, changes in working capital and other expenditures, as applicable, and discounted to NPV using the risk adjusted discount rate of return. The most significant economic assumptions are: a) the useful life of the asset; b) the risk adjusted discount rate of return; c) royalty rates; and d) growth rates. Assumptions used for these cash flows are consistent with internal forecasts and industry practices. The fair values of these assets are significantly sensitive to changes in such relevant assumptions. Certain key assumptions are more subjective than others. In respect of trademarks, CEMEX considers that the most subjective key assumption is the royalty rate. In respect of extraction rights and customer relationships, the most subjective assumptions are revenue growth rates and estimated useful lives. CEMEX validates its assumptions through benchmarking with industry practices and the corroboration of third-party valuation advisors. Significant judgment by management is required to appropriately assess the fair values and values in use of the related assets, as well as to determine the appropriate valuation method and select the significant economic assumptions.

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Impairment of long-lived assets – Goodwill

Goodwill is tested for impairment when required upon the occurrence of internal or external indicators of impairment or at least once a year, during the last quarter of such year. CEMEX determines the recoverable amount of the group of cash-generating units (“CGUs”) to which goodwill balances were allocated, which consists of the higher of such group of CGUs fair value less cost to sell and its value in use, the latter represented by the NPV of estimated future cash flows to be generated by such CGUs to which goodwill was allocated, which are generally determined over periods of 5 years. However, in specific circumstances, when CEMEX considers that actual results for a CGU do not fairly reflect historical performance and most external economic variables provide confidence that a reasonably determinable improvement in the mid-term is expected in their operating results, management uses cash flow projections over a period of up to 10 years, to the point in which future expected average performance resembles the historical average performance, to the extent CEMEX has detailed, explicit and reliable financial forecasts. If the value in use of a group of CGUs to which goodwill has been allocated is lower than its corresponding carrying amount, CEMEX determines the fair value of such group of CGUs using methodologies generally accepted in the market to determine the value of entities, such as multiples of Operating EBITDA and by reference to other market transactions. An impairment loss is recognized within “Other expenses, net”, if the recoverable amount is lower than the net book value of the group of CGUs to which goodwill has been allocated. Impairment charges recognized on goodwill are not reversed in subsequent periods.

The reportable segments reported by CEMEX (note 4.4), represent CEMEX’s groups of CGUs to which goodwill has been allocated for purposes of testing goodwill for impairment, considering: a) that after the acquisition, goodwill was allocated at the level of the reportable segment; b) that the operating components that comprise the reported segment have similar economic characteristics; c) that the reported segments are used by CEMEX to organize and evaluate its activities in its internal information system; d) the homogeneous nature of the items produced and traded in each operative component, which are all used by the construction industry; e) the vertical integration in the value chain of the products comprising each component; f) the type of clients, which are substantially similar in all components; g) the operative integration among components; and h) that the compensation system of a specific country is based on the consolidated results of the geographic segment and not on the particular results of the components. In addition, the country level represents the lowest level within CEMEX at which goodwill is monitored for internal management purposes.

Impairment tests are significantly sensitive to the estimation of future prices of CEMEX’s products, the development of operating expenses, local and international economic trends in the construction industry, the long-term growth expectations in the different markets, as well as the discount rates and the growth rates in perpetuity applied. For purposes of estimating future prices, CEMEX uses, to the extent available, historical data; plus the expected increase or decrease according to information issued by trusted external sources, such as national construction or cement producer chambers and/or in governmental economic expectations. Operating expenses are normally measured as a constant proportion of revenues, following experience. However, such operating expenses are also reviewed considering external information sources in respect of inputs that behave according to international prices, such as oil and gas. CEMEX uses specific pre-tax discount rates for each group of CGUs to which goodwill is allocated, which are applied to discount pre-tax cash flows. The amounts of estimated undiscounted cash flows are significantly sensitive to the growth rate in perpetuity applied. The higher the growth rate in perpetuity applied, the higher the amount of undiscounted future cash flows by group of CGUs obtained. Moreover, the amounts of discounted estimated future cash flows are significantly sensitive to the weighted average cost of capital (discount rate) applied. The higher the discount rate applied, the lower the amount of discounted estimated future cash flows by group of CGUs obtained.

2.11) PROVISIONS

CEMEX recognizes provisions when it has a legal or constructive obligation resulting from past events, whose resolution would require cash outflows, or the delivery of other resources owned by the Company. As of December 31, 2019 and 2018, some significant proceedings that gave rise to a portion of the carrying amount of CEMEX’s other current and non-current liabilities and provisions are detailed in note 24.1.

Considering guidance under IFRS, CEMEX recognizes provisions for levies imposed by governments when the obligating event or the activity that triggers the payment of the levy has occurred, as defined in the legislation.

Restructuring

CEMEX recognizes provisions for restructuring when the restructuring detailed plans have been properly finalized and authorized by management and have been communicated to the third parties involved and/or affected by the restructuring prior to the statement of financial position’s date. These provisions may include costs not associated with CEMEX’s ongoing activities.

Asset retirement obligations (note 17)

Unavoidable obligations, legal or constructive, to restore operating sites upon retirement of long-lived assets at the end of their useful lives are measured at the NPV of estimated future cash flows to be incurred in the restoration process and are initially recognized against the related assets’ book value. The increase to the assets’ book value is depreciated during its remaining useful life. The increase in the liability related to adjustments to NPV by the passage of time is charged to the line item “Financial income and other items, net.” Adjustments to the liability for changes in estimations are recognized against fixed assets, and depreciation is modified prospectively. These obligations are related mainly to future costs of demolition, cleaning and reforestation, so that quarries, maritime terminals and other production sites are left in acceptable condition at the end of their operation.

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Costs related to remediation of the environment (notes 17 and 24)

Provisions associated with environmental damage represent the estimated future cost of remediation, which are recognized at their nominal value when the time schedule for the disbursement is not clear, or when the economic effect for the passage of time is not significant; otherwise, such provisions are recognized at their discounted values. Reimbursements from insurance companies are recognized as assets only when their recovery is practically certain. In that case, such reimbursement assets are not offset against the provision for remediation costs.

Contingencies and commitments (notes 23 and 24)

Obligations or losses related to contingencies are recognized as liabilities in the statement of financial position only when present obligations exist resulting from past events that are probable to result in an outflow of resources and the amount can be measured reliably. Otherwise, a qualitative disclosure is included in the notes to the financial statements. The effects of long-term commitments established with third parties, such as supply contracts with suppliers or customers, are recognized in the financial statements on an incurred or accrued basis, after taking into consideration the substance of the agreements. Relevant commitments are disclosed in the notes to the financial statements. The Company recognizes contingent revenues, income or assets only when their realization is virtually certain.

2.12) PENSIONS AND OTHER POST-EMPLOYMENT BENEFITS (note 18)

Defined contribution pension plans

The costs of defined contribution pension plans are recognized in the operating results as they are incurred. Liabilities arising from such plans are settled through cash transfers to the employees' retirement accounts, without generating future obligations.

Defined benefit pension plans and other post-employment benefits

The costs associated with employees' benefits for defined benefit pension plans and other post-employment benefits, generally comprised of health care benefits, life insurance and seniority premiums, granted by CEMEX and/or pursuant to applicable law, are recognized as services are rendered by the employees based on actuarial estimations of the benefits' present value considering the advice of external actuaries. For certain pension plans, CEMEX has created irrevocable trust funds to cover future benefit payments ("plan assets"). These plan assets are valued at their estimated fair value at the statement of financial position date. The actuarial assumptions and accounting policy consider: a) the use of nominal rates; b) a single rate is used for the determination of the expected return on plan assets and the discount of the benefits obligation to present value; c) a net interest is recognized on the net defined benefit liability (liability minus plan assets); and d) all actuarial gains and losses for the period, related to differences between the projected and real actuarial assumptions at the end of the period, as well as the difference between the expected and real return on plan assets, are recognized as part of "Other items of comprehensive income, net" within stockholders' equity.

The service cost, corresponding to the increase in the obligation for additional benefits earned by employees during the period, is recognized within operating costs and expenses. The net interest cost, resulting from the increase in obligations for changes in NPV and the change during the period in the estimated fair value of plan assets, is recognized within "Financial income and other items, net."

The effects from modifications to the pension plans that affect the cost of past services are recognized within operating costs and expenses over the period in which such modifications become effective to the employees or without delay if changes are effective immediately. Likewise, the effects from curtailments and/or settlements of obligations occurring during the period, associated with events that significantly reduce the cost of future services and/or reduce significantly the population subject to pension benefits, respectively, are recognized within operating costs and expenses.

Termination benefits

Termination benefits, not associated with a restructuring event, which mainly represent severance payments by law, are recognized in the operating results for the period in which they are incurred.

2.13) INCOME TAXES (note 19)

The effects reflected in the income statement for income taxes include the amounts incurred during the period and the amounts of deferred income taxes, determined according to the income tax law applicable to each subsidiary, reflecting uncertainty in income tax treatments, if any. Consolidated deferred income taxes represent the addition of the amounts determined in each subsidiary by applying the enacted statutory income tax rate to the total temporary differences resulting from comparing the book and taxable values of assets and liabilities, considering tax assets such as loss carryforwards and other recoverable taxes, to the extent that it is probable that future taxable profits will be available against which they can be utilized. The measurement of deferred income taxes at the reporting period reflects the tax consequences that follow the way in which CEMEX expects to recover or settle the carrying amount of its assets and liabilities. Deferred income taxes for the period represent the difference between balances of deferred income taxes at the beginning and the end of the period. Deferred income tax assets and liabilities relating to different tax jurisdictions are not offset. According to IFRS, all items charged or credited directly in stockholders' equity or as part of other comprehensive income or loss for the period are recognized net

of their current and deferred income tax effects. The effect of a change in enacted statutory tax rates is recognized in the period in which the change is officially enacted.

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Income taxes – continued

Deferred tax assets are reviewed at each reporting date and are reduced when it is not deemed probable that the related tax benefit will be realized, considering the aggregate amount of self-determined tax loss carryforwards that CEMEX believes will not be rejected by the tax authorities based on available evidence and the likelihood of recovering them prior to their expiration through an analysis of estimated future taxable income. If it is probable that the tax authorities would reject a self-determined deferred tax asset, CEMEX would decrease such asset. When it is considered that a deferred tax asset will not be recovered before its expiration, CEMEX would not recognize such deferred tax asset. Both situations would result in additional income tax expense for the period in which such determination is made. In order to determine whether it is probable that deferred tax assets will ultimately be recovered, CEMEX takes into consideration all available positive and negative evidence, including factors such as market conditions, industry analysis, expansion plans, projected taxable income, carryforward periods, current tax structure, potential changes or adjustments in tax structure, tax planning strategies, future reversals of existing temporary differences. Likewise, CEMEX analyzes its actual results versus the Company’s estimates, and adjusts, as necessary, its tax asset valuations. If actual results vary from CEMEX’s estimates, the deferred tax asset and/or valuations may be affected, and necessary adjustments will be made based on relevant information in CEMEX’s income statement for such period.

Based on IFRIC 23, *Uncertainty over income tax treatments* (“IFRIC 23”), the income tax effects from an uncertain tax position are recognized when it is probable that the position will be sustained based on its technical merits and assuming that the tax authorities will examine each position and have full knowledge of all relevant information. For each position is considered individually its probability, regardless of its relation to any other broader tax settlement. The probability threshold represents a positive assertion by management that CEMEX is entitled to the economic benefits of a tax position. If a tax position is considered not probable of being sustained, no benefits of the position are recognized. Interest and penalties related to unrecognized tax benefits are recorded as part of the income tax in the consolidated income statements.

The effective income tax rate is determined dividing the line item “Income Tax” by the line item “Earnings before income tax.” This effective tax rate is further reconciled to CEMEX’s statutory tax rate applicable in Mexico (note 19.3). A significant effect in CEMEX’s effective tax rate and consequently in the reconciliation of CEMEX’s effective tax rate, relates to the difference between the statutory income tax rate in Mexico of 30% against the applicable income tax rates of each country where CEMEX operates.

For the years ended December 31, 2019, 2018 and 2017, the statutory tax rates in CEMEX’s main operations were as follows:

Country	2019	2018	2017
Mexico	30.0%	30.0%	30.0%
United States	21.0%	21.0%	35.0%
United Kingdom	19.3%	19.3%	19.3%
France	34.4%	34.4%	34.4%
Germany	28.2%	28.2%	28.2%
Spain	25.0%	25.0%	25.0%
Philippines	30.0%	30.0%	30.0%
Colombia	33.0%	37.0%	40.0%
Egypt	22.5%	22.5%	22.5%
Others	7.8% - 35.0%	7.8% - 39.0%	7.8% - 39.0%

CEMEX’s current and deferred income tax amounts included in the income statement for the period are highly variable, and are subject, among other factors, to taxable income determined in each jurisdiction in which CEMEX operates. Such amounts of taxable income depend on factors such as sale volumes and prices, costs and expenses, exchange rate fluctuations and interest on debt, among others, as well as to the estimated tax assets at the end of the period due to the expected future generation of taxable gains in each jurisdiction.

2.14) STOCKHOLDERS’ EQUITY

Common stock and additional paid-in capital (note 20.1)

These items represent the value of stockholders’ contributions, and include increases related to the capitalization of retained earnings and the recognition of executive compensation programs in CEMEX, S.A.B. de C.V.’s CPOs as well as decreases associated with the restitution of retained earnings.

Other equity reserves (note 20.2)

Groups the cumulative effects of items and transactions that are, temporarily or permanently, recognized directly to stockholders’ equity, and includes the comprehensive income, which reflects certain changes in stockholders’ equity that do not result from investments by owners and distributions to owners. The most significant items within “Other equity reserves” during the reported periods are as follows:

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Items of “Other equity reserves” included within other comprehensive income:

- Currency translation effects from the translation of foreign subsidiaries, net of: a) exchange results from foreign currency debt directly related to the acquisition of foreign subsidiaries; and b) exchange results from foreign currency related parties’ balances that are of a non-current investment class (note 2.4);
- The effective portion of the valuation and liquidation effects from derivative financial instruments under cash flow hedging relationships, which are recorded temporarily in stockholders’ equity (note 2.6);
- Changes in fair value of other investments in strategic securities (note 2.6); and
- Current and deferred income taxes during the period arising from items whose effects are directly recognized in stockholders’ equity.

Items of “Other equity reserves” not included in comprehensive income:

- Effects related to controlling stockholders’ equity for changes or transactions affecting non-controlling interest stockholders in CEMEX’s consolidated subsidiaries;
- Effects attributable to controlling stockholders’ equity for financial instruments issued by consolidated subsidiaries that qualify for accounting purposes as equity instruments, such as the interest expense paid on perpetual debentures;
- The equity component of securities which are mandatorily or optionally convertible into shares of the Parent Company (notes 2.6 and 16.2). Upon conversion, this amount will be reclassified to common stock and additional paid-in capital; and
- The cancellation of the Parent Company’s shares held by consolidated entities.

Retained earnings (note 20.3)

Retained earnings represent the cumulative net results of prior years, net of: a) dividends declared; b) capitalization of retained earnings; c) restitution of retained earnings when applicable; and d) cumulative effects from adoption of new IFRS.

Non-controlling interest and perpetual debentures (note 20.4)

This caption includes the share of non-controlling stockholders in the results and equity of consolidated subsidiaries. This caption also includes the nominal amounts of financial instruments (perpetual notes) issued by consolidated entities that qualify as equity instruments considering that there is: a) no contractual obligation to deliver cash or another financial asset; b) no predefined maturity date; and c) a unilateral option to defer interest payments or preferred dividends for indeterminate periods.

2.15) REVENUE RECOGNITION (note 3)

Revenue is recognized at a point in time or over time in the amount of the price, before tax on sales, expected to be received by CEMEX’s subsidiaries for goods and services supplied as a result of their ordinary activities, as contractual performance obligations are fulfilled, and control of goods and services passes to the customer. Revenues are decreased by any trade discounts or volume rebates granted to customers. Transactions between related parties are eliminated in consolidation.

Variable consideration is recognized when it is highly probable that a significant reversal in the amount of cumulative revenue recognized for the contract will not occur and is measured using the expected value or the most likely amount method, whichever is expected to better predict the amount based on the terms and conditions of the contract.

Revenue and costs from trading activities, in which CEMEX acquires finished goods from a third party and subsequently sells the goods to another third-party, are recognized on a gross basis, considering that CEMEX assumes ownership risks on the goods purchased, not acting as agent or broker.

When revenue is earned over time as contractual performance obligations are satisfied, which is the case of construction contracts, CEMEX apply the stage of completion method to measure revenue, which represents: a) the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs; b) the surveys of work performed; or c) the physical proportion of the contract work completed; whichever better reflects the percentage of completion under the specific circumstances. Revenue related to such construction contracts is recognized in the period in which the work is performed by reference to the contract’s stage of completion at the end of the period, considering that the following have been defined: a) each party’s enforceable rights regarding the asset under construction; b) the consideration to be exchanged; c) the manner and terms of settlement; d) actual costs incurred and contract costs required to complete the asset are effectively controlled; and e) it is probable that the economic benefits associated with the contract will flow to the entity.

Progress payments and advances received from customers do not reflect the work performed and are recognized as short-term or long-term advanced payments, as appropriate.

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2.16) COST OF SALES AND OPERATING EXPENSES (note 5)

Cost of sales represents the production cost of inventories at the moment of sale. Such cost of sales includes depreciation, amortization and depletion of assets involved in production, expenses related to storage in production plants and freight expenses of raw material in plants and delivery expenses of CEMEX's ready-mix concrete business.

Administrative expenses represent the expenses associated with personnel, services and equipment, including depreciation and amortization, related to managerial activities and back office for the Company's management.

Sales expenses represent the expenses associated with personnel, services and equipment, including depreciation and amortization, involved specifically in sales activities.

Distribution and logistics expenses refer to expenses of storage at points of sales, including depreciation and amortization, as well as freight expenses of finished products between plants and points of sale and freight expenses between points of sales and the customers' facilities.

2.17) EXECUTIVE SHARE-BASED COMPENSATION (note 21)

Share-based payments to executives are defined as equity instruments when services received from employees are settled by delivering shares of the Parent Company and/or a subsidiary; or as liability instruments when CEMEX commits to make cash payments to the executives on the exercise date of the awards based on changes in the Parent Company and/or subsidiary's own stock (intrinsic value). The cost of equity instruments represents their estimated fair value at the date of grant and is recognized in the income statement during the period in which the exercise rights of the employees become vested. In respect of liability instruments, these instruments are valued at their estimated fair value at each reporting date, recognizing the changes in fair value through the operating results.

2.18) EMISSION RIGHTS

In certain countries where CEMEX operates, such as EU countries, mechanisms aimed at reducing carbon dioxide emissions ("CO₂") have been established by means of which, the relevant environmental authorities have granted certain number of emission rights ("certificates") free of cost to the different industries releasing CO₂, which must submit to such environmental authorities at the end of a compliance period, certificates for a volume equivalent to the tons of CO₂ released. Companies must obtain additional certificates to meet deficits between actual CO₂ emissions during the compliance period and certificates received, or they can dispose of any surplus of certificates in the market. In addition, the United Nations Framework Convention on Climate Change ("UNFCCC") Certified Emission Reductions ("CERs") to qualified CO₂ emission reduction projects. CERs may be used in specified proportions to settle emission rights obligations in the EU. CEMEX actively participates in the development of projects aimed to reduce CO₂ emissions. Some of these projects have been awarded with CERs.

CEMEX does not maintain emission rights, CERs and/or enter into forward transactions with trading purposes. CEMEX accounts for the effects associated with CO₂ emission reduction mechanisms as follows:

- Certificates received for free are not recognized in the statement of financial position. Revenues from the sale of any surplus of certificates are recognized by decreasing cost of sales. In forward sale transactions, revenues are recognized upon physical delivery of the emission certificates.
- Certificates and/or CERs acquired to hedge current CO₂ emissions are recognized as intangible assets at cost and are further amortized to cost of sales during the compliance period. In the case of forward purchases, assets are recognized upon physical reception of the certificates.
- CEMEX accrues a provision against cost of sales when the estimated annual emissions of CO₂ are expected to exceed the number of emission rights, net of any benefit obtained through swap transactions of emission rights for CERs.
- CERs received from the UNFCCC are recognized as intangible assets at their development cost, which are attributable mainly to legal expenses incurred in the process of obtaining such CERs.

During 2019, 2018 and 2017, there were no sales of emission rights to third parties. In addition, in certain countries, the environmental authorities impose levies per ton of CO₂ or other greenhouse gases released. Such expenses are recognized as part of cost of sales as incurred.

2.19) CONCENTRATION OF CREDIT

CEMEX sells its products primarily to distributors in the construction industry, with no specific geographic concentration within the countries in which CEMEX operates. As of and for the years ended December 31, 2019, 2018 and 2017, no single customer individually accounted for a significant amount of the reported amounts of sales or in the balances of trade receivables. In addition, there is no significant concentration of a specific supplier relating to the purchase of raw materials.

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2.20) NEWLY ISSUED IFRS NOT YET ADOPTED

There are several amendments or new IFRS issued but not yet effective which are under analysis and the Company's management expects to adopt in their specific effective dates considering preliminarily without any significant effect in the Company's financial position or operating results, and which are summarized as follows:

<u>Standard</u>	<u>Main topic</u>	<u>Effective date</u>
Amendments to IFRS 10, <i>Consolidated financial statements</i> and IAS 28	Clarify the recognition of gains or losses in the Parent's financial statements for the sale or contribution of assets between an investor and its associate or joint venture	Has yet to be set
Amendments to IFRS 3, <i>Business Combination</i>	The amended definition of a business requires an acquisition to include an input and a substantive process that together significantly contribute to the ability to create outputs. The definition of the term 'outputs' is amended to focus on goods and services provided to customers, generating investment income and other income, and it excludes returns in the form of lower costs and other economic benefits. The amendments will likely result in more acquisitions being accounted for as asset acquisitions.	January 1, 2020
Amendments to IAS 1, <i>Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors</i>	The amendments use a consistent definition of materiality throughout International Financial Reporting Standards and the Conceptual Framework for Financial Reporting, clarify when information is material and incorporate some of the guidance in IAS 1 about immaterial information.	January 1, 2020
Amendments to IFRS 9, IAS 39 and IFRS 7 – <i>Interest Rate Benchmark Reform</i>	The amendments respond to the effects of Interbank Offered Rates (IBOR) reform on financial reporting and provide temporary reliefs to continue hedge accounting during the period of uncertainty before the replacement of an existing interest rate benchmark with an alternative nearly risk-free interest rate.	January 1, 2020
IFRS 17, <i>Insurance contracts</i>	The new Standard establishes the principles for the recognition, measurement, presentation and disclosure of insurance contracts and supersedes IFRS 4, <i>Insurance contracts</i> . The Standard outlines a General Model, which is modified for insurance contracts with direct participation features, described as the Variable Fee Approach. The General Model is simplified if certain criteria are met by measuring the liability for remaining coverage using the Premium Allocation Approach.	January 1, 2021

3) REVENUE AND CONSTRUCTION CONTRACTS

CEMEX's revenues are mainly originated from the sale and distribution of cement, ready-mix concrete, aggregates and other construction materials and services. CEMEX grants credit for terms ranging from 15 to 90 days depending of the type and risk of each customer. For the years ended December 31, 2019, 2018 and 2017, revenue is as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
From the sale of goods associated to CEMEX's main activities ¹	\$12,605	13,018	12,387
From the sale of services ²	147	159	176
From the sale of other goods and services ³	378	354	363
	<u>\$13,130</u>	<u>13,531</u>	<u>12,926</u>

¹ Includes in each period revenue generated under construction contracts that are presented in the table below.

² Refers mainly to revenue generated by Neoris N.V. and its subsidiaries, involved in providing information technology solutions and services.

³ Refers mainly to revenues generated by subsidiaries not individually significant operating in different lines of business.

Information of revenues by reportable segment and line of business for the years 2019, 2018 and 2017 is presented in note 4.4

As of December 31, 2019 and 2018, amounts receivable for progress billings to and advances received from customers of construction contracts were not significant. For 2019, 2018 and 2017, revenues and costs related to construction contracts in progress were as follows:

	<u>Accrued ¹</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Revenue from construction contracts included in consolidated revenues ²	\$ 114	79	72	89
Costs incurred in construction contracts included in consolidated cost of sales ³	(115)	(79)	(68)	(102)
Construction contracts gross operating profit (loss)	\$ (1)	—	4	(13)

- 1** Revenues and costs recognized from inception of the contracts until December 31, 2019 in connection with those projects still in progress.
- 2** Revenues from construction contracts during 2019, 2018 and 2017, were mainly obtained in Mexico and Colombia.
- 3** Refers to actual costs incurred during the periods.

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Revenue and construction contracts – continued

Under IFRS 15, some commercial practices of CEMEX, in the form of certain promotions and/or discounts and rebates offered as part of the sale transaction, result in a portion of the transaction price should be allocated to such commercial incentives as separate performance obligations, recognized as contract liabilities with customers, and deferred to the income statement during the period in which the incentive is exercised by the customer or until it expires. For the years ended December 31, 2019, 2018 and 2017 changes in the balance of contract liabilities with customers are as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Opening balance of contract liabilities with customers	\$ 234	237	196
Increase during the period for new transactions	1,931	1,763	3,147
Decrease during the period for exercise or expiration of incentives	(1,946)	(1,762)	(3,126)
Currency translation effects	6	(4)	20
Closing balance of contract liabilities with customers	<u>\$ 225</u>	<u>234</u>	<u>237</u>

For the years 2019, 2018 and 2017, CEMEX did not identify any costs required to be capitalized as contract fulfilment assets and released over the contract life according to IFRS 15.

4) BUSINESS COMBINATIONS, DISCONTINUED OPERATIONS, SALE OF OTHER DISPOSAL GROUPS AND SELECTED FINANCIAL INFORMATION BY REPORTABLE SEGMENT AND LINE OF BUSINESS

4.1) BUSINESS COMBINATIONS

In August 2018, a subsidiary of CEMEX in the United Kingdom acquired all the shares of the ready-mix producer Procon Readymix Ltd (“Procon”) for an amount in pounds sterling equivalent to \$22, considering the pound sterling to dollar exchange rate as of August 31, 2018. Based on the valuation of the fair values of the assets acquired and liabilities assumed, the net assets of Procon amounted to \$10 and goodwill was determined in the amount of \$12.

On December 5, 2016, through its subsidiary Sierra Trading (“Sierra”), CEMEX presented an offer and take-over bid, which was amended on January 9, 2017 (the “Offer”), to all shareholders of Trinidad Cement Limited (“TCL”), a company publicly listed in Trinidad and Tobago Stock Exchange, to acquire up to 132,616,942 ordinary shares in TCL (equivalent to 30.2% of TCL’s common stock). TCL’s main operations are in Trinidad and Tobago, Jamaica and Barbados. TCL shares deposited in response to the Offer together with Sierra’s then existing 39.5% shareholding in TCL represented 69.8% of the outstanding shares of TCL. The total consideration paid by Sierra for the TCL shares under the Offer was \$86. CEMEX started consolidating TCL on February 1, 2017. CEMEX determined a fair value of TCL’s assets as of February 1, 2017 of \$531 and \$113 of debt assumed, among other effects. The purchase of TCL represented a step acquisition. As a result, the remeasurement of CEMEX’s previously held ownership interest in TCL of 39.5% generated a gain of \$32 in 2017 as part of “Financial income and other items, net.”

4.2) DISCONTINUED OPERATIONS

As of December 31, 2019, through an affiliate in the United Kingdom, CEMEX was in negotiations with Breedon Group plc for the sale of certain assets for an amount that could reach \$235, including \$31 of debt. The assets held for sale mainly consist of 49 ready-mix plants, 28 aggregate quarries, four depots, one cement terminal, 14 asphalt plants, four concrete products operations, as well as a portion of CEMEX’s paving solutions business in the United Kingdom. After completion of the potential divestiture, CEMEX will retain significant operations in the United Kingdom related with the production and sale of cement, ready-mix concrete, aggregates, asphalt and paving solutions. As of December 31, 2019, the assets and liabilities associated with this segment under negotiation in the United Kingdom are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$49, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2019, 2018 and 2017 the operations related to this segment are presented net of tax in the single line item “Discontinued operations.” See note 26 for subsequent events in connection with this transaction.

On November 26, 2019, CEMEX announced that its U.S. affiliate Kosmos Cement Company (“Kosmos”), a partnership with a subsidiary of Buzzi Unicem S.p.A. in which CEMEX holds a 75% interest, signed a definitive agreement for the sale of certain assets to Eagle Materials Inc. for \$665. The share of proceeds to CEMEX from this transaction will be \$499. The assets being divested consist of Kosmos’ cement plant in Louisville, Kentucky, as well as related assets which include seven distribution terminals and raw material reserves. The closing of this transaction is subject to the satisfaction of certain conditions, including approval from regulators. CEMEX currently expects to finalize this divestiture during the first half of 2020. As of December 31, 2019, the assets and liabilities associated with the sale of Kosmos in the United States are presented in the statement of financial position within the line items of “assets held for sale,” including a proportional allocation of goodwill of \$291, and “liabilities directly related to assets held for sale,” respectively. Moreover, for purposes of the income statements for the years ended December 31, 2019, 2018 and 2017 the operations related to this segment are presented net of income tax in the single line item “Discontinued operations.”

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Discontinued operations – continued

On June 28, 2019, after obtaining customary authorizations, CEMEX concluded with several counterparties the sale of its ready-mix and aggregates business in the central region of France for an aggregate price of €31.8 million (\$36.2). CEMEX’s operations of these disposed assets in France for the period from January 1 to June 28, 2019 and for the years ended December 31, 2018 and 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$17 net of a proportional allocation of goodwill related to this reporting segment of \$8.

On May 31, 2019, CEMEX concluded the sale of its aggregates and ready-mix assets in the North and North-West regions of Germany to GP Günter Papenburg AG for €87 (\$97). The assets divested in Germany consisted of four aggregates quarries and four ready-mix facilities in North Germany, and nine aggregates quarries and 14 ready-mix facilities in North-West Germany. CEMEX’s operations of these disposed assets for the period from January 1 to May 31, 2019 and for the years ended December 31, 2018 and 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$59.

On March 29, 2019, CEMEX closed the sale of assets in the Baltics and Nordics to the German building materials group Schwenk for a price in euro equivalent to \$387. The Baltic assets divested consisted of one cement production plant in Broceni with a production capacity of approximately 1.7 million tons, four aggregates quarries, two cement quarries, six ready-mix plants, one marine terminal and one land distribution terminal in Latvia. The assets divested also included CEMEX’s 37.8% interest in Akmenes Cementas AB owner of a cement production plant in Akmene in Lithuania with a production capacity of approximately 1.8 million tons, as well as the exports business to Estonia. The Nordic assets divested consisted of three import terminals in Finland, four import terminals in Norway and four import terminals in Sweden. CEMEX’s operations of these disposed assets for the period from January 1 to March 29, 2019 and for the years ended December 31, 2018 and 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations,” including in 2019 a gain on sale of \$66.

On March 29, 2019, CEMEX signed a binding agreement with Çimsa Çimento Sanayi Ve Ticaret A.Ş. to divest CEMEX’s white cement business, except for Mexico and the U.S., for a price of \$180, including its Buñol cement plant in Spain and its white cement customer list. The transaction is pending for its conclusion the authorization of the Spanish authorities. CEMEX currently expects it could close this divestment during the first half of 2020. CEMEX’s operations of these assets in Spain for the years ended December 31, 2019, 2018 and 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations.”

On September 27, 2018, CEMEX concluded the sale of its construction materials operations in Brazil (the “Brazilian Operations”) through the sale to Votorantim Cimentos N/NE S.A. of all the shares of CEMEX’s Brazilian subsidiary Cimento Vencemos Do Amazonas Ltda, consisting of a fluvial cement distribution terminal located in Manaus, Amazonas province, as well as the operation license. The sale price was \$31. CEMEX determined a net gain on sale of \$12. CEMEX’s Brazilian Operations for the period from January 1 to September 27, 2018 and the year ended December 31, 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations.”

On June 30, 2017, CEMEX concluded the sale of its Pacific Northwest Materials Business consisting of aggregate, asphalt and ready-mix concrete operations in Oregon and Washington to Cadman Materials, Inc., a subsidiary of HeidelbergCement Group, for \$150. CEMEX determined a net gain on disposal of these assets of \$22, which included a proportional allocation of goodwill of \$73. The operations of its Pacific Northwest Materials Business for the six-month period ending June 30, 2017 are reported in the income statements net of tax in the single line item “Discontinued operations.”

On January 31, 2017, CEMEX concluded the sale of its Concrete Reinforced Pipe Manufacturing Business (“Concrete Pipe Business”) in the United States to Quikrete Holdings, Inc. for \$500, plus a potential contingent consideration based on future performance of \$40. CEMEX determined a net gain on disposal of these assets for \$148 which included a proportional allocation of goodwill of \$260. The operations of the Concrete Pipe Business for the one-month period ending January 31, 2017 are reported in the income statements, net of income tax, in the single line item “Discontinued operations.”

As of December 31, 2019, the following table presents condensed combined information of the statement of financial position for the assets held for sale in the United Kingdom, the United States and Spain, as mentioned above:

	2019
Current assets	\$ 41
Non-current assets	751
Total assets of the disposal group	792
Current liabilities	8
Non-current liabilities	29
Total liabilities directly related to disposal group	37
Total net assets of disposal group	\$755

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Discontinued operations – continued

In addition, the following table presents condensed combined information of the income statements of CEMEX’s discontinued operations previously mentioned in: a) the United Kingdom for the years ended December 31, 2019, 2018 and 2017; b) the United States related to Kosmos for the years ended December 31, 2019, 2018 and 2017; c) France for the period from January 1 to June 28, 2019 and for the years ended December 31, 2018 and 2017; d) Germany for the period from January 1 to May 31, 2019 and for the years ended December 31, 2018 and 2017; e) the Baltics and Nordics for the period from January 1 to March 29, 2019 and for the years ended December 31, 2018 and 2017; f) Spain for the years ended December 31, 2019, 2018 and 2017; g) Brazil for the period from January 1 to September 27, 2018 and for the year ended December 31, 2017; h) the Pacific Northwest Materials Business in the United States for the six-months period ended June 30, 2017; and i) the Concrete Pipe Business operations in the United States for the one-month period ended January 31, 2017:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Revenues	\$ 572	868	873
Cost of sales and operating expenses	(534)	(792)	(811)
Other income (expenses), net	1	(1)	—
Financial expenses, net and others	—	(2)	(3)
Earnings before income tax	39	73	59
Income tax	(6)	(7)	(6)
Result of discontinued operations	33	66	53
Net disposal result	55	11	169
Net result of discontinued operations	\$ 88	77	222

4.3) OTHER DISPOSAL GROUPS

On September 12, 2016, CEMEX announced that one of its subsidiaries in the United States signed a definitive agreement for the sale of its Fairborn, Ohio cement plant and cement terminal in Columbus, Ohio to Eagle Materials Inc. (“Eagle Materials”) for \$400. Fairborn plant had an annual production capacity of approximately 730 thousand metric tons (unaudited). On February 10, 2017, CEMEX closed the divestment of these assets, and recognized in 2017 a gain on disposal for \$188 as part of “Other expenses, net” in the income statement, net of an allocation of goodwill associated to CEMEX’s reporting segment in the United States of \$211.

The operations of the net assets in Ohio sold to Eagle Materials did not represent discontinued operations and were consolidated by CEMEX line-by-line in the income statements for the year 2017 until their disposal. In arriving at this conclusion CEMEX evaluated the Company’s ongoing operations in the Mid-West of the United States.

For the year 2017, selected combined income statement information of the net assets sold to Eagle Materials until their disposal, was as follows:

	<u>2017</u>
Net sales	\$ 86
Operating costs and expenses	(71)
Operating earnings (losses) before other expenses, net	\$ 15

In addition, on April 28, 2017, CEMEX concluded the sale of its assets and activities related to the ready-mix concrete pumping business in Mexico to Cementos Españoles de Bombeo, S. de R.L., subsidiary in Mexico of Pumping Team S.L.L. (“Pumping Team”), specialist in the supply of ready-mix concrete pumping services based in Spain, for an aggregate price of \$88, which included the sale of fixed assets for \$16, plus administrative and client and market development services, as well as the lease of facilities in Mexico that CEMEX will supply to Pumping Team over a period of ten years with the possibility to extend for three additional years, for an aggregate initial amount of \$71, which are recognized each period as services are rendered. The agreement includes the possibility of a contingent revenue subject to results for up to \$30 linked to annual metrics beginning in the first year and up to the fifth year of the agreement. For the first two years of operation under the agreements from May 2018 to April 2019 and May 2017 to April 2018, CEMEX received an aggregate amount of \$2 related to this contingent revenue.

4.4) SELECTED FINANCIAL INFORMATION BY REPORTABLE SEGMENT AND LINE OF BUSINESS

Reportable segments represent the components of CEMEX that engage in business activities from which CEMEX may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity’s top management to make decisions about resources to be allocated to the segments and assess their performance, and for which discrete financial information is available. CEMEX operates geographically and by business on a regional basis. For the reported periods, the Company’s operations were organized in five geographical regions, each under the supervision of a regional president, as follows: 1) Mexico, 2) United States, 3) Europe, 4) South, Central America and the Caribbean (“SCA&C”), and 5) Asia, Middle East and Africa (“AMEA”). The accounting policies applied to determine the financial information by reportable segment are consistent with those described in note 2.

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Selected financial information by reportable segment and line of business – continued

Considering similar regional and economic characteristics and/or materiality, certain countries have been aggregated and presented as single line items as follows: a) “Rest of Europe” refers mainly to CEMEX’s operations and activities in Poland, the Czech Republic and Croatia; b) “Rest of SCA&C” refers mainly to CEMEX’s operations and activities in Costa Rica, Puerto Rico, Nicaragua, Jamaica, the Caribbean, Guatemala and El Salvador, excluding the acquired operations of TCL; c) “Caribbean TCL” refers to TCL’s operations mainly in Trinidad and Tobago, Jamaica, Guyana and Barbados; and d) “Rest of AMEA” refers to CEMEX’s operations and activities in Egypt and the United Arab Emirates. The segment “Others” refers to: 1) cement trade maritime operations, 2) Neoris N.V., CEMEX’s subsidiary involved in the business of information technology solutions, 3) the Parent Company, other corporate entities and finance subsidiaries, and 4) other minor subsidiaries with different lines of business.

Selected information of the consolidated income statements by reportable segment for the years 2019, 2018 and 2017, excluding the share of profits of equity accounted investees by reportable segment that is included in the note 13.1, was as follows:

	Revenues (including intragroup transactions)	Less: Intragroup transactions	Revenues	Operating EBITDA	Less: Depreciation and amortization	Operating earnings before other expenses, net	Other expenses, net	Financial expense	Other financing items, net
2019									
Mexico	\$ 2,897	(105)	2,792	969	159	810	(48)	(36)	(1)
United States	3,780	—	3,780	629	392	237	(22)	(64)	(13)
Europe									
United Kingdom	749	—	749	119	69	50	(2)	(11)	(17)
France	869	—	869	94	48	46	(4)	(11)	—
Germany	439	(25)	414	65	28	37	3	(3)	(4)
Spain	319	(25)	294	16	34	(18)	(8)	(2)	2
Rest of Europe	672	(14)	658	122	49	73	(1)	(5)	(4)
SCA&C									
Colombia ¹	504	—	504	90	29	61	(21)	(4)	(3)
Panama ¹	181	(2)	179	48	17	31	(9)	(1)	—
Caribbean TCL ²	248	(8)	240	56	23	33	(2)	(6)	(4)
Dominican Republic	245	(17)	228	84	9	75	(1)	—	—
Rest of SCA&C ¹	511	(17)	494	107	20	87	(60)	(3)	(6)
AMEA									
Philippines ³	458	—	458	117	38	79	1	6	4
Israel	660	—	660	89	23	66	—	(2)	1
Rest of AMEA	286	—	286	10	22	(12)	(6)	(2)	30
Others	1,104	(579)	525	(237)	85	(322)	(167)	(567)	(56)
Continuing operations	13,922	(792)	13,130	2,378	1,045	1,333	(347)	(711)	(71)
Discontinued operations	572	—	572	89	51	38	1	—	—
Total	\$ 14,494	(792)	13,702	2,467	1,096	1,371	(346)	(711)	(71)

	Revenues (including intragroup transactions)	Less: Intragroup transactions	Revenues	Operating EBITDA	Less: Depreciation and amortization	Operating earnings before other expenses, net	Other expenses, net	Financial expense	Other financing items, net
2018									
Mexico	\$ 3,302	(91)	3,211	1,217	148	1,069	(33)	(32)	(3)
United States	3,614	—	3,614	686	369	317	(18)	(53)	(11)
Europe									
United Kingdom	773	—	773	117	67	50	(7)	(12)	(22)
France	895	—	895	91	50	41	(47)	(13)	—
Germany	429	(75)	354	37	28	9	(8)	(3)	(4)
Spain	334	(47)	287	13	33	(20)	(16)	(3)	3
Rest of Europe	733	(51)	682	113	50	63	(3)	(4)	(2)
SCA&C									
Colombia ¹	524	—	524	97	29	68	6	(7)	(22)
Panama ¹	222	—	222	66	17	49	(3)	(1)	—
Caribbean TCL ²	254	(5)	249	58	19	39	(15)	(3)	(2)
Dominican Republic	218	(16)	202	61	10	51	(1)	(1)	2
Rest of SCA&C ¹	590	(20)	570	133	21	112	(7)	(3)	14
AMEA									
Philippines ³	448	—	448	93	36	57	(3)	(2)	(4)
Israel	630	—	630	87	21	66	—	(3)	(1)
Rest of AMEA	357	—	357	44	22	22	(9)	(2)	(3)

Others	<u>1,247</u>	<u>(734)</u>	<u>513</u>	<u>(228)</u>	<u>62</u>	<u>(290)</u>	<u>(132)</u>	<u>(580)</u>	<u>53</u>
Continuing operations	14,570	(1,039)	13,531	2,685	982	1,703	(296)	(722)	(2)
Discontinued operations	868	—	868	147	71	76	(1)	(2)	—
Total	<u>\$ 15,438</u>	<u>(1,039)</u>	<u>14,399</u>	<u>2,832</u>	<u>1,053</u>	<u>1,779</u>	<u>(297)</u>	<u>(724)</u>	<u>(2)</u>

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	Revenues (including intragroup transactions)	Less: Intragroup transactions	Revenues	Operating EBITDA	Less: Depreciation and amortization	Operating earnings before other expenses, net	Other expenses, net	Financial expense	Other financing items, net
2017									
Mexico	\$ 3,104	(58)	3,046	1,188	147	1,041	(61)	(28)	(28)
United States	3,320	—	3,320	603	379	224	(39)	(59)	(9)
Europe									
United Kingdom	841	—	841	153	66	87	23	(13)	(21)
France	805	—	805	68	45	23	(7)	(12)	1
Germany	412	(71)	341	40	26	14	(1)	(3)	(3)
Spain	306	(52)	254	14	33	(19)	(38)	(3)	1
Rest of Europe	616	(19)	597	63	52	11	(14)	(7)	4
SCA&C									
Colombia ¹	566	—	566	113	27	86	(49)	(7)	(2)
Panama ¹	266	—	266	108	19	89	(2)	(1)	—
Caribbean TCL ²	232	(3)	229	57	32	25	(10)	(12)	(2)
Dominican Republic	207	(18)	189	57	10	47	(1)	(1)	—
Rest of SCA&C ¹	605	(33)	572	144	21	123	(5)	(4)	—
AMEA									
Philippines ³	440	—	440	82	35	47	(5)	(3)	(1)
Israel	603	—	603	84	20	64	(1)	(2)	1
Rest of AMEA	318	—	318	53	21	32	(11)	(4)	26
Others	1,090	(551)	539	(129)	30	(159)	16	(927)	217
Continuing operations	13,731	(805)	12,926	2,698	963	1,735	(205)	(1,086)	184
Discontinued operations	873	—	873	125	63	62	—	(3)	—
Total	\$ 14,604	(805)	13,799	2,823	1,026	1,797	(205)	(1,089)	184

- 1 CEMEX Latam Holdings, S.A. (“CLH”), a company incorporated in Spain, trades its ordinary shares on the Colombian Stock Exchange. CLH is the indirect holding company of CEMEX’s operations in Colombia, Panama, Costa Rica, Guatemala, Nicaragua and El Salvador. At year end 2019 and 2018, there is a non-controlling interest in CLH of 26.83% and 26.78%, respectively, of its ordinary shares, excluding shares held in CLH’s treasury (note 20.4).
- 2 As mentioned in note 4.1, in February 2017, CEMEX’s acquired a controlling interest in TCL, whose shares trade on the Trinidad and Tobago Stock Exchange. As of December 31, 2019 and 2018, there is a non-controlling interest in TCL of 30.17% of its ordinary shares in both years (note 20.4).
- 3 CEMEX’s operations in the Philippines are mainly conducted through CEMEX Holdings Philippines, Inc. (“CHP”), a Philippine company whose shares trade on the Philippines Stock Exchange. As of December 31, 2019 and 2018, there is a non-controlling interest in CHP of 33.22% and 45.0% of its ordinary shares (note 20.4).

Debt by reportable segment is included in note 16.1. As of December 31, 2019 and 2018, selected statement of financial position information by reportable segment was as follows:

	Equity accounted investees	Other segment assets	Total assets	Total liabilities	Net assets by segment	Additions to fixed assets ¹
2019						
Mexico	\$ —	3,910	3,910	1,443	2,467	199
United States	143	13,755	13,898	2,440	11,458	398
Europe						
United Kingdom	6	1,556	1,562	1,225	337	67
France	50	928	978	460	518	38
Germany	4	397	401	353	48	25
Spain	—	1,190	1,190	185	1,005	34
Rest of Europe	11	745	756	304	452	52
SCA&C						
Colombia	—	1,187	1,187	428	759	25
Panama	—	337	337	105	232	10
Caribbean TCL	—	542	542	236	306	21
Dominican Republic	—	193	193	66	127	8
Rest of SCA&C	—	381	381	164	217	18
AMEA						
Philippines	—	689	689	141	548	84
Israel	—	611	611	429	182	33
Rest of AMEA	—	423	423	131	292	13
Others	267	1,199	1,466	10,392	(8,926)	8
Total	481	28,043	28,524	18,502	10,022	1,033

Assets held for sale and related liabilities (note 12.1)	—	839	839	37	802	—
Total consolidated	<u>\$ 481</u>	<u>28,882</u>	<u>29,363</u>	<u>18,539</u>	<u>10,824</u>	<u>1,033</u>

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Selected information of the statements of financial position by reportable segment – continued

2018	Equity accounted investees	Other segment assets	Total assets	Total liabilities	Net assets by segment	Additions to fixed assets¹
Mexico	\$ —	3,630	3,630	1,442	2,188	168
United States	126	14,080	14,206	2,277	11,929	405
Europe						
United Kingdom	6	1,779	1,785	1,107	678	61
France	47	938	985	512	473	44
Germany	4	460	464	377	87	27
Spain	—	1,301	1,301	171	1,130	27
Rest of Europe	8	1,110	1,118	359	759	54
SCA&C						
Colombia	—	1,249	1,249	444	805	22
Panama	—	368	368	65	303	12
Caribbean TCL	—	574	574	215	359	29
Dominican Republic	—	206	206	64	142	8
Rest of SCA&C	—	457	457	176	281	14
AMEA						
Philippines	—	644	644	184	460	36
Israel	—	507	507	367	140	27
Rest of AMEA	—	438	438	145	293	15
Others	293	849	1,142	10,207	(9,065)	15
Total	484	28,590	29,074	18,112	10,962	964
Assets held for sale and related liabilities (note 12.1)	—	107	107	16	91	—
Total consolidated	\$ 484	28,697	29,181	18,128	11,053	964

¹ In 2019 and 2018, the column “Additions to fixed assets” includes capital expenditures, which comprises acquisitions of property, machinery and equipment as well as additions of assets for the right-of-use, for combined amounts of \$1,033 and \$964, respectively (note 14).

Revenues by line of business and reportable segment for the years ended December 31, 2019, 2018 and 2017 were as follows:

2019	Cement	Concrete	Aggregates	Others	Eliminations	Revenues
Mexico	\$2,009	798	196	445	(656)	2,792
United States	1,608	2,189	917	332	(1,266)	3,780
Europe						
United Kingdom	227	310	290	246	(324)	749
France	—	720	355	4	(210)	869
Germany	192	184	62	43	(67)	414
Spain	228	86	23	18	(61)	294
Rest of Europe	396	284	88	23	(133)	658
SCA&C						
Colombia	363	176	53	51	(139)	504
Panama	141	49	15	12	(38)	179
Caribbean TCL	241	9	5	9	(24)	240
Dominican Republic	194	27	8	25	(26)	228
Rest of SCA&C	448	48	11	18	(31)	494
AMEA						
Philippines	457	—	—	2	(1)	458
Israel	—	554	166	78	(138)	660
Rest of AMEA	213	94	1	5	(27)	286
Others	—	—	—	1,107	(582)	525
Continuing operations	6,717	5,528	2,190	2,418	(3,723)	13,130
Discontinued operations	229	110	154	85	(6)	572
Total	\$6,946	5,638	2,344	2,503	(3,729)	13,702

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2018	Cement	Concrete	Aggregates	Others	Eliminations	Revenues
Mexico	\$2,302	898	210	642	(841)	3,211
United States	1,584	2,088	850	393	(1,301)	3,614
Europe						
United Kingdom	237	325	300	281	(370)	773
France	—	735	353	9	(202)	895
Germany	186	197	56	136	(221)	354
Spain	250	70	19	17	(69)	287
Rest of Europe	399	298	93	193	(301)	682
SCA&C						
Colombia	353	189	55	92	(165)	524
Panama	171	71	23	14	(57)	222
Caribbean TCL	245	10	5	13	(24)	249
Dominican Republic	178	27	9	24	(36)	202
Rest of SCA&C	510	63	14	24	(41)	570
AMEA						
Philippines	444	—	3	2	(1)	448
Israel	—	521	159	110	(160)	630
Rest of AMEA	257	118	1	12	(31)	357
Others	—	—	—	1,285	(772)	513
Continuing operations	<u>7,116</u>	<u>5,610</u>	<u>2,150</u>	<u>3,247</u>	<u>(4,592)</u>	<u>13,531</u>
Discontinued operations	<u>420</u>	<u>219</u>	<u>236</u>	<u>144</u>	<u>(151)</u>	<u>868</u>
Total	<u>\$7,536</u>	<u>5,829</u>	<u>2,386</u>	<u>3,391</u>	<u>(4,743)</u>	<u>14,399</u>
2017	Cement	Concrete	Aggregates	Others	Eliminations	Revenues
Mexico	\$2,241	780	182	593	(750)	3,046
United States	1,353	1,832	785	384	(1,034)	3,320
Europe						
United Kingdom	189	290	301	309	(248)	841
France	—	669	319	10	(193)	805
Germany	192	192	88	96	(227)	341
Spain	292	50	14	36	(138)	254
Rest of Europe	358	267	84	36	(148)	597
SCA&C						
Colombia	373	213	65	104	(189)	566
Panama	206	91	24	10	(65)	266
Caribbean TCL	220	11	7	13	(22)	229
Dominican Republic	169	30	10	22	(42)	189
Rest of SCA&C	510	70	14	15	(37)	572
AMEA						
Philippines	430	4	8	3	(5)	440
Israel	—	498	152	114	(161)	603
Rest of AMEA	227	114	1	9	(33)	318
Others	—	—	—	1,090	(551)	539
Continuing operations	<u>6,760</u>	<u>5,111</u>	<u>2,054</u>	<u>2,844</u>	<u>(3,843)</u>	<u>12,926</u>
Discontinued operations	<u>439</u>	<u>296</u>	<u>168</u>	<u>160</u>	<u>(190)</u>	<u>873</u>
Total	<u>\$7,199</u>	<u>5,407</u>	<u>2,222</u>	<u>3,004</u>	<u>(4,033)</u>	<u>13,799</u>

5) OPERATING EXPENSES, DEPRECIATION AND AMORTIZATION

Consolidated operating expenses during 2019, 2018 and 2017 by function are as follows:

	2019	2018	2017
Administrative expenses 1	\$1,112	1,130	1,091
Selling expenses	371	312	323
Distribution and logistics expenses	1,489	1,537	1,412
	<u>\$2,972</u>	<u>2,979</u>	<u>2,826</u>

¹ All significant R&D activities are executed by several internal areas as part of their daily activities. In 2019, 2018 and 2017, total combined expenses of these departments recognized within administrative expenses were \$38, \$39 and \$38, respectively.

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Operating expenses, depreciation and amortization – continued

Depreciation and amortization recognized during 2019, 2018 and 2017 are detailed as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Included in cost of sales	\$ 865	853	841
Included in administrative, selling and distribution and logistics expenses	180	129	122
	<u>\$1,045</u>	<u>982</u>	<u>963</u>

6) OTHER EXPENSES, NET

The detail of the line item “Other expenses, net” in 2019, 2018 and 2017 was as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Results from the sale of assets and others, net ¹	\$(230)	(149)	(2)
Restructuring costs ²	(48)	(72)	(45)
Impairment losses ³	(64)	(62)	(151)
Remeasurement of pension liabilities ⁴	—	(8)	—
Charitable contributions	(5)	(5)	(7)
	<u>\$(347)</u>	<u>(296)</u>	<u>(205)</u>

¹ In 2019 and 2018, includes \$55 and \$56, respectively, in connection with property damages and natural disasters. In 2017, includes an expense of \$25 related to a penalty in connection with a market investigation in Colombia (note 24.1).

² Restructuring costs mainly refer to severance payments and the definite closing of operating sites.

³ In 2019, 2018 and 2017, among others, includes impairment losses of fixed assets for \$64, \$23 and \$49, respectively, as well as in 2018 losses in the valuation of assets held for sale of \$22 and impairment losses of goodwill in 2017 of \$98 (notes 13.2, 14 and 15).

⁴ Refers to a past services remeasurement of CEMEX’s defined benefit plan in the United Kingdom determined in 2018 as a result of a recently enacted gender parity law.

7) FINANCIAL ITEMS

7.1) FINANCIAL EXPENSE

Consolidated financial expense in 2019, 2018 and 2017 includes \$77, \$74 and \$71 of interest expense from financial obligations related to lease contracts (notes 14.2 and 16.2).

7.2) FINANCIAL INCOME AND OTHER ITEMS, NET

The detail of financial income and other items, net in 2019, 2018 and 2017 was as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Effects of amortized cost on assets and liabilities and others, net	\$(59)	(59)	(59)
Foreign exchange results	(32)	10	(5)
Results from financial instruments, net (notes 13.2 and 16.4)	(1)	39	9
Financial income	21	18	18
Results in the sale of associates and remeasurement of previously held interest before change in control of associates (notes 4.1 and 13.1)	—	(10)	221
	<u>\$(71)</u>	<u>(2)</u>	<u>184</u>

8) CASH AND CASH EQUIVALENTS

As of December 31, 2019 and 2018, consolidated cash and cash equivalents consisted of:

	<u>2019</u>	<u>2018</u>
Cash and bank accounts	\$547	258
Fixed-income securities and other cash equivalents	241	51
	<u>\$788</u>	<u>309</u>

Based on net settlement agreements, the balance of cash and cash equivalents excludes deposits in margin accounts that guarantee several obligations of CEMEX of \$27 in 2019 and \$21 in 2018, which were offset against the corresponding obligations of CEMEX with the counterparties, considering CEMEX's right, ability and intention to settle the amounts on a net basis.

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9) TRADE ACCOUNTS RECEIVABLE

As of December 31, 2019 and 2018, consolidated trade accounts receivable consisted of:

	<u>2019</u>	<u>2018</u>
Trade accounts receivable	\$ 1,637	1,607
Allowances for expected credit losses	(116)	(119)
	<u>\$ 1,521</u>	<u>1,488</u>

As of December 31, 2019 and 2018, trade accounts receivable include receivables of \$682 and \$664, respectively, sold under outstanding trade receivables securitization programs and/or factoring programs with recourse, established in Mexico, the United States, France and the United Kingdom, in which CEMEX effectively surrenders control associated with the trade accounts receivable sold and there is no guarantee or obligation to reacquire the assets; nonetheless, in such programs, CEMEX retains certain residual interest in the programs and/or maintains continuing involvement with the accounts receivable. Therefore, the trade accounts receivable sold were not removed from the statement of financial position and the funded amounts to CEMEX of \$599 in 2019 and \$599 in 2018, were recognized within the line item of "Other financial obligations." Trade accounts receivable qualifying for sale exclude amounts over certain days past due or concentrations over certain limits to any one customer, according to the terms of the programs. The discount granted to the acquirers of the trade accounts receivable is recorded as financial expense and amounted to \$25 in 2019, \$23 in 2018 and \$16 in 2017. CEMEX's securitization programs are usually negotiated for periods of one to two years and are usually renewed at their maturity.

Allowances for doubtful accounts were established until December 31, 2017 based on incurred loss analyses over delinquent accounts considering aging of balances, the credit history and risk profile of each customer and legal processes to recover accounts receivable. Beginning in 2018 such allowances are determined and recognized upon origination of the trade accounts receivable based on an ECL model (note 2.6).

As of December 31, 2019, the balances of trade accounts receivable and the allowance for ECL were as follows:

	<u>Accounts receivable</u>	<u>ECL allowance</u>	<u>ECL average rate</u>
Mexico	\$ 266	35	13.2%
United States	474	6	1.3%
Europe	432	30	6.9%
South, Central America and the Caribbean	126	25	19.8%
Asia, Middle East and Africa	301	16	5.3%
Others	38	4	10.5%
	<u>\$ 1,637</u>	<u>116</u>	

Changes in the allowance for expected credit losses in 2019, 2018 and 2017, were as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Allowances for expected credit losses at beginning of period	\$ 119	109	106
Adoption effects of IFRS 9 charged to retained earnings (note 2.6)	—	29	—
Charged to selling expenses	12	8	13
Additions through business combinations	—	—	7
Deductions	(16)	(20)	(23)
Foreign currency translation effects	1	(7)	6
Allowances for expected credit losses at end of period	<u>\$ 116</u>	<u>119</u>	<u>109</u>

10) OTHER ACCOUNTS RECEIVABLE

As of December 31, 2019 and 2018, consolidated other accounts receivable consisted of:

	<u>2019</u>	<u>2018</u>
Non-trade accounts receivable ¹	\$113	138
Interest and notes receivable	50	46
Current portion of valuation of derivative financial instruments	1	1
Loans to employees and others	14	12
Refundable taxes	147	115
	<u>\$325</u>	<u>312</u>

¹ Non-trade accounts receivable are mainly attributable to the sale of assets.

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11) INVENTORIES

As of December 31, 2019 and 2018, the consolidated balance of inventories was summarized as follows:

	<u>2019</u>	<u>2018</u>
Finished goods	\$320	345
Work-in-process	195	194
Raw materials	194	194
Materials and spare parts	263	303
Inventory in transit	17	45
	<u>\$989</u>	<u>1,081</u>

For the years ended December 31, 2019, 2018 and 2017, CEMEX recognized within “Cost of sales” in the income statement, inventory impairment losses of \$6, \$6 and \$1, respectively.

12) ASSETS HELD FOR SALE AND OTHER CURRENT ASSETS

12.1) ASSETS HELD FOR SALE (note 4.2)

As of December 31, 2019 and 2018, assets held for sale, which are measured at the lower of their estimated realizable value, less costs to sell, and their carrying amounts, as well as liabilities directly related with such assets are detailed as follows:

	<u>2019</u>			<u>2018</u>		
	<u>Assets</u>	<u>Liabilities</u>	<u>Net assets</u>	<u>Assets</u>	<u>Liabilities</u>	<u>Net assets</u>
Kosmos’ assets in the United States	\$ 457	14	443	\$ —	—	—
Assets in the United Kingdom	229	23	206	—	—	—
White cement assets in Spain	106	—	106	—	—	—
Assets in the central region of France	—	—	—	48	16	32
Other assets held for sale	47	—	47	59	—	59
	<u>\$ 839</u>	<u>37</u>	<u>802</u>	<u>\$ 107</u>	<u>16</u>	<u>91</u>

12.2) OTHER CURRENT ASSETS

As of December 31, 2019 and 2018, other current assets are mainly comprised of advance payments to vendors. During July 2019, by means of granting a bank guarantee, CEMEX released all restricted cash balances of CEMEX Colombia, S.A. (“CEMEX Colombia”) for an aggregate amount of \$12 that as of December 31, 2018 were subject to a temporary restriction on its availability due to a seizure order within a legal proceeding initiated by a supplier in connection with a commercial dispute.

13) EQUITY ACCOUNTED INVESTEEES, OTHER INVESTMENTS AND NON-CURRENT ACCOUNTS RECEIVABLE

13.1) EQUITY ACCOUNTED INVESTEEES

As of December 31, 2019 and 2018, the investments in common shares of associates were as follows:

	<u>Activity</u>	<u>Country</u>	<u>%</u>	<u>2019</u>	<u>2018</u>
Camcem, S.A. de C.V.	Cement	Mexico	40.1	\$ 229	208
Concrete Supply Co. LLC	Concrete	United States	40.0	75	66
Lehigh White Cement Company	Cement	United States	36.8	64	60
Société d’Exploitation de Carrières	Aggregates	France	50.0	17	16
Société Méridionale de Carrières	Aggregates	France	33.3	15	16
Akmenes Cementas AB	Cement	Lithuania	37.8	—	27
Cemento Interoceánico, S.A.	Cement	Panama	25.0	—	8
Other companies	—	—	—	81	83
				<u>\$ 481</u>	<u>484</u>

Out of which:

Book value at acquisition date	\$ 331	368
Changes in stockholders’ equity	\$ 150	116

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Equity accounted investees – continued

On November 15, 2019, through its subsidiary Balboa Investments B.V., CEMEX sold its 25% equity interest in Cemento Interoceánico, S.A. (“Cemento Interoceánico”), customer, cement producer and competitor of the Company in Panama, to an international cement group (the “Purchaser”) for a price of \$44, plus an additional consideration (“earn-out”) for up to \$20 to be received in 2020 (note 17.2). As condition precedent for this acquisition of such 25% equity interest of Balboa in Cemento Interoceánico, the Purchaser required CEMEX enter with Cemento Interoceánico into a new clinker supply agreement including certain commercial conditions as well as a guaranteed installed capacity reserve of CEMEX’s plant in Panama for a period of 10 years beginning on November 15, 2019. The portion of the proceeds allocated to the new clinker supply agreement was recognized as deferred revenue and will be amortized to CEMEX’s income statement over the 10-year tenure of such contract with Cemento Interoceánico as the conditions agreed upon are fulfilled and revenue is earned.

On March 29, 2019, as part of the sale of the Baltic and Nordic assets to the German building materials group Schwenk described in note 4.2, CEMEX sold its 37.8% equity interest in Akmenes Cementas AB.

During 2018, a subsidiary of CEMEX in the United States invested a total of \$36 and increased the Company’s ownership over the Lehigh White Cement Company investee from 24.5% to 36.8%. This deal also included an agreement in which the Company contributed all of its rights, title and interest in the white cement business in Florida to the investee and entered into an agreement in which a Company’s terminal receives and packs white cement for Lehigh White Cement Company to sell and distribute in the Florida market.

During January and September 2017, by means of a public offering in the BMV and a definitive sale to two financial institutions, respectively, the Company sold 76.5 million shares of Grupo Cementos de Chihuahua, S.A.B. de C.V. (“GCC”), 23% equity interest that was held within investments in associates. CEMEX received combined proceeds of \$377 and generated a combined gain on sale in 2017 of \$187 as part of “Financial income and other items, net” in the income statement. CEMEX continues to have a 20% indirect interest in GCC through Camcem, S.A. de C.V., GCC’s parent company.

As mentioned in note 4.1, on February 1, 2017, CEMEX assumed control of its former associate TCL, which was accounted until such date for under the equity method. The purchase of TCL represented a step acquisition. As a result, the remeasurement of CEMEX’s previously held ownership interest in TCL of 39.5% generated a gain of \$32 in 2017 as part of “Financial income and other items, net.”

Combined condensed statement of financial position information of CEMEX’s associates as of December 31, 2019 and 2018 is set forth below:

	<u>2019</u>	<u>2018</u>
Current assets	\$ 982	849
Non-current assets	1,757	1,674
Total assets	<u>2,739</u>	<u>2,523</u>
Current liabilities	326	289
Non-current liabilities	898	879
Total liabilities	<u>1,224</u>	<u>1,168</u>
Total net assets	<u>\$1,515</u>	<u>1,355</u>

Combined selected information of the statements of operations of CEMEX’s associates in 2019, 2018 and 2017 is set forth below:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Sales	\$1,600	1,449	1,433
Operating earnings	237	224	227
Income before income tax	158	110	125
Net income	<u>118</u>	<u>86</u>	<u>97</u>

The share of equity accounted investees by reportable segment in the income statements for 2019, 2018 and 2017 is detailed as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Mexico	\$ 23	13	15
United States	18	15	14
Europe	10	7	6
Corporate and others	(2)	(1)	(2)
	<u>\$ 49</u>	<u>34</u>	<u>33</u>

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13.2) OTHER INVESTMENTS AND NON-CURRENT ACCOUNTS RECEIVABLE

As of December 31, 2019 and 2018, consolidated other investments and non-current accounts receivable were summarized as follows:

	<u>2019</u>	<u>2018</u>
Non-current accounts receivable ¹	\$197	220
Investments at fair value through the income statement ²	34	22
Non-current portion of valuation of derivative financial instruments (note 16.4)	2	15
Investments in strategic equity securities ³	3	11
	<u>\$236</u>	<u>268</u>

¹ Includes, among other items: a) accounts receivable from investees and joint ventures of \$32 in 2019 and \$65 in 2018, b) advances to suppliers of fixed assets of \$32 in 2019 and \$45 in 2018, c) employee prepaid compensation of \$7 in 2019 and \$6 in 2018, d) refundable taxes of \$10 in 2019 and \$13 in 2018; and e) warranty deposits of \$33 in 2019 and \$20 in 2018.

² Refers to investments in private funds and investments related to employee' savings funds. In 2019 and 2018, no contributions were made to such private funds.

³ This line item refers mainly to a strategic investment in CPOs of Axtel, S.A.B. de C.V. ("Axtel"). This investment is recognized at fair value through other comprehensive income.

14) PROPERTY, MACHINERY AND EQUIPMENT, NET AND ASSETS FOR THE RIGHT-OF-USE, NET

As of December 31, 2019 and 2018, consolidated property, machinery and equipment, net and assets for the right-of-use, net were summarized as follows:

	<u>2019</u>	<u>2018</u>
Property, machinery and equipment, net	\$ 10,565	11,232
Assets for the right-of-use, net ¹	1,285	1,222
	<u>\$ 11,850</u>	<u>12,454</u>

¹ CEMEX adopted IFRS 16 using the full retrospective approach as of January 1, 2017. The figures as of December 31, 2018 previously reported were re-presented.

14.1) PROPERTY, MACHINERY AND EQUIPMENT, NET

As of December 31, 2019 and 2018, consolidated property, machinery and equipment, net and the changes in this line item during 2019, 2018 and 2017, were as follows:

	<u>2019</u>				<u>Total</u>
	<u>Land and mineral reserves</u>	<u>Building</u>	<u>Machinery and equipment</u>	<u>Construction in progress ²</u>	
Cost at beginning of period	\$4,789	2,633	12,185	1,035	20,642
Accumulated depreciation and depletion	(958)	(1,371)	(7,081)	—	(9,410)
Net book value at beginning of period	3,831	1,262	5,104	1,035	11,232
Capital expenditures	46	28	663	—	737
Stripping costs	22	—	—	—	22
Total capital expenditures	68	28	663	—	759
Disposals ³	(38)	(8)	(50)	—	(96)
Reclassifications ⁴	(163)	(23)	(203)	(13)	(402)
Depreciation and depletion for the period	(121)	(61)	(451)	—	(633)
Impairment losses	(18)	(17)	(29)	—	(64)
Foreign currency translation effects	79	(133)	(364)	187	(231)
Cost at end of period	4,606	2,374	11,519	1,209	19,708
Accumulated depreciation and depletion	(968)	(1,326)	(6,849)	—	(9,143)
Net book value at end of period	\$3,638	1,048	4,670	1,209	10,565

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Property, machinery and equipment, net – continued

	2018 ¹					2017 ^{1,2}
	Land and mineral reserves	Building	Machinery and equipment	Construction in progress ²	Total	
Cost at beginning of period	\$4,830	2,665	12,168	990	20,653	19,053
Accumulated depreciation and depletion	(857)	(1,308)	(6,900)	—	(9,065)	(8,023)
Net book value at beginning of period	3,973	1,357	5,268	990	11,588	11,030
Capital expenditures	26	29	575	—	630	615
Stripping costs	38	—	—	—	38	41
Total capital expenditures	64	29	575	—	668	656
Disposals ³	(13)	(6)	(30)	—	(49)	(94)
Reclassifications ⁴	(18)	(2)	(4)	30	6	(83)
Business combinations	4	—	2	—	6	331
Depreciation and depletion for the period	(184)	(102)	(371)	—	(657)	(679)
Impairment losses	(6)	(2)	(15)	—	(23)	(51)
Foreign currency translation effects	11	(12)	(321)	15	(307)	478
Cost at end of period	4,789	2,633	12,185	1,035	20,642	20,653
Accumulated depreciation and depletion	(958)	(1,371)	(7,081)	—	(9,410)	(9,065)
Net book value at end of period	\$3,831	1,262	5,104	1,035	11,232	11,588

¹ CEMEX adopted IFRS 16 using the full retrospective approach as of January 1, 2017. The figures as of December 31, 2018 and 2017 previously reported were re-presented.

² In 2017, CEMEX Colombia significantly concluded the construction of a cement plant in the municipality of Maceo in the Antioquia department in Colombia with an annual capacity of approximately 1.1 million tons. The plant has not initiated commercial operations. As of the reporting date, the works related to the access road to the plant remain suspended and the beginning of commercial operations is subject to the successful conclusion of several ongoing processes for the proper operation of the assets and other legal proceedings (note 24.3). As of December 31, 2019, the carrying amount of the plant, net of impairment adjustments of certain advances recognized in 2016 of \$23, is for an amount in Colombian pesos equivalent to \$278.

³ In 2019, includes sales of non-strategic fixed assets in Germany, France and the United Kingdom for \$32, \$12 and \$6, respectively. In 2018, includes sales of non-strategic fixed assets in the United States, Spain and Mexico for \$19, \$8 and \$6, respectively. In 2017, includes sales of non-strategic fixed assets in Mexico, the United States, and France for \$18, \$12 and \$12, respectively.

⁴ In 2019, refers to the reclassification of the assets in the United States, United Kingdom and Spain for \$134, \$182 and \$86, respectively. In 2018, refers mainly to the reclassification of the assets in Spain (note 12.1) for \$30. In 2017, refers to the construction materials' business in the Pacific Northwest of the United States for \$83 (note 4.2).

As a result of impairment tests conducted on several CGUs considering certain triggering events, mainly: a) the closing and/or reduction of operations of cement and ready-mix concrete plants resulting from adjusting the supply to current demand conditions, such as the further adjustment in Puerto Rico in the last quarter of 2019 due to the continued adverse outlook and the overall uncertain economic conditions in such country after hurricane "Maria" in 2017; b) change of operating model of certain assets or the transferring of installed capacity to more efficient plants; as well as c) for certain equipment, remaining idle for several periods. These losses result from the excess of the net book value of the related assets against their respective use value or estimated realizable value, whichever is greater. For the years ended December 31, 2019, 2018 and 2017, CEMEX adjusted the related fixed assets to their estimated value in use in those circumstances in which the assets would continue in operation based on estimated cash flows during the remaining useful life, or to their realizable value, in case of permanent shut down, and recognized impairment losses within the line item of "Other expenses, net" (notes 2.10 and 6).

During the years ended December 31, 2019, 2018 and 2017 impairment losses of fixed assets by country are as follows:

	2019	2018	2017
Puerto Rico	\$ 52	—	—
United States	6	13	8
Colombia	3	2	—
France	1	—	3
Poland	—	5	—
Spain	—	2	24
Mexico	—	1	2
Czech Republic	—	—	8
Panama	—	—	3
Others	2	—	1

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14.2) ASSETS FOR THE RIGHT-OF-USE, NET

As of December 31, 2019 and 2018, consolidated assets for the right-of-use, net and the changes in this caption during 2019, 2018 and 2017, were as follows:

	2019				
	Land	Buildings	Machinery and equipment	Others	Total
Assets for the right-of-use at beginning of period	\$ 384	393	1,289	7	2,073
Accumulated depreciation	(83)	(265)	(499)	(4)	(851)
Net book value at beginning of period	301	128	790	3	1,222
Additions of new leases	25	52	193	4	274
Cancellations and remeasurements	(6)	(6)	(40)	—	(52)
Reclassifications	(5)	65	(25)	—	35
Depreciation	(29)	(39)	(219)	(1)	(288)
Foreign currency translation effects	(37)	38	93	—	94
Assets for the right-of-use at end of period	366	471	1,417	11	2,265
Accumulated depreciation	(117)	(233)	(625)	(5)	(980)
Net book value at end of period	\$ 249	238	792	6	1,285

	2018					2017
	Land	Buildings	Machinery and equipment	Others	Total	
Assets for the right-of-use at beginning of period	\$373	393	1,109	6	1,881	1,487
Accumulated depreciation	(72)	(242)	(371)	(3)	(688)	(448)
Net book value at beginning of period	301	151	738	3	1,193	1,039
Additions of new leases	19	19	257	1	296	328
Cancellations and remeasurements	—	(1)	(8)	—	(9)	(1)
Depreciation	(19)	(32)	(167)	(1)	(219)	(176)
Foreign currency translation effects	—	(9)	(30)	—	(39)	3
Assets for the right-of-use at end of period	384	393	1,289	7	2,073	1,881
Accumulated depreciation	(83)	(265)	(499)	(4)	(851)	(688)
Net book value at end of period	\$301	128	790	3	1,222	1,193

For the years ended December 31, 2019, 2018 and 2017, the combined rental expense related with short-term leases, leases of low-value assets and variable lease payments was \$104, \$89 and \$96, respectively, and was recognized in cost of sales and operating expenses, as correspond. During the reported periods, CEMEX did not have any material revenue from sub-leasing activities.

15) GOODWILL AND INTANGIBLE ASSETS, NET

15.1) BALANCES AND CHANGES DURING THE PERIOD

As of December 31, 2019 and 2018, consolidated goodwill, intangible assets and deferred charges were summarized as follows:

	2019			2018		
	Cost	Accumulated amortization	Carrying Amount	Cost	Accumulated amortization	Carrying Amount
Intangible assets of indefinite useful life:						
Goodwill	\$ 9,562	—	9,562	\$ 9,912	—	9,912
Intangible assets of definite useful life:						
Extraction rights	1,985	(395)	1,590	1,979	(357)	1,622
Industrial property and trademarks	42	(18)	24	44	(20)	24
Customer relationships	196	(196)	—	196	(196)	—
Mining projects	48	(5)	43	42	(5)	37
Others intangible assets	1,014	(643)	371	917	(576)	341
	<u>\$ 12,847</u>	<u>(1,257)</u>	<u>11,590</u>	<u>\$ 13,090</u>	<u>(1,154)</u>	<u>11,936</u>

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Goodwill – continued

Changes in consolidated goodwill in 2019, 2018 and 2017, were as follows:

	2019	2018	2017
Balance at beginning of period	\$ 9,912	9,948	9,957
Business combinations	—	16	100
Reclassification to assets held for sale (notes 4.2, 4.3 and 12)	(371)	(22)	92
Impairment losses	—	—	98
Foreign currency translation effects	21	(30)	(299)
Balance at end of period	<u>\$ 9,562</u>	<u>9,912</u>	<u>9,948</u>

Intangible assets of definite life

Changes in intangible assets of definite life in 2019, 2018 and 2017, were as follows:

	2019					Total
	Extraction rights	Industrial property and trademarks	Mining projects	Others ¹	Total	
Balance at beginning of period	\$ 1,622	24	37	341	2,024	
Additions (disposals), net ¹	(26)	(6)	5	108	81	
Reclassifications (notes 4.1, 4.2 and 12)	—	—	—	(2)	(2)	
Amortization for the period	(8)	(1)	(1)	(114)	(124)	
Foreign currency translation effects	2	7	2	38	49	
Balance at the end of period	<u>\$ 1,590</u>	<u>24</u>	<u>43</u>	<u>371</u>	<u>2,028</u>	

	2018					2017
	Extraction rights	Industrial property and trademarks	Mining projects	Others ¹	Total	
Balance at beginning of period	\$ 1,686	29	36	255	2,006	1,989
Additions (disposals), net ¹	(11)	(2)	6	164	157	66
Business combinations (note 4.1)	—	—	—	—	—	4
Reclassifications (notes 4.1, 4.2 and 12)	(11)	—	—	—	(11)	—
Amortization for the period	(32)	(5)	(1)	(68)	(106)	(108)
Impairment losses	(9)	—	—	—	(9)	1
Foreign currency translation effects	(1)	2	(4)	(10)	(13)	54
Balance at the end of period	<u>\$ 1,622</u>	<u>24</u>	<u>37</u>	<u>341</u>	<u>2,024</u>	<u>2,006</u>

¹ As of December 31, 2019 and 2018, “Others” includes the carrying amount of internal-use software of \$253 and \$227, respectively. Capitalized direct costs incurred in the development stage of internal-use software, such as professional fees, direct labor and related travel expenses amounted to \$102 in 2019, \$133 in 2018 and \$76 in 2017.

15.2) ANALYSIS OF GOODWILL IMPAIRMENT

For purposes of goodwill impairment tests, all cash-generating units within a country are aggregated, as goodwill is allocated at that level. Considering materiality for disclosure purposes, certain balances of goodwill were presented for Rest of SCA&C, but this does not represent that goodwill was tested at a higher level than for operations in an individual country. During the last quarter of each year, CEMEX performs its annual goodwill impairment test.

During 2019 and 2018, CEMEX did not determine impairment losses of goodwill. Based on these analyses, during 2017, in connection with the operating segment in Spain, considering the uncertainty over the improvement indicators affecting the country’s construction industry and consequently, in the expected consumption of cement, ready-mix and aggregates, partially a result of the then country’s complex prevailing political environment, which had limited expenditure in infrastructure projects, as well as the uncertainty in the expected price recovery and the effects of increased competition and imports, CEMEX’s management determined that the net book value of such operating segment in Spain, exceeded in \$98 the amount of the value in use. As a result, CEMEX recognized an impairment loss of goodwill for such amount as part of “Other expenses, net” in the income statement on 2017 against the related goodwill balance.

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As of December 31, 2019 and 2018, goodwill balances allocated by operating segment were as follows:

	<u>2019</u>	<u>2018</u>
Mexico	\$ 384	375
United States	7,469	7,760
Europe		
Spain	494	523
United Kingdom	279	324
France	221	211
Czech Republic	30	30
SCA&C		
Colombia	296	299
Caribbean TCL	100	104
Rest of SCA&C ¹	62	62
AMEA		
Philippines	92	89
United Arab Emirates	96	96
Egypt	12	12
Others		
Other reporting segments ²	27	27
	<u>\$ 9,562</u>	<u>9,912</u>

¹ This caption refers to the operating segments in the Dominican Republic, the Caribbean, Costa Rica and Panama.

² This caption is primarily associated with Neoris N.V., CEMEX's subsidiary involved in the sale of information technology and services.

CEMEX's pre-tax discount rates and long-term growth rates used to determine the discounted cash flows in the group of CGUs with the main goodwill balances were as follows:

Groups of CGUs	Discount rates			Growth rates		
	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
United States	7.8%	8.5%	8.8%	2.5%	2.5%	2.5%
Spain	8.3%	8.8%	9.5%	1.6%	1.7%	1.7%
Mexico	9.0%	9.4%	10.2%	2.4%	3.0%	2.7%
Colombia	8.9%	9.5%	10.5%	3.7%	3.6%	3.7%
France	8.0%	8.4%	9.0%	1.4%	1.6%	1.8%
United Arab Emirates	8.8%	11.0%	10.4%	2.5%	2.9%	3.1%
United Kingdom	8.0%	8.4%	9.0%	1.5%	1.6%	1.7%
Range of rates in other countries	<u>8.1% - 11.5%</u>	<u>8.5% - 13.3%</u>	<u>9.1% - 11.8%</u>	<u>1.6% - 6.5%</u>	<u>2.3% - 6.9%</u>	<u>2.3% - 6.8%</u>

The discount rates used by CEMEX in its cash flows projections to determine the value in use of its operating segments generally decreased in 2019 as compared to 2018 in a range of 0.6% up to 2.6%, mainly as a result of a decrease in 2019 in the funding cost observed in the industry that changed from 7.3% in 2018 to 5.4% in 2019. The risk-free rate associated to CEMEX remained significantly flat in the level of 2.9%, while the country risk-specific rates decreased slightly in 2019 in most cases. These reductions were partially offset by a slight increase in the public comparable companies' stock volatility (beta) that changed from 1.06 in 2018 to 1.08 in 2019 and the decrease in the weighing of debt in the calculation of the discount rates that changed from 33.5% in 2018 to 31.7% in 2019. In 2018, such discount rates decreased slightly in most cases in a range of 0.3% up to 1 percentage point, except for United Arab Emirates and the Caribbean, as compared to 2017. This reduction was mainly attributable to a decrease in the public comparable companies' stock volatility (beta) and general decreases in the country specific sovereign yields in the majority of the countries where CEMEX operates and the weighing of debt in the calculation, effects that were partially offset for increases during 2018 in the funding cost observed in the industry that changed from 6.1% in 2017 to 7.3% in 2018 and the risk free rate associated with CEMEX which increased from 2.8% in 2017 to 2.9% in 2018. With respect to long-term growth rates, CEMEX uses country specific rates, which are mainly obtained from economic data released by the International Monetary Fund.

In connection with the assumptions included in the table above, CEMEX corroborates the reasonableness of its conclusions using sensitivity analyses to changes in assumptions, affecting the value in use of all groups of CGUs with an independent reasonably possible increase of 1% in the pre-tax discount rate, an independent possible decrease of 1% in the long-term growth rate, as well as using multiples of Operating EBITDA, by means of which, CEMEX determined a weighted-average multiple of Operating EBITDA to enterprise value observed in the industry and/or in recent mergers and acquisitions in the industry. The average multiple was then applied to a stabilized amount of Operating EBITDA and the result was compared to the corresponding carrying amount for each group of CGUs to which goodwill has been allocated. CEMEX considered an industry average Operating EBITDA multiple of 11.5 times in 2019, 11.1 times in 2018 and multiple of 9.0 times in 2017.

As of December 31, 2019, 2018 and 2017, except for the operating segment in Spain in 2017, none of the other sensitivity analyses indicated a potential impairment risk in CEMEX's operating segments. CEMEX continually monitors the evolution of the group of CGUs to which goodwill has been allocated that have presented relative goodwill impairment risk in any of the reported periods and, in the event that the relevant economic variables and the related value in use would be negatively affected, it may result in a goodwill impairment loss in the future.

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Analysis of goodwill impairment – continued

As of December 31, 2019 and 2018, goodwill allocated to its operating segment in the United States accounted in both years for 78%, of CEMEX's total amount of consolidated goodwill. In connection with CEMEX's determination of value in use relative to its groups of CGUs in the United States in the reported periods, CEMEX has considered several factors, such as the historical performance of such operating segment, including the operating results in recent years, the long-term nature of CEMEX's investment, the signs of recovery in the construction industry over the last years, the significant economic barriers for new potential competitors considering the high investment required, and the lack of susceptibility of the industry to technology improvements or alternate construction products, among other factors. To improve its assurance, as mentioned above, CEMEX verified its conclusions using sensitivity analyses over Operating EBITDA multiples of recent sale transaction within the industry occurred in such country, as well as macroeconomic information regarding gross domestic product and cement consumption over the projected periods issued by the International Monetary Fund and the U.S. Portland Cement Association, respectively.

16) FINANCIAL INSTRUMENTS

16.1) SHORT-TERM AND LONG-TERM DEBT

As of December 31, 2019 and 2018, CEMEX's consolidated debt summarized by interest rates and currencies, was as follows:

	2019			2018		
	Short-term	Long-term	Total ^{1,2}	Short-term	Long-term	Total ^{1,2}
Floating rate debt	\$ 59	2,997	3,056	\$ 13	3,400	3,413
Fixed rate debt	3	6,306	6,309	32	5,866	5,898
	<u>\$ 62</u>	<u>9,303</u>	<u>9,365</u>	<u>\$ 45</u>	<u>9,266</u>	<u>9,311</u>
Effective rate³						
Floating rate	4.3%	4.1%		7.8%	3.6%	
Fixed rate	<u>5.2%</u>	<u>5.5%</u>		<u>4.2%</u>	<u>5.6%</u>	

Currency	2019				2018			
	Short-term	Long-term	Total	Effective rate ³	Short-term	Long-term	Total	Effective rate ³
Dollars	\$ 25	6,144	6,169	5.2%	\$ 30	5,837	5,867	5.8%
Euros	3	2,438	2,441	3.1%	1	2,665	2,666	2.8%
Pounds	23	433	456	3.2%	—	439	439	2.9%
Philippine pesos	3	221	224	5.2%	3	257	260	5.4%
Other currencies	8	67	75	5.6%	11	68	79	5.9%
	<u>\$ 62</u>	<u>9,303</u>	<u>9,365</u>		<u>\$ 45</u>	<u>9,266</u>	<u>9,311</u>	

¹ As of December 31, 2019 and 2018, from total debt of \$9,365 and \$9,311, respectively, 84% in 2019 and 79% in 2018 was held in the Parent Company, 11% in 2019 and 15% in 2018 was in finance subsidiaries in the Netherlands and the United States, and 5% in 2019 and 6% in 2018 was in other countries.

² As of December 31, 2019 and 2018, cumulative discounts, fees and other direct costs incurred in CEMEX's outstanding debt borrowings and the issuance of notes payable (jointly "Issuance Costs") for \$71 and \$65, respectively, are presented reducing debt balances and are amortized to financial expense over the maturity of the related debt instruments under the amortized cost method.

³ In 2019 and 2018, represents the weighted-average nominal interest rate of the related debt agreements determined at the end of each period.

As of December 31, 2019 and 2018, CEMEX's consolidated debt summarized by type of instrument, was as follow:

	2019		2018	
	Short-term	Long-term	Short-term	Long-term
Bank loans			Bank loans	
Loans in foreign countries, 2020 to 2024	\$ 1	290	Loans in foreign countries, 2019 to 2024	\$ 31
Syndicated loans, 2021 to 2022	—	2,865	Syndicated loans, 2020 to 2022	—
	<u>1</u>	<u>3,155</u>		<u>31</u>
Notes payable			Notes payable	
Medium-term notes, 2023 to 2026	—	6,044	Medium-term notes, 2023 to 2026	—
Other notes payable, 2020 to 2025	6	159	Other notes payable, 2019 to 2025	7
	<u>6</u>	<u>6,203</u>		<u>7</u>
Total bank loans and notes payable	7	9,358	Total bank loans and notes payable	38
Current maturities	55	(55)	Current maturities	7
	<u>\$ 62</u>	<u>9,303</u>		<u>\$ 45</u>

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Consolidated debt – continued

As of December 31, 2019 and 2018, CEMEX’s bank loans included the balances under CEMEX’s facilities agreement entered into with 20 financial institutions on July 19, 2017, as amended and restated on April 2, 2019 and November 4, 2019, (the “2017 Credit Agreement”) as described below, for \$2,897 and \$3,208, respectively. The 2017 Credit Agreement is multi-currency and includes a committed revolving credit facility of \$1,135 in 2019 and in 2018.

Changes in consolidated debt for the years ended December 31, 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Debt at beginning of year	\$ 9,311	9,873	11,401
Proceeds from new debt instruments	3,331	2,325	4,990
Debt repayments	(3,284)	(2,745)	(7,046)
Foreign currency translation and accretion effects	7	(142)	528
Debt at end of year	<u>\$ 9,365</u>	<u>9,311</u>	<u>9,873</u>

As of December 31, 2019 and 2018, non-current notes payable for \$6,203 and \$5,766, respectively, were detailed as follows:

Description	Date of issuance	Issuer ¹	Currency	Principal amount	Rate	Maturity Date	Repurchased amount	Outstanding amount ²	2019	2018
							\$	\$		
November 2029 Notes ³	19/Nov/19	CEMEX, S.A.B. de C.V.	Dollar	1,000	5.45%	19/Nov/29	—	1,000	\$ 992	—
April 2026 Notes	16/Mar/16	CEMEX, S.A.B. de C.V.	Dollar	1,000	7.75%	16/Apr/26	—	1,000	996	996
March 2026 Notes ³	19/Mar/19	CEMEX, S.A.B. de C.V.	Euro	400	3.125%	19/Mar/26	—	449	446	—
July 2025 Notes	02/Apr/03	CEMEX Materials LLC	Dollar	150	7.70%	21/Jul/25	—	150	154	155
March 2025 Notes	03/Mar/15	CEMEX, S.A.B. de C.V.	Dollar	750	6.125%	05/May/25	—	750	748	748
January 2025 Notes	11/Sep/14	CEMEX, S.A.B. de C.V.	Dollar	1,100	5.70%	11/Jan/25	(29)	1,071	1,069	1,068
December 2024 Notes	05/Dec/17	CEMEX, S.A.B. de C.V.	Euro	650	2.75%	05/Dec/24	—	729	726	742
June 2024 Notes	14/Jun/16	CEMEX Finance LLC	Euro	400	4.625%	15/Jun/24	—	449	447	456
April 2024 Notes ³	01/Apr/14	CEMEX Finance LLC	Dollar	1,000	6.00%	01/Apr/24	(360)	640	621	967
March 2023 Notes ³	03/Mar/15	CEMEX, S.A.B. de C.V.	Euro	550	4.375%	05/Mar/23	(629)	—	—	629
Other notes payable									4	5
									<u>\$6,203</u>	<u>5,766</u>

¹ Unless otherwise indicated, all issuances are fully and unconditionally guaranteed by CEMEX, S.A.B. de C.V., CEMEX México, S.A. de C.V., CEMEX Concretos, S.A. de C.V., Empresas Tolteca de México, S.A. de C.V., New Sunward Holding B.V., CEMEX España, S.A. (“CEMEX España”), CEMEX Asia B.V., CEMEX Corp., CEMEX Africa & Middle East Investments B.V., CEMEX Finance LLC, CEMEX France Gestion, (S.A.S.), CEMEX Research Group AG and CEMEX UK. CEMEX México, S.A. de C.V. and Empresas Tolteca de México, S.A. de C.V. entered into a merger agreement with CEMEX, S.A.B. de C.V. (note 27).

² Presented net of all outstanding notes repurchased and held by CEMEX’s subsidiaries.

³ In December 2019, CEMEX used a portion of the proceeds of the November 2029 Notes and increased to \$360 the repurchased amount of the April 2024 Notes. Moreover, in April 2019, CEMEX used the proceeds of the March 2026 Notes to repurchase in full the March 2023 Notes.

The maturities of consolidated long-term debt as of December 31, 2019, were as follows:

	Bank loans	Notes payable	Total
2021	\$ 672	1	673
2022	1,229	—	1,229
2023	664	1	665
2024	537	1,794	2,331

2025 and thereafter	—	4,405	4,405
	<u>\$ 3,102</u>	<u>6,201</u>	<u>9,303</u>

As of December 31, 2019, CEMEX had the following lines of credit, of which, the only committed portion refers to the revolving credit facility under the 2017 Credit Agreement, at annual interest rates ranging between 0.75% and 8.50%, depending on the negotiated currency:

	<u>Lines of credit</u>	<u>Available</u>
Other lines of credit in foreign subsidiaries	\$ 385	286
Other lines of credit from banks	683	635
Revolving credit facility 2017 Credit Agreement	1,135	1,135
	<u>\$2,203</u>	<u>2,056</u>

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Consolidated debt – continued

As a result of debt issuances, exchange offers and tender offers incurred to refinance, replace and/or repurchase existing debt instruments, as applicable, CEMEX paid Issuance Costs for a combined amount of \$63 in 2019, \$51 in 2018 and \$251 in 2017. Of these incurred Issuance Costs, \$24 in 2019 and \$39 in 2017, corresponding to new debt instruments or the refinancing of old debt, adjusted the carrying amount of the related debt instruments and are amortized over the remaining term of each instrument, while \$39 in 2019, \$51 in 2018 and \$212 in 2017 of such Issuance Costs, associated with the extinguished portion of the related debt, were recognized in the income statement in each year within “Financial expense”. In addition, Issuance Costs pending for amortization related to extinguished debt instruments for \$1 in 2019, \$4 in 2018 and \$16 in 2017 were also recognized in the income statement of each year within “Financial expense.”

2017 Credit Agreement and 2014 Credit Agreement

On July 19, 2017, the Parent Company and certain subsidiaries entered into the 2017 Credit Agreement for an amount in different currencies equivalent to \$4,050 at the origination date. The proceeds were used to refinance in full the \$3,680 then outstanding under the former facilities agreements (the “2014 Credit Agreement”) and other debt repayments. All tranches under the 2017 Credit Agreement have substantially the same terms and share the same guarantors and collateral package as other secured debt obligations of CEMEX. All tranches under the 2017 Credit Agreement amortize in five equal semi-annual payments beginning in July 2020, except for the commitments under the revolving credit which have a five-year maturity.

All tranches under the 2017 Credit Agreement have substantially the same terms, including a margin over LIBOR or EURIBOR, as applicable, of between 125 to 350 basis points, depending on the consolidated leverage ratio (as defined below in the Financial Covenants section) of CEMEX, as follows:

Consolidated leverage ratio	Applicable margin ¹
≥ 5.00x	350 bps
< 5.00x ≥ 4.50x	300 bps
< 4.50x ≥ 4.00x	250 bps
< 4.00x ≥ 3.50x	212.5 bps
< 3.50x ≥ 3.00x	175 bps
< 3.00x ≥ 2.50x	150 bps
< 2.50x	125 bps

¹ LIBOR and EURIBOR refer to the London Inter-Bank Offered Rate and the Euro Inter-Bank Offered Rate, respectively, variable rates used in international markets for debt denominated in U.S. dollars and Euros, respectively. As of December 31, 2019 and 2018, 3-Month LIBOR rate was 1.9084% and 2.8076%, respectively, meanwhile 3-Month EURIBOR rate was (0.383%) and (0.309%), respectively. The contraction “bps” means basis points. One hundred basis points equal 1%.

As part of the April 2, 2019 amendment process to the 2017 Credit Agreement, among other aspects, CEMEX extended \$1,060 of maturities by three years and made certain adjustments to its consolidated financial leverage ratio, as described below in the financial covenants section, in connection with the implementation of IFRS 16 and the neutralization of any potential effect from such adoption. In addition, CEMEX delayed the scheduled tightening of the consolidated financial leverage ratio limit by one year. Moreover, as a result of the November 4, 2019 amendments, among other aspects, CEMEX negotiated: a) an exclusive amount of up to \$500 permitted for share buy-back; b) a new allowance for disposals of non-controlling interests in subsidiaries that are no obligors under the 2017 Credit Agreement of up to \$100 per calendar year; c) authorization to implement corporate reorganizations in Mexico, Europe and TCL; and d) modifications to the calculation and limits of the consolidated coverage ratio and the consolidated leverage ratio, as described in the Financial Covenants section below.

The balance of debt under the 2017 Credit Agreement and previously under the 2014 Credit Agreement, which debtor is CEMEX, S.A.B. de C.V., was originally guaranteed by CEMEX México, S.A. de C.V., CEMEX Concretos, S.A. de C.V., Empresas Tolteca de México, S.A. de C.V., New Sunward Holding B.V., CEMEX España, CEMEX Asia B.V., CEMEX Corp., CEMEX Africa & Middle East Investments B.V., CEMEX Finance LLC, CEMEX France Gestion (S.A.S.), CEMEX Research Group AG and CEMEX UK. In addition, the debt under these agreements (together with all other senior capital markets debt issued or guaranteed by CEMEX, and certain other preceding facilities) is also secured by a first-priority security interest in: (a) substantially all the shares of CEMEX México, S.A. de C.V., CEMEX Operaciones México, S.A. de C.V., New Sunward Holding B.V., CEMEX Trademarks Holding Ltd. and CEMEX España (the “Collateral”); and (b) all proceeds of such Collateral. CEMEX México, S.A. de C.V. and Empresas Tolteca de México, S.A. de C.V. entered into a merger agreement with CEMEX, S.A.B. de C.V. (note 27).

During the years 2019, 2018 and 2017, under both the 2017 Credit Agreement and the 2014 Credit Agreement, CEMEX was required to: a) not exceed the aggregate amount allowed for capital expenditures of \$1,500 per year, excluding certain capital expenditures, joint venture investments and acquisitions by CHP and its subsidiaries and CLH and its subsidiaries, which had a separate aggregate limit of \$500 (or its equivalent) each; and b) not exceed the amounts allowed for permitted acquisitions and investments in joint ventures of \$400 per year. Nonetheless, such limitations did not apply if capital expenditures or acquisitions did not exceed free cash flow generation or were funded with proceeds from equity issuances or asset disposals.

In addition to the restrictions mentioned above, and subject in each case to the permitted negotiated amounts and other exceptions, CEMEX is also subject to a number of negative covenants that, among other things, restrict or limit its ability to incur additional obligations, change its line of business, enter into mergers and enter into speculative derivatives transactions.

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2017 Credit Agreement and 2014 Credit Agreement – continued

Certain covenants and restrictions, such as the capital expenditure restrictions and several negative covenants, including restrictions on CEMEX’s ability to declare or pay cash dividends and distributions to shareholders, among others, shall cease to apply or become less restrictive if CEMEX so elects upon CEMEX’s Leverage Ratio (as defined hereinafter) for the two most recently completed quarterly testing periods being less than or equal to 3.75 times and no default under the 2017 Credit Agreement is continuing. CEMEX cannot assure that it will be able to meet the conditions for these restrictions to cease to apply prior to the final maturity date under the 2017 Credit Agreement. In addition, the 2017 Credit Agreement, and previously the 2014 Credit Agreement, contains events of default, some of which may occur and are outside of CEMEX’s control such as expropriation, sequestration and availability of foreign exchange.

As of December 31, 2019 and 2018, CEMEX was in compliance with such limitations and restrictions contained in the 2017 Credit Agreement. CEMEX cannot assure that in the future it will be able to comply with such restrictive covenants and limitations. CEMEX’s failure to comply with such covenants and limitations could result in an event of default, which could materially and adversely affect CEMEX’s business and financial condition.

Financial Covenants

The 2017 Credit Agreement requires CEMEX to comply with financial ratios, which mainly include: a) the consolidated ratio of debt to Operating EBITDA (the “Leverage Ratio”); and b) the consolidated ratio of Operating EBITDA to interest expense (the “Coverage Ratio”). These financial ratios are calculated using the consolidated amounts under IFRS.

After the April 2, 2019 amendments, which modified the calculation of the Leverage Ratio and increased temporarily certain limits, CEMEX must comply with a Coverage Ratio and a Leverage Ratio for each period of four consecutive quarters. For the Coverage Ratio, the limit should be equal or greater than 2.50 times from December 31, 2019 through September 30, 2022 and equal or greater than 2.75 times for each subsequent reference period. The limits for the Leverage Ratio are as follows:

<u>Period</u>	<u>Leverage Ratio</u>
For the period ending on December 31, 2019 up to and including the period ending on March 31, 2021	< = 5.25
For the period ending on June 30, 2021 up to and including the period ending on September 30, 2021	< = 5.00
For the period ending on December 31, 2021 up to and including the period ending on September 30, 2022	< = 4.75
For the period ending on December 31, 2022 up to and including the period ending on March 31, 2023	< = 4.50
For the period ending on June 30, 2023 and each subsequent reference period	< = 4.25

Leverage Ratio: After the April 2, 2019 amendments mentioned above, is calculated by dividing “Funded Debt” by pro forma Operating EBITDA for the last twelve months as of the calculation date including the adoption of IFRS 16. Funded Debt equals debt, as reported in the statement of financial position, net of cash and cash equivalents, excluding components of liability of convertible subordinated notes, plus lease liabilities, perpetual debentures and guarantees, plus or minus the fair value of derivative financial instruments, as applicable, among other adjustments for business acquisitions or disposals. Before the April 2, 2019 amendments, the calculation of Funded Debt did not include cash and cash equivalents and obligations under lease contracts.

Pro forma Operating EBITDA represents, Operating EBITDA for the last twelve months as of the calculation date, after IFRS 16 effects, plus the portion of Operating EBITDA referring to such twelve-month period of any significant acquisition made in the period before its consolidation in CEMEX, minus Operating EBITDA referring to such twelve-month period of any significant disposal that had already been liquidated.

Coverage Ratio: is calculated by dividing pro forma Operating EBITDA by the financial expense for the last twelve months as of the calculation date, both including IFRS 16 effects. Financial expense includes coupons accrued on the perpetual debentures.

For the compliance periods ended as of December 31, 2019, 2018 and 2017, under the 2017 Credit Agreement and the 2014 Credit Agreement, as applicable, the main consolidated financial ratios were as follows:

		<u>Consolidated financial ratios</u>		
		<u>2019</u>	<u>2018¹</u>	<u>2017¹</u>
Leverage ratio	Limit	< = 5.25	< = 4.75	< = 5.25
	Calculation	4.17	3.84	3.85
Coverage ratio	Limit	> = 2.50	> = 2.50	> = 2.50
	Calculation	3.86	4.41	3.46

¹ Refers to the compliance limits and calculations that were effective according to the outstanding conditions on such dates, before the April 2, 2019 amendments, the November 4, 2019 amendments and the adoption of IFRS 16 in the financial statements.

CEMEX's ability to comply with these ratios may be affected by economic conditions and volatility in foreign exchange rates, as well as by overall conditions in the financial and capital markets.

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Financial covenants – continued

CEMEX will classify all of its outstanding debt as current debt if: 1) as of any measurement date CEMEX fails to comply with the aforementioned financial ratios; or 2) the cross default clause that is part of the 2017 Credit Agreement is triggered by the provisions contained therein; 3) as of any date prior to a subsequent measurement date CEMEX expects not to be in compliance with such financial ratios in the absence of: a) amendments and/or waivers covering the next succeeding 12 months; b) high probability that the violation will be cured during any agreed upon remediation period and be sustained for the next succeeding 12 months; and/or c) an agreement to refinance the relevant debt on a long-term basis. As a result of such classification of debt as short-term for noncompliance with the agreed upon financial ratios or, in such event, the absence of a waiver of compliance or a negotiation thereof, after certain procedures upon CEMEX's lenders' request, they would call for the acceleration of payments due under the 2017 Credit Agreement. That scenario would have a material adverse effect on CEMEX's operating results, liquidity or financial position.

16.2) OTHER FINANCIAL OBLIGATIONS

As of December 31, 2019 and 2018, other financial obligations in the consolidated statement of financial position were detailed as follows:

	2019			2018		
	Short-term	Long-term	Total	Short-term	Long-term	Total
I. Leases	\$ 262	1,044	1,306	\$ 237	1,078	1,315
II. Liabilities secured with accounts receivable	599	—	599	599	—	599
III. Convertible subordinated notes due 2020	520	—	520	—	514	514
IV. Mandatorily convertible securities due 2019	—	—	—	19	—	19
	<u>\$ 1,381</u>	<u>1,044</u>	<u>2,425</u>	<u>\$ 855</u>	<u>1,592</u>	<u>2,447</u>

I. Leases (notes 2.1, 2.6, 7.1, 14.2 and 23.1)

CEMEX has several operating and administrative assets under lease contracts (note 14.2). As mentioned in note 2.1, beginning January 1, 2019, CEMEX applied IFRS 16 using the full retrospective approach and re-presented the amounts of prior periods. CEMEX applies the recognition exemption for short-term leases and leases of low-value assets. Changes in the balance of lease financial liabilities during 2019, 2018 and 2017 were as follows:

	2019	2018	2017
Lease financial liability at beginning of year	\$1,315	1,309	1,054
Additions from new leases	274	296	328
Reductions from payments	(239)	(192)	(112)
Cancellations and liability remeasurements	(54)	(67)	(11)
Foreign currency translation and accretion effects	10	(31)	50
Lease financial liability at end of year	<u>\$1,306</u>	<u>1,315</u>	<u>1,309</u>

As of December 31, 2019, the maturities of lease financial liabilities are as follows:

	Total
2020	\$ 262
2021	221
2022	159
2023	115
2024 and thereafter	549
	<u>\$1,306</u>

Total cash outflows for leases in 2019, 2018 and 2017 were \$316, \$266 and \$183, respectively. Future payments associated with these contracts are presented in note 23.1.

II. Liabilities secured with accounts receivable

As mentioned in note 9, the funded amounts of sale of trade accounts receivable under securitization programs and/or factoring programs with recourse, are recognized in "Other financial obligations" in the statement of financial position.

III. Optional convertible subordinated notes due 2020

During 2015, the Parent Company issued \$521 aggregate principal amount of 3.72% optional convertible subordinated notes due in March 2020 (the “2020 Convertible Notes”) as a result of exchanges or settlements of other convertible notes. The 2020 Convertible Notes, which are subordinated to all of CEMEX’s liabilities and commitments, are convertible into a fixed number of the Parent Company’s ADSs at any time at the holder’s election and are subject to antidilution adjustments. The value of the conversion option as of the issuance date which amounted to \$12 was recognized in other equity reserves. As of December 31, 2019 and 2018, the conversion price per ADS for the 2020 Convertible Notes was \$10.73 and \$11.01 dollars, respectively. After antidilution adjustments, the conversion rate for the 2020 Convertible Notes as of December 31, 2019 and 2018 was 93.2334 and 90.8592 ADS per each 1 thousand dollars principal amount of such notes.

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Other financial obligations – continued

IV. Mandatorily convertible securities due in 2019

In December 2009, the Parent Company exchanged debt into \$315 principal amount of 10% mandatorily convertible securities denominated in pesos with maturity in November 2019. On November 28, 2019, the securities expired and were converted into 236 million CPOs at a conversion price in pesos equivalent to \$ 0. 8937 per CPO.

16.3) FAIR VALUE OF FINANCIAL INSTRUMENTS

Financial assets and liabilities

The book values of cash, trade receivables, other accounts receivable, trade payables, other accounts payable and accrued expenses, as well as short-term debt, approximate their corresponding estimated fair values due to the revolving nature of these financial assets and liabilities in the short-term.

The estimated fair value of CEMEX's long-term debt is level 2 and is either based on estimated market prices for such or similar instruments, considering interest rates currently available for CEMEX to negotiate debt with the same maturities, or determined by discounting future cash flows using market-based interest rates currently available to CEMEX.

The fair values determined by CEMEX for its derivative financial instruments are level 2. There is no direct measure for the risk of CEMEX or its counterparties in connection with such instruments. Therefore, the risk factors applied for CEMEX's assets and liabilities originated by the valuation of such derivatives were extrapolated from publicly available risk discounts for other public debt instruments of CEMEX or of its counterparties.

The estimated fair value of derivative instruments fluctuates over time and is determined by measuring the effect of future relevant economic variables according to the yield curves shown in the market as of the reporting date. These values should be analyzed in relation to the fair values of the underlying transactions and as part of CEMEX's overall exposure to fluctuations in interest rates and foreign exchange rates. The notional amounts of derivative instruments do not represent amounts of cash exchanged by the parties, and consequently, there is no direct measure of CEMEX's exposure to the use of these derivatives. The amounts exchanged are determined on the basis of the notional amounts and other terms included in the derivative instruments.

As of December 31, 2019 and 2018, the carrying amounts of financial assets and liabilities and their respective fair values were as follows:

	2019		2018	
	<u>Carrying amount</u>	<u>Fair value</u>	<u>Carrying amount</u>	<u>Fair value</u>
Financial assets				
Derivative financial instruments (notes 13.2 and 16.4)	\$ 2	2	\$ 15	15
Other investments and non-current accounts receivable (note 13.2)	234	234	253	253
	<u>\$ 236</u>	<u>236</u>	<u>\$ 268</u>	<u>268</u>
Financial liabilities				
Long-term debt (note 16.1)	\$ 9,303	9,711	\$ 9,266	9,147
Other financial obligations (note 16.2)	1,044	1,071	1,592	1,552
Derivative financial instruments (notes 16.4 and 17)	46	46	21	21
	<u>\$ 10,393</u>	<u>10,828</u>	<u>\$ 10,879</u>	<u>10,720</u>

As of December 31, 2019 and 2018, assets and liabilities carried at fair value in the consolidated statements of financial position are included in the following fair value hierarchy categories (note 2.6):

2019	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
Assets measured at fair value				
Derivative financial instruments (notes 13.2 and 16.4)	\$ —	2	—	2
Investments in strategic equity securities (note 13.2)	3	—	—	3
Other investments at fair value through earnings (note 13.2)	—	34	—	34
	<u>\$ 3</u>	<u>36</u>	<u>—</u>	<u>39</u>
Liabilities measured at fair value				
Derivative instruments (notes 16.4 and 17)	\$ —	46	—	46
2018				
Assets measured at fair value				
Derivative financial instruments (notes 13.2 and 16.4)	\$ —	15	—	15

Investments in strategic equity securities (note 13.2)	11	—	—	11
Other investments at fair value through earnings (note 13.2)	<u>—</u>	<u>22</u>	<u>—</u>	<u>22</u>
	<u>\$ 11</u>	<u>37</u>	<u>—</u>	<u>48</u>
Liabilities measured at fair value				
Derivative financial instruments (notes 16.4 and 17)	<u>\$ —</u>	<u>21</u>	<u>—</u>	<u>21</u>

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16.4) DERIVATIVE FINANCIAL INSTRUMENTS

During the reported periods, in compliance with the guidelines established by its Risk Management Committee, the restrictions set forth by its debt agreements and its hedging strategy (note 16.5), CEMEX held derivative instruments, with the objectives of, as the case may be of: a) changing the risk profile or fixed the price of fuels and electric energy; b) foreign exchange hedging; c) hedge of forecasted transactions; and d) other corporate purposes.

As of December 31, 2019 and 2018, the notional amounts and fair values of CEMEX's derivative instruments were as follows:

	2019		2018	
	Notional amount	Fair value	Notional amount	Fair value
I. Net investment hedge	\$ 1,154	(67)	1,249	2
II. Interest rate swaps	1,000	(35)	1,126	(8)
III. Equity forwards on third party shares	74	1	111	2
IV. Fuel price hedging	96	1	122	(14)
	<u>\$ 2,324</u>	<u>(100)</u>	<u>2,608</u>	<u>(18)</u>

The caption "Financial income and other items, net" in the income statement includes gains and losses related to the recognition of changes in fair values of the derivative financial instruments during the applicable period, which represented net losses of \$1 in 2019, net gains of \$39 in 2018 and net gains of \$9 in 2017.

I. Net investment hedge

As of December 31, 2019 and 2018, there are Dollar / Mexican peso foreign exchange forward contracts under a program that started at around \$1,250, which notional can be adjusted in relation to hedged risks, with monthly revolving settlement dates from 1 to 24 months. The average life of these contracts is approximately one year. For accounting purposes under IFRS, CEMEX has designated this program as a hedge of CEMEX's net investment in Mexican pesos, pursuant to which changes in fair market value of these instruments are recognized as part of other comprehensive income in equity. For the years 2019, 2018 and 2017, these contracts generated losses of \$126, \$59 and gains of \$6, respectively, which partially offset currency translation results in each year recognized in equity generated from CEMEX's net assets denominated in Mexican pesos due to the appreciation of the peso in 2019 and 2018 and the depreciation of the peso in 2017.

II. Interest rate swap contracts

As of December 31, 2019 and 2018, CEMEX held interest rate swaps for a notional amount of \$1,000 the fair value of which represented a liability of \$35 and \$19, respectively, negotiated in June 2018 to fix interest payments of existing bank loans bearing floating rates. The contracts mature in June 2023. For accounting purposes under IFRS, CEMEX designated these contracts as cash flow hedges, pursuant to which, changes in fair value are initially recognized as part of other comprehensive income in equity and are subsequently allocated through financial expense as interest expense on the related bank loans is accrued. For the years ended in 2019 and 2018, changes in fair value of these contracts generated losses of \$26 and \$19, respectively, recognized in other comprehensive income.

As of December 31, 2018, CEMEX had an interest rate swap maturing in September 2022 associated with an agreement entered by CEMEX for the acquisition of electric energy in Mexico, the fair value of which represented assets of \$11. Pursuant to this instrument, during the tenure of the swap and based on its notional amount, CEMEX receives fixed rate of 5.4% and pays LIBOR. Changes in the fair value of this interest rate swap generated losses of \$6 in 2018 and \$6 in 2017, recognized in the income statement for each period. During 2019, CEMEX unwound and settled its interest rate swap.

III. Equity forwards on third party shares

As of December 31, 2019 and 2018, CEMEX maintained equity forward contracts with cash settlement in March 2021 and March 2020, respectively, over the price of 13.9 million shares of GCC in 2019 and 20.9 million in 2018, in connection with the sale of CEMEX's remaining GCC shares in September 2017 (note 13.1). During 2019 and 2018, CEMEX early settled a portion of these contracts for 6.9 and 10.6 million shares, respectively. Changes in the fair value of these instruments and early settlement effects generated gains of \$2 in 2019, gains of \$26 in 2018 and losses of \$24 in 2017 recognized within "Financial income and other items, net" in the income statement.

IV. Fuel price hedging

As of December 31, 2019 and 2018, CEMEX maintained forward and option contracts negotiated to hedge the price of certain fuels, including diesel, and gas, as solid fuel, in several operations for aggregate notional amounts of \$96 and \$122, respectively, with an estimated aggregate fair value representing assets of \$1 in 2019 and liabilities of \$14 in 2018. By means of these contracts, for its own consumption only, CEMEX fixed the price of these fuels over certain volumes representing a portion of the estimated consumption of such fuels in several operations. These contracts have been designated as cash flow hedges of diesel, gas or coal consumption, and as such, changes in fair value are recognized temporarily through other

comprehensive income and are recycled to operating expenses as the related fuel volumes are consumed. For the years 2019, 2018 and 2017, changes in fair value of these contracts recognized in other comprehensive income represented gains of \$15, losses of \$35 and gains of \$4, respectively.

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16.5) RISK MANAGEMENT

Enterprise risks may arise from any of the following situations: i) the potential change in the value of assets owned or reasonably anticipated to be owned, ii) the potential change in value of liabilities incurred or reasonably anticipated to be incurred, iii) the potential change in value of services provided, purchase or reasonably anticipated to be provided or purchased in the ordinary course of business, iv) the potential change in the value of assets, services, inputs, products or commodities owned, produced, manufactured, processed, merchandised, leased or sell or reasonably anticipated to be owned, produced, manufactured, processed, merchandising, leasing or selling in the ordinary course of business, or v) any potential change in the value arising from interest rate or foreign exchange rate exposures arising from current or anticipated assets or liabilities.

In the ordinary course of business, CEMEX is exposed to commodities risk, including the exposure from inputs such as fuel, coal, petcoke, fly-ash, gypsum and other industrial materials which are commonly used by CEMEX in the production process, and expose CEMEX to variations in prices of the underlying commodities. To manage this and other risks, such as credit risk, interest rate risk, foreign exchange risk, equity risk and liquidity risk, considering the guidelines set forth by the Parent Company's Board of Directors, which represent CEMEX's risk management framework and that are supervised by several Committees, CEMEX's management establishes specific policies that determine strategies oriented to obtain natural hedges to the extent possible, such as avoiding customer concentration on a determined market or aligning the currencies portfolio in which CEMEX incurred its debt, with those in which CEMEX generates its cash flows.

As of December 31, 2019 and 2018, these strategies are sometimes complemented with the use of derivative financial instruments as mentioned in note 16.4, such as the commodity forward contracts on fuels negotiated to fix the price of these underlying commodities.

The main risk categories are mentioned below:

Credit risk

Credit risk is the risk of financial loss faced by CEMEX if a customer or counterparty to a financial instrument does not meet its contractual obligations and originates mainly from trade accounts receivable. As of December 31, 2019 and 2018, the maximum exposure to credit risk is represented by the balance of financial assets. Management has developed policies for the authorization of credit to customers. Exposure to credit risk is monitored constantly according to the payment behavior of debtors. Credit is assigned on a customer-by-customer basis and is subject to assessments which consider the customers' payment capacity, as well as past behavior regarding due dates, balances past due and delinquent accounts. In cases deemed necessary, CEMEX's management requires guarantees from its customers and financial counterparties with regard to financial assets.

The Company's management has established a policy of low risk tolerance which analyzes the creditworthiness of each new client individually before offering the general conditions of payment terms and delivery. The review includes external ratings, when references are available, and in some cases bank references. Thresholds of purchase limits are established for each client, which represent the maximum purchase amounts that require different levels of approval. Customers that do not meet the levels of solvency requirements imposed by CEMEX can only carry out transactions by paying cash in advance. As of December 31, 2019, considering CEMEX's best estimate of potential expected losses based on the ECL model developed by CEMEX (note 9), the allowance for expected credit losses was \$116.

Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates, which only affects CEMEX's results if the fixed-rate long-term debt is measured at fair value. All of CEMEX's fixed-rate long-term debt is carried at amortized cost and therefore is not subject to interest rate risk. CEMEX's accounting exposure to the risk of changes in market interest rates relates primarily to its long-term debt obligations with floating interest rates, which, if such rates were to increase, may adversely affect its financing cost and the results for the period.

Nonetheless, it is not economically efficient to concentrate on fixed rates at a high point when the interest rates market expects a downward trend. That is, there is an opportunity cost for continuing to pay a determined fixed interest rate when the market rates have decreased and the entity may obtain improved interest rate conditions in a new loan or debt issuance. CEMEX manages its interest rate risk by balancing its exposure to fixed and variable rates while attempting to reduce its interest costs. In addition, when the interest rate of a debt instrument has turned relatively high as compared to current market rates, CEMEX intends to renegotiate the conditions or repurchase the debt, to the extent the net present value of the expected future benefits from the interest rate reduction would exceed the cost and commissions that would have to be paid in such renegotiation or repurchase of debt.

As of December 31, 2019 and 2018, 22% and 37%, respectively, of CEMEX's long-term debt was denominated in floating rates at a weighted-average interest rate of LIBOR plus 285 basis points in 2019 and 241 basis points in 2018. As of December 31, 2019 and 2018, if interest rates at that date had been 0.5% higher, with all other variables held constant, CEMEX's net income for 2019 and 2018 would have reduced by \$19 and \$19, respectively, as a result of higher interest expense on variable rate denominated debt. This analysis does not include the effect of interest rate swaps held by CEMEX during 2019 and 2018.

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Foreign currency risk

Foreign currency risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. CEMEX's exposure to the risk of changes in foreign exchange rates relates primarily to its operating activities. Due to its geographic diversification, CEMEX's revenues and costs are generated and settled in various countries and in different currencies. For the year ended December 31, 2019, 21% of CEMEX's net sales, before eliminations resulting from consolidation, were generated in Mexico, 27% in the United States, 5% in the United Kingdom, 6% in France, 3% in Germany, 2% in Spain, 5% in the Rest of Europe region, 4% in Colombia, 1% in Panama, 2% in Dominican Republic, 2% in Caribbean TCL, 4% in the Rest of South, Central America and the Caribbean region, 3% in Philippines, 5% in Israel, 2% in the Rest of Asia, Middle East and Africa and 8% in CEMEX's other operations.

Foreign exchange results incurred through monetary assets or liabilities in a currency different from its functional currency are recorded in the consolidated income statements. Exchange fluctuations associated with foreign currency indebtedness directly related to the acquisition of foreign entities and exchange fluctuations in related parties' long-term balances denominated in foreign currency that are not expected to be settled in the foreseeable future, are recognized in the statement of other comprehensive income. As of December 31, 2019 and 2018, excluding from the sensitivity analysis the impact of translating the net assets denominated in currencies different from CEMEX's presentation currency, considering a hypothetical 10% strengthening of the dollar against the Mexican peso, with all other variables held constant, CEMEX's net income for 2019 and 2018 would have decreased by \$76 and \$63, respectively, as a result of higher foreign exchange losses on CEMEX's dollar-denominated net monetary liabilities held in consolidated entities with other functional currencies. Conversely, a hypothetical 10% weakening of the U.S. dollar against the Mexican peso would have the opposite effect.

As of December 31, 2019, 67% of CEMEX's financial debt was Dollar-denominated, 23% was Euro-denominated, 5% was Pound-denominated and 2% was Philippine peso-denominated. Therefore, CEMEX had a foreign currency exposure arising mainly from the Dollar-denominated and Euro-denominated financial debt versus the several currencies in which CEMEX's revenues are settled in most countries in which it operates. The amounts of Pound-denominated financial debt and Philippine peso-denominated financial debt outstanding as of December 31, 2019, are closely related to the amount of revenues generated in such currencies and/or, in the case of the Euro-denominated financial debt, the amount of CEMEX's net assets denominated in such currencies; therefore, CEMEX considers that the foreign currency risk related to these amounts of debt is low. Nonetheless, CEMEX cannot guarantee that it will generate sufficient revenues in dollars, euros, pounds and Philippine pesos from its operations to service these obligations. As of December 31, 2019 and 2018, CEMEX had not implemented any derivative financing hedging strategy to address this foreign currency risk. Nonetheless, CEMEX may enter into derivative financing hedging strategies in the future if either of its debt portfolio currency mix, interest rate mix, market conditions and/or expectations changes.

As of December 31, 2019 and 2018, CEMEX's consolidated net monetary assets (liabilities) by currency are as follows:

	2019						
	Mexico	United States	Europe	South, Central America and the Caribbean	Asia, Middle East and Africa	Others ¹	Total
Monetary assets	\$ 721	1,017	1,001	280	592	190	3,801
Monetary liabilities	1,311	2,444	2,481	589	681	10,220	17,726
Net monetary assets (liabilities) ²	<u>\$ (590)</u>	<u>(1,427)</u>	<u>(1,480)</u>	<u>(309)</u>	<u>(89)</u>	<u>(10,030)</u>	<u>(13,925)</u>
Out of which:							
Dollars	\$ (23)	(1,427)	(5)	(72)	5	(6,715)	(8,237)
Pesos	(567)	—	—	—	—	(144)	(711)
Euros	—	—	(519)	1	—	(2,505)	(3,023)
Pounds	—	—	(807)	—	—	20	(787)
Other currencies	—	—	(149)	(238)	(94)	(686)	(1,167)
	<u>\$ (590)</u>	<u>(1,427)</u>	<u>(1,480)</u>	<u>(309)</u>	<u>(89)</u>	<u>(10,030)</u>	<u>(13,925)</u>
	2018						
	Mexico	United States	Europe	South, Central America and the Caribbean	Asia, Middle East and Africa	Others ¹	Total
Monetary assets	\$ 427	507	670	308	520	153	2,585
Monetary liabilities	1,007	1,703	2,043	552	624	10,215	16,144
Net monetary assets (liabilities) ²	<u>\$ (580)</u>	<u>(1,196)</u>	<u>(1,373)</u>	<u>(244)</u>	<u>(104)</u>	<u>(10,062)</u>	<u>(13,559)</u>
Out of which:							
Dollars	\$ (28)	(1,196)	8	(48)	1	(5,989)	(7,252)
Pesos	(552)	—	—	—	—	(278)	(830)
Euros	—	—	(538)	—	—	(2,694)	(3,232)
Pounds	—	—	(928)	—	—	(438)	(1,366)
Other currencies	—	—	85	(196)	(105)	(663)	(879)

\$ (580) (1,196) (1,373) (244) (104) (10,062) (13,559)

¹ Includes the Parent Company, CEMEX's financing subsidiaries, as well as Neoris N.V., among other entities.

² Includes assets held for sale and liabilities directly related with these assets considering that such items will be realized in the short term.

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Foreign currency risk – continued

In addition, considering that the Parent Company's functional currency for all assets, liabilities and transactions associated with its financial and holding company activities is the dollar (note 2.4), there is foreign currency risk associated with the translation of subsidiaries' net assets denominated in different currencies (peso, euro, pounds and other currencies) into dollars. When the dollar appreciates, the value of CEMEX's net assets denominated in other currencies decreases in terms of dollars, generating negative foreign currency translation and reducing stockholders' equity. Conversely, when the dollar depreciates, the value of CEMEX's net assets denominated in other currencies would increase in terms of dollars generating the opposite effect. As mentioned in note 16.4, CEMEX has implemented a long-term program for up to \$1,250 to hedge foreign currency translation in connection with its net assets denominated in pesos.

Equity risk

Equity risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in the market price of CEMEX, S.A.B. de C.V.'s and/or third party's shares. As described in note 16.4, considering specific objectives, CEMEX has entered into equity forward contracts on third-party shares, as well as capped calls based on the price of CEMEX, S.A.B. de C.V.'s own ADSs. Under these equity derivative instruments, there is a direct relationship from the change in the fair value of the derivative with the change in price of the underlying share. All changes in fair value of such derivative instruments are recognized in the income statement as part of "Financial income and other items, net." During 2017, all outstanding capped calls based on the price of CEMEX, S.A.B. de C.V.'s own ADSs were early settled.

As of December 31, 2019 and 2018, the potential change in the fair value of CEMEX's forward contracts in GCC shares that would result from a hypothetical, instantaneous decrease of 10% in the market price of GCC shares in dollars, with all other variables held constant, CEMEX's net income would have reduced by \$7 in 2019 and \$11 in 2018, as a result of additional negative changes in fair value associated with these forward contracts. A 10% hypothetical increase in the price of GCC shares would have generated approximately the opposite effect.

Liquidity risk

Liquidity risk is the risk that CEMEX will not have sufficient funds available to meet its obligations. In addition to cash flows provided by its operating activities, in order to meet CEMEX's overall liquidity needs for operations, servicing debt and funding capital expenditures and acquisitions, CEMEX relies on cost-cutting and operating improvements to optimize capacity utilization and maximize profitability, as well as borrowing under credit facilities, proceeds of debt and equity offerings, and proceeds from asset sales. CEMEX is exposed to risks from changes in foreign currency exchange rates, prices and currency controls, interest rates, inflation, governmental spending, social instability and other political, economic and/or social developments in the countries in which it operates, any one of which may materially affect CEMEX's results and reduce cash from operations. The maturities of CEMEX's contractual obligations are included in note 23.1.

As of December 31, 2019, current liabilities, which included \$1,443 of current maturities of debt and other financial obligations, exceed current assets by \$830. For the year ended December 31, 2019, CEMEX generated net cash flows provided by operating activities from continuing operations of \$1,284, after payments of interest and income taxes. The Company's management considers that CEMEX will generate sufficient cash flows from operations in the following twelve months. In addition, as of December 31, 2019, CEMEX has committed available lines of credit under its 2017 Credit Agreement, which includes the revolving credit facility and an undrawn tranche for a combined amount of \$1,135, as well as CEMEX's proven capacity to continually refinance and replace its short-term obligations, will enable CEMEX to meet any liquidity risk in the short-term.

As of December 31, 2019 and 2018, the potential requirement for additional margin calls under our different commitments is not significant.

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17) OTHER CURRENT AND NON-CURRENT LIABILITIES

17.1) OTHER CURRENT LIABILITIES

As of December 31, 2019 and 2018, consolidated other current liabilities were as follows:

	2019	2018
Provisions ¹	\$ 558	536
Interest payable	88	94
Other accounts payable and accrued expenses ²	313	266
Contract liabilities with customers (note 3) ³	225	234
	<u>\$1,184</u>	<u>1,130</u>

- ¹ Current provisions primarily consist of accrued employee benefits, insurance payments, accruals for legal assessments and others. These amounts are revolving in nature and are expected to be settled and replaced by similar amounts within the next 12 months.
- ² As of December 31, 2019 and 2018, includes \$22 and \$30, respectively, of the current portion of other taxes payable in Mexico.
- ³ As of December 31, 2019 and 2018, contract liabilities with customers included \$184 and \$195, respectively, of advances received from customers, as well as in 2019 the current portion of deferred revenues in connection with commercial agreements of Cemento Bayano, S.A. ("Cemento Bayano") of \$4 as described below.

17.2) OTHER NON-CURRENT LIABILITIES

As of December 31, 2019 and 2018, consolidated other non-current liabilities were as follows:

	2019	2018
Asset retirement obligations ¹	\$497	408
Accruals for legal assessments and other responsibilities ²	30	45
Non-current liabilities for valuation of derivative instruments	46	21
Environmental liabilities ³	29	29
Other non-current liabilities and provisions ^{4, 5}	<u>323</u>	<u>257</u>
	<u>\$925</u>	<u>760</u>

- ¹ Provisions for asset retirement include future estimated costs for demolition, cleaning and reforestation of production sites at the end of their operation, which are initially recognized against the related assets and are depreciated over their estimated useful life.
- ² Provisions for legal claims and other responsibilities include items related to tax contingencies.
- ³ Environmental liabilities include future estimated costs arising from legal or constructive obligations, related to cleaning, reforestation and other remedial actions to remediate damage caused to the environment. The expected average period to settle these obligations is greater than 15 years.
- ⁴ As of December 31, 2019 and 2018, includes \$31 and \$50, respectively, of the non-current portion of taxes payable in Mexico.
- ⁵ As of December 31, 2019, in connection with the sale of CEMEX's non-controlling interest in Cemento Interoceánico and the related commercial agreements between the Purchaser and Cemento Bayano (note 13.1), the balance includes deferred revenues of \$50 that will be amortized to the income statement as deliverables are fulfilled over the 10-year maturity of the agreements.

Changes in consolidated other current and non-current liabilities for the years ended December 31, 2019 and 2018, were as follows:

	2019					Total	2018
	Asset retirement obligations	Environmental liabilities	Accruals for legal proceedings	Valuation of derivative instruments	Other liabilities and provisions		
Balance at beginning of period	\$ 408	29	45	35	818	1,335	1,452
Additions or increase in estimates	141	1	18	26	1,455	1,641	1,382
Releases or decrease in estimates	(47)	1	(34)	—	(1,447)	(1,527)	(1,454)
Reclassifications	43	—	—	—	19	62	(20)
Accretion expense	(12)	—	—	—	(47)	(59)	(59)
Foreign currency translation	(36)	(2)	1	41	68	72	34
Balance at end of period	<u>\$ 497</u>	<u>29</u>	<u>30</u>	<u>102</u>	<u>866</u>	<u>1,524</u>	<u>1,335</u>
Out of which:							
Current provisions	<u>\$ —</u>	<u>—</u>	<u>—</u>	<u>56</u>	<u>543</u>	<u>599</u>	<u>536</u>

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18) PENSIONS AND POST-EMPLOYMENT BENEFITS

Defined contribution pension plans

The consolidated costs of defined contribution plans for the years ended December 31, 2019, 2018 and 2017 were \$50, \$45 and \$49, respectively. CEMEX contributes periodically the amounts offered by the pension plan to the employee's individual accounts, not retaining any remaining liability as of the financial statements' date.

Defined benefit pension plans

Most of CEMEX's defined benefit plans have been closed to new participants for several years. Actuarial results related to pension and other post-retirement benefits are recognized in earnings and/or in "Other comprehensive income" for the period in which they are generated, as appropriate. For the years ended December 31, 2019, 2018 and 2017, the effects of pension plans and other post-employment benefits are summarized as follows:

	Pensions			Other benefits			Total		
	2019	2018	2017	2019	2018	2017	2019	2018	2017
Net period cost (income):									
Recorded in operating costs and expenses									
Service cost	\$ 10	10	12	2	3	2	12	13	14
Past service cost	1	9	(3)	—	—	—	1	9	(3)
Settlements and curtailments	(3)	—	—	—	—	—	(3)	—	—
	<u>8</u>	<u>19</u>	<u>9</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>10</u>	<u>22</u>	<u>11</u>
Recorded in other financial expenses									
Net interest cost	<u>34</u>	<u>35</u>	<u>37</u>	<u>5</u>	<u>5</u>	<u>4</u>	<u>39</u>	<u>40</u>	<u>41</u>
Recorded in other comprehensive income									
Actuarial (gains) losses for the period	<u>203</u>	<u>(176)</u>	<u>1</u>	<u>7</u>	<u>—</u>	<u>(1)</u>	<u>210</u>	<u>(176)</u>	<u>—</u>
	<u>\$245</u>	<u>(122)</u>	<u>47</u>	<u>14</u>	<u>8</u>	<u>5</u>	<u>259</u>	<u>(114)</u>	<u>52</u>

As of December 31, 2019 and 2018, the reconciliation of the actuarial benefits' obligations and pension plan assets, are presented as follows:

	Pensions		Other benefits		Total	
	2019	2018	2019	2018	2019	2018
Change in benefits obligation:						
Projected benefit obligation at beginning of the period	\$2,375	2,794	79	73	2,454	2,867
Service cost	10	10	2	3	12	13
Interest cost	78	83	5	5	83	88
Actuarial (gains) losses	268	(265)	7	—	275	(265)
Additions through business combinations	—	—	—	6	—	6
Settlements and curtailments	(3)	—	—	—	(3)	—
Reduction from disposal of assets	(2)	—	—	—	(2)	—
Plan amendments	1	9	—	—	1	9
Benefits paid	(141)	(146)	(7)	(5)	(148)	(151)
Foreign currency translation	65	(110)	1	(3)	66	(113)
Projected benefit obligation at end of the period	<u>2,651</u>	<u>2,375</u>	<u>87</u>	<u>79</u>	<u>2,738</u>	<u>2,454</u>
Change in plan assets:						
Fair value of plan assets at beginning of the period	1,486	1,662	1	1	1,487	1,663
Return on plan assets	44	48	—	—	44	48
Actuarial gains (losses)	65	(89)	—	—	65	(89)
Employer contributions	103	81	7	5	110	86
Reduction for disposal of assets	(1)	—	—	—	(1)	—
Benefits paid	(141)	(146)	(7)	(5)	(148)	(151)
Foreign currency translation	43	(70)	—	—	43	(70)
Fair value of plan assets at end of the period	<u>1,599</u>	<u>1,486</u>	<u>1</u>	<u>1</u>	<u>1,600</u>	<u>1,487</u>
Net projected liability in the statement of financial position	<u>\$1,052</u>	<u>889</u>	<u>86</u>	<u>78</u>	<u>1,138</u>	<u>967</u>

For the years 2019, 2018 and 2017, actuarial (gains) losses for the period were generated by the following main factors as follows:

	2019	2018	2017
Actuarial (gains) losses due to experience	\$ 5	(58)	6
Actuarial (gains) losses due to demographic assumptions	(11)	(57)	(2)
Actuarial (gains) losses due financial assumptions	<u>216</u>	<u>(61)</u>	<u>(4)</u>

\$210 (176) —

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Pensions and post-employment benefits – continued

In 2019, net actuarial losses due to financial assumptions were mainly driven by a general decrease in the discount rates applicable to the calculation of the benefits' obligations mainly in the United Kingdom, the United States, Germany and Mexico, as market interest rates decrease globally in 2019 as compared to 2018, partially offset by actual returns in plan assets higher than estimated in the United Kingdom and the United States. In 2018, net actuarial gains due to financial assumptions were mainly generated by a general increase in the discounts rates applied for the calculation of the pension benefit obligations in the United Kingdom, Germany, United States and Mexico, among others, resulting from the increase in market interest rates after several years in which such rates reached historically low levels.

As of December 31, 2019 and 2018, based on the hierarchy of fair values, plan assets are detailed as follows:

	2019				2018			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash	\$ 45	16	—	61	\$ 36	—	—	36
Investments in corporate bonds	4	396	—	400	7	342	—	349
Investments in government bonds	90	450	—	540	84	345	—	429
Total fixed-income securities	139	862	—	1,001	127	687	—	814
Investment in marketable securities	223	157	—	380	259	79	—	338
Other investments and private funds	46	85	88	219	50	212	73	335
Total variable-income securities	269	242	88	599	309	291	73	673
Total plan assets	\$ 408	1,104	88	1,600	\$ 436	978	73	1,487

The most significant assumptions used in the determination of the benefit obligation were as follows:

	2019				2018			
	Mexico	United States	United Kingdom	Range of rates in other countries	Mexico	United States	United Kingdom	Rates ranges in other countries
Discount rates	8.75%	3.6%	2.1%	0.4% – 8.8%	10.8%	4.5%	2.9%	1.3% – 7.5%
Rate of return on plan assets	8.75%	3.6%	2.1%	0.4% – 8.8%	10.8%	4.5%	2.9%	1.3% – 7.5%
Rate of salary increases	4.0%	—	3.0%	2.3% – 6.8%	4.0%	—	3.3%	2.3% – 6.0%

As of December 31, 2019, estimated payments for pensions and other post-employment benefits over the next 10 years were as follows:

	2019
2020 ¹	\$156
2021	140
2022	142
2023	144
2024 – 2029	852

¹ The amount of estimated payments during the year 2020 includes the expected funding to the Company's plan assets.

As of December 31, 2019 and 2018, the aggregate projected benefit obligation ("PBO") for pension plans and other post-employment benefits and the plan assets by country were as follows:

	2019			2018		
	PBO	Assets	Deficit	PBO	Assets	Deficit
Mexico	\$ 203	24	179	\$ 168	30	138
United States	297	219	78	286	174	112
United Kingdom ¹	1,681	1,128	553	1,464	1,057	407
Germany	204	9	195	202	10	192
Other countries	353	220	133	334	216	118
	\$2,738	1,600	1,138	\$2,454	1,487	967

¹ Applicable regulation in the United Kingdom requires to maintain plan assets at a level similar to that of the obligations. Beginning in 2012, the pension fund receives annual dividends of \$20, increasing at a 5% rate per year, from a limited partnership (the “Partnership”), whose assets transferred by CEMEX UK of an approximate value of \$553, are leased back to CEMEX UK. The Partnership is owned, controlled and consolidated by CEMEX UK. In 2037, on expiry of the arrangement, the Partnership will be terminated and under the terms of the agreement, the remaining assets will be distributed to CEMEX UK. Distributions from the Partnership to the pension fund are considered as employer contributions to plan assets in the period in which they occur.

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Pensions and post-employment benefits – continued

In some countries, CEMEX has established health care benefits for retired personnel limited to a certain number of years after retirement. As of December 31, 2019 and 2018, the projected benefits obligation related to these benefits was \$62 and \$58, respectively, included within other benefits liability. The medical inflation rates used to determine the projected benefits obligation of these benefits in 2019 and 2018 for Mexico were 8.0% and 7.0%, respectively, for Puerto Rico 6.3% and 6.2%, respectively, and for the United Kingdom were 6.5% and 6.8%, respectively. In connection with the acquisition of TCL (note 4.1), CEMEX integrated TCL's consolidated health care benefits into its operations. For 2019 and 2018, the medical inflation rate used to determine the projected benefits obligation was 8.0% in 2019 and 5.0% in 2018.

Significant events of settlements or curtailments related to employees' pension benefits and other post-employment benefits during the reported periods

During 2019, CEMEX in France closed two legal entities resulting in a curtailment gain of \$3, which were recognized in the income statement for the period. There were no significant events during 2018. During 2017, CEMEX in Spain removed certain increases in pension benefits which resulted in an adjustment to past service cost generating gains of \$5 in 2017, recognized in the income statement for the year. In addition, due to the acquisition of TCL (note 4.1), CEMEX integrated TCL's consolidated pensions plans, which were fully funded, as well as TCL's consolidated health care benefits which represented an increase in the net projected liability of \$6 in 2018 upon conclusion of the purchase price allocation.

Sensitivity analysis of pension and other post-employment benefits

For the year ended December 31, 2019, CEMEX performed sensitivity analyses on the most significant assumptions that affect the PBO, considering reasonable independent changes of plus or minus 50 basis points in each of these assumptions. The increase (decrease) that would have resulted in the PBO of pensions and other post-employment benefits as of December 31, 2019 are shown below:

Assumptions:	Pensions		Other benefits		Total	
	+50 bps	-50 bps	+50 bps	-50 bps	+50 bps	-50 bps
Discount Rate Sensitivity	\$ (175)	196	(4)	5	(179)	201
Salary Increase Rate Sensitivity	8	(7)	—	—	8	(7)
Pension Increase Rate Sensitivity	126	(105)	—	—	126	(105)

Multiemployer defined benefit pension plans

In addition to the Company's sponsored plans, certain union employees in the United States and the United Kingdom are covered under multiemployer defined benefit plans administered by their unions. The Company's funding arrangements, rate of contributions and funding requirements were made in accordance with the contractual multiemployer agreements. The combined amounts contributed to the multiemployer plans were \$18 in 2019, \$17 in 2018 and \$17 in 2017. The Company expects to contribute approximately \$19 to the multiemployer plans in 2020.

In addition to the funding described in the preceding paragraph, CEMEX negotiated with a union managing a multiemployer plan in the United States the change of the plan from defined benefit to defined contribution beginning on September 29, 2019. This change generated a one-time settlement obligation of \$24 recognized in the income statement in 2019 as part of other expenses, net, against an accrued liability. Payments are expected to be made over the next 20 years though lump sum payment is allowable.

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19) INCOME TAXES

19.1) INCOME TAXES FOR THE PERIOD

The amounts of income tax expense in the statements of operations for 2019, 2018 and 2017 are summarized as follows:

	2019	2018	2017
Current income tax expense	\$143	99	184
Deferred income tax expense (revenue)	19	125	(168)
	<u>\$162</u>	<u>224</u>	<u>16</u>

19.2) DEFERRED INCOME TAXES

As of December 31, 2019 and 2018, the main temporary differences that generated the consolidated deferred income tax assets and liabilities are presented below:

	2019	2018
Deferred tax assets:		
Tax loss carryforwards and other tax credits	\$ 757	702
Accounts payable and accrued expenses	458	338
Intangible assets, net	57	142
Total deferred tax assets, gross	1,272	1,182
Presentation offset regarding same legal entity	(645)	(564)
	<u>627</u>	<u>618</u>
Deferred tax liabilities:		
Property, machinery and equipment and right-of-use asset, net	(1,323)	(1,283)
Investments and other assets	(42)	(29)
Total deferred tax liabilities, gross	(1,365)	(1,312)
Presentation offset regarding same legal entity	645	564
Total deferred tax liabilities, net in the statement of financial position	(720)	(748)
Net deferred tax liabilities	<u>\$ (93)</u>	<u>(130)</u>
Out of which:		
Net deferred tax liability in Mexican entities ¹	\$ (157)	(205)
Net deferred tax asset in Foreign entities ²	64	75
Net deferred tax liability	<u>\$ (93)</u>	<u>(130)</u>

¹ Net deferred tax liabilities in Mexico mainly refer to a temporary difference resulting when comparing at the reporting date the carrying amount of property, machinery and equipment, as per IFRS, and their corresponding tax values (remaining tax-deductible amount), partially offset by certain deferred tax assets from tax loss carryforwards that are expected to be recovered in the future against taxable income. When the book value is greater than the related tax value results in a deferred tax liability. In 2011, upon transition to IFRS, CEMEX elected to measure its fixed assets at fair value, which resulted in a significant increase in book value, mainly associated with the revaluation of mineral reserves. Such restated amounts are depleted to the income statement in a period over 35 years, generating accounting expense that is not tax-deductible; hence the temporary difference will gradually reverse over time but does not represent a payment obligation to the tax authority at the reporting date.

² Net deferred tax assets in foreign entities in 2019 and 2018 are mainly related to tax loss carryforwards recognized in prior years, mainly in the United States, that are expected to be recovered in the future against taxable income.

As of December 31, 2019 and 2018, balances of the deferred tax assets and liabilities included in the statement of financial position are located in the following entities:

	2019			2018		
	Asset	Liability	Net	Asset	Liability	Net
Mexican entities	\$189	(346)	(157)	\$174	(379)	(205)
Foreign entities	438	(374)	64	444	(369)	75
	<u>\$627</u>	<u>(720)</u>	<u>(93)</u>	<u>\$618</u>	<u>(748)</u>	<u>(130)</u>

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Deferred income taxes – continued

The breakdown of changes in consolidated deferred income taxes during 2019, 2018 and 2017 was as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Deferred income tax expense (revenue) in the income statement ¹	\$ 19	125	(168)
Deferred income tax revenue in stockholders' equity ²	(59)	(10)	(11)
Reclassifications ³	3	3	5
Change in deferred income tax during the period	<u>\$(37)</u>	<u>118</u>	<u>(174)</u>

¹ In 2017, includes net income tax revenue related to the recognition of deferred income tax assets in CEMEX's operations in the United States (note 19.4).

² In 2018, includes a deferred income tax revenue of \$8 in connection with the adoption of IFRS 9 on January 1, 2018.

³ In 2019, 2018 and 2017, refers to the effects of the reclassification of balances to assets held for sale and related liabilities (note 4.2).

Current and/or deferred income tax relative to items of other comprehensive income during 2019, 2018 and 2017 were as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Revenue related to foreign exchange fluctuations from intercompany balances (note 20.2)	\$(19)	(2)	(2)
Expense (revenue) associated to actuarial results (note 20.2)	(29)	31	—
Revenue related to derivative financial instruments (note 16.4)	(34)	(3)	—
Expense (revenue) from foreign currency translation and other effects	4	(38)	(11)
	<u>\$(78)</u>	<u>(12)</u>	<u>(13)</u>

As of December 31, 2019, consolidated tax loss and tax credits carryforwards expire as follows:

	<u>Amount of carryforwards</u>	<u>Amount of unrecognized carryforwards</u>	<u>Amount of recognized carryforwards</u>
2020	\$ 58	56	2
2021	202	176	26
2022	301	273	28
2023	437	432	5
2024 and thereafter	14,497	11,479	3,018
	<u>\$ 15,495</u>	<u>12,416</u>	<u>3,079</u>

As of December 31, 2019, in connection with CEMEX's deferred tax loss carryforwards presented in the table above, in order to realize the benefits associated with such deferred tax assets that have not been reserved, before their expiration, CEMEX would need to generate \$3,079 in consolidated pre-tax income in future periods. Based on the same forecasts of future cash flows and operating results used by CEMEX's management to allocate resources and evaluate performance in the countries in which CEMEX operates, along with the implementation of feasible tax strategies, CEMEX believes that it will recover the balance of its tax loss carryforwards that have been recognized before their expiration. In addition, CEMEX concluded that, the deferred tax liabilities that were considered in the analysis of recoverability of its deferred tax assets will reverse in the same period and tax jurisdiction of the related recognized deferred tax assets. Moreover, a certain amount of CEMEX's deferred tax assets refers to operating segments and tax jurisdictions in which CEMEX is currently generating taxable income or in which, according to CEMEX's management cash flow projections, will generate taxable income in the relevant periods before the expiration of the deferred tax assets.

The Parent Company does not recognize a deferred income tax liability related to its investments in subsidiaries considering that CEMEX controls the reversal of the temporary differences arising from these investments and management is satisfied that such temporary differences will not reverse in the foreseeable future.

19.3) RECONCILIATION OF EFFECTIVE INCOME TAX RATE

For the years ended December 31, 2019, 2018 and 2017, the effective consolidated income tax rates were as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Earnings before income tax	\$ 253	717	661
Income tax expense	(162)	(224)	(16)
Effective consolidated income tax expense rate ¹	<u>64.0%</u>	<u>31.2%</u>	<u>2.4%</u>

- ¹ The average effective tax rate equals the net amount of income tax revenue or expense divided by income or loss before income taxes, as these line items are reported in the income statement.

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Effective tax rate – continued

Differences between the financial reporting and the corresponding tax basis of assets and liabilities and the different income tax rates and laws applicable to CEMEX, among other factors, give rise to permanent differences between the statutory tax rate applicable in Mexico, and the effective tax rate presented in the consolidated statements of operations, which in 2019, 2018 and 2017 were as follows:

	2019		2018		2017	
	%	\$	%	\$	%	\$
Mexican statutory tax rate	30.0	76	30.0	215	30.0	198
Difference between accounting and tax expenses, net ¹	109.2	277	18.7	134	18.7	124
Non-taxable sale of equity securities and fixed assets	(13.4)	(34)	(4.6)	(33)	(15.0)	(99)
Difference between book and tax inflation	38.1	96	19.5	140	31.2	206
Differences in the income tax rates in the countries where CEMEX operates ²	(31.9)	(81)	(16.0)	(115)	(21.9)	(145)
Changes in deferred tax assets ³	(59.8)	(151)	(15.6)	(112)	(39.8)	(263)
Changes in provisions for uncertain tax positions	(5.2)	(13)	(1.8)	(13)	0.3	2
Others	(3.0)	(8)	1.0	8	(1.1)	(7)
Effective consolidated income tax expense rate	64.0	162	31.2	224	2.4	16

¹ In 2019, includes \$117 of difference between book and tax foreign exchange fluctuations of the Parent Company.

² Refers mainly to the effects of the differences between the statutory income tax rate in Mexico of 30% against the applicable income tax rates of each country where CEMEX operates. In 2018 and 2017, includes the effect related to the change in statutory tax rate in Colombia and the United States, respectively (note 19.4).

³ Refers to the effects in the effective income tax rate associated with changes during the period in the amount of deferred income tax assets related to CEMEX's tax loss carryforwards.

The following table compares variations between the line item "Changes in deferred tax assets" as presented in the table above against the changes in deferred tax assets in the statement of financial position for the years ended December 31, 2019 and 2018:

	2019		2018	
	Changes in the statement of financial position	Amounts in reconciliation	Changes in the statement of financial position	Amounts in reconciliation
Tax loss carryforwards generated and not recognized during the year	\$ —	84	—	139
Derecognition related to tax loss carryforwards recognized in prior years	(43)	(43)	(92)	(3)
Recognition related to unrecognized tax loss carryforwards	92	92	5	5
Foreign currency translation and other effects	6	18	(29)	(29)
Changes in deferred tax assets	\$ 55	151	(116)	112

19.4) UNCERTAIN TAX POSITIONS AND SIGNIFICANT TAX PROCEEDINGS

Uncertain tax positions

As of December 31, 2019 and 2018, as part of current provisions and non-current other liabilities (note 17), CEMEX has recognized provisions related to unrecognized tax benefits in connection with uncertain tax positions taken, in which it is deemed probable that the tax authority would differ from the position adopted by CEMEX. As of December 31, 2019, the tax returns submitted by some subsidiaries of CEMEX located in several countries are under review by the respective tax authorities in the ordinary course of business. CEMEX cannot anticipate if such reviews will result in new tax assessments, which would, should any arise, be appropriately disclosed and/or recognized in the financial statements. A summary of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2019, 2018 and 2017, excluding interest and penalties, is as follows:

	2019	2018	2017
Balance of tax positions at beginning of the period	\$ 44	80	55
Adoption effects of IFRIC 23 credited to retained earnings (note 2.1)	(6)	—	—
Additions for tax positions of prior periods	—	1	1
Additions for tax positions of current period	4	6	35
Reductions for tax positions related to prior periods and other items	(13)	(2)	(2)
Settlements and reclassifications	—	(7)	(6)
Expiration of the statute of limitations	(2)	(32)	(7)

Foreign currency translation effects	<u>1</u>	<u>(2)</u>	<u>4</u>
Balance of tax positions at end of the period	<u>\$ 28</u>	<u>44</u>	<u>80</u>

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Uncertain tax positions – continued

During 2017, considering recoverability analyses and cash flow projections, CEMEX recognized deferred income tax assets related to its operations in the United States for \$700 considering the then applicable income tax rate of 35%. However, regarding the Tax Cuts and Jobs Act (the “Act”) enacted on December 22, 2017, the U.S. statutory federal tax rate was reduced from 35% to 21%. For this reason, CEMEX reduced its net deferred tax assets by \$124. The reduction in the U.S. statutory federal tax rate is expected to positively impact CEMEX’s future after-tax earnings in the United States.

Tax examinations can involve complex issues, and the resolution of issues may span multiple years, particularly if subject to negotiation or litigation. Although CEMEX believes its estimates of the total unrecognized tax benefits are reasonable, uncertainties regarding the final determination of income tax audit settlements and any related litigation could affect the amount of total unrecognized tax benefits in future periods. It is difficult to estimate the timing and range of possible changes related to uncertain tax positions, as finalizing audits with the income tax authorities may involve formal administrative and legal proceedings. Accordingly, it is not possible to reasonably estimate the expected changes to the total unrecognized tax benefits over the next 12 months, although any settlements or statute of limitations expirations may result in a significant increase or decrease in the total unrecognized tax benefits, including those positions related to tax examinations being currently conducted.

Significant tax proceedings

As of December 31, 2019, the Company’s most significant tax proceedings are as follows:

- The tax authorities in Spain have challenged part of the tax loss carryforwards reported by CEMEX España covering the tax years from and including 2006 to 2009. During 2014, the tax authorities in Spain notified CEMEX España of fines in the aggregate amount of \$547. CEMEX España filed appeals against such resolution. On September 20, 2017, CEMEX España was notified about an adverse resolution to such appeals. CEMEX España challenged this decision and applied for the suspension of the payment before the National Court (*Audiencia Nacional*) until the case is finally resolved. On November 6, 2018 CEMEX España obtained a favorable resolution to this request from the National Court through the pledge of certain fixed assets. As of December 31, 2019, CEMEX believes an adverse resolution in this proceeding is not probable and no accruals have been created in connection with this proceeding. Nonetheless, as of December 31, 2019, it is difficult to assess with certainty the likelihood of an adverse result, and the appeals that CEMEX España has filed could take an extended amount of time to be resolved, but if adversely resolved, this proceeding could have a material adverse impact on CEMEX’s results of operations, liquidity or financial position.
- On April 6, 2018, CEMEX Colombia received a special proceeding from the Colombian Tax Authority (the “Tax Authority”), where certain deductions included in the 2012 income tax return were rejected. The Tax Authority assessed an increase in the income tax payable by CEMEX Colombia and imposed an inaccuracy penalty for amounts in Colombian pesos equivalent to \$38 of income tax and \$38 of penalty. On June 22, 2018, CEMEX Colombia filed a response to the special proceeding within the legal term. On December 28, 2018, CEMEX Colombia received an official review settlement ratifying the rejected deductible items and amounts. CEMEX Colombia filed a reconsideration request on February 21, 2019. If the proceeding would be adversely resolved in the final stage, CEMEX Colombia must pay the amounts determined in the official settlement plus interest accrued on the amount of the income tax adjustment until the payment date. As of December 31, 2019, in this stage of the proceeding, CEMEX considers that an adverse resolution in this proceeding after conclusion of all available defense procedures is not probable, however, it is difficult to assess with certainty the likelihood of an adverse result in the proceeding; but if adversely resolved, CEMEX believes this proceeding could have a material adverse impact on the operating results, liquidity or financial position of CEMEX. See note 26 for Subsequent Events in connection with this proceeding.
- In September 2012, the Tax Authority requested CEMEX Colombia to amend its income tax return for the year 2011 in connection with several deductible expenses including the amortization of goodwill. CEMEX Colombia rejected the arguments of the ordinary request and filed a motion requesting the case to be closed. The 2011 income tax return was under audit of the Tax Authority from August 2013 until September 5, 2018, when CEMEX Colombia was notified of a special requirement in which the Tax Authority rejects certain deductions included in such income tax return of the year 2011 and determined an increase in the income tax payable and imposed a penalty for amounts in Colombian pesos equivalent to \$26 of income tax and \$26 of penalty. CEMEX Colombia filed a response to the special requirement on November 30, 2018 and the tax authority notified the official review liquidation on May 15, 2019, maintaining the claims of the special requirement; therefore, CEMEX Colombia filed an appeal within the legal term on July 11, 2019. If the proceeding would be adversely resolved in its final stage, CEMEX Colombia would have to pay the amounts determined in the official settlement plus interest accrued on the amount of the income tax adjustment until the date of payment. As of December 31, 2019, in this stage of the proceeding, CEMEX considers that an adverse resolution in this proceeding after conclusion of all available defense procedures is not probable, however, it is difficult to assess with certainty the likelihood of an adverse result in the proceeding; but if adversely resolved, CEMEX believes this proceeding could have a material adverse impact on the operating results, liquidity or financial position of CEMEX.

- In April 2011, the Tax Authority notified CEMEX Colombia of a special proceeding rejecting certain deductions taken by CEMEX Colombia in its 2009 tax return considering they are not linked to direct revenues recorded in the same fiscal year, and assessed an increase in taxes to be paid by CEMEX Colombia and imposed a penalty for amounts in Colombian pesos equivalent to \$27 of income tax and \$27 of penalty, considering changes in law that reduced the original penalty. After several appeals of CEMEX Colombia to the Colombian Tax Authority's special proceeding in the applicable courts in which CEMEX Colombia obtained negative resolutions in each case over the years, in July 2014, CEMEX Colombia filed an appeal against this resolution before the Colombian State Council (*Consejo de Estado*). If the proceeding would be adversely resolved in the final stage, CEMEX Colombia must pay the amounts determined in the official settlement plus interest accrued on the amount of the income tax adjustment until the payment date. As of December 31, 2019, in this stage of the proceeding, CEMEX considers that an adverse resolution in this proceeding after conclusion of all available defense procedures is not probable, however, it is difficult to assess with certainty the likelihood of an adverse result in the proceeding; but if adversely resolved, CEMEX believes this proceeding could have a material adverse impact on the operating results, liquidity or financial position of CEMEX.

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20) STOCKHOLDERS' EQUITY

For purposes of the parent entities applying the equity method of accounting for its investments in subsidiaries under IFRS, total stockholders' equity in the stand-alone statement of financial position is the same as total controlling interest in the consolidated statement of financial position. Nonetheless, considering that: a) CEMEX, S.A.B. de C.V.'s presentation currency continues to be the Mexican peso; and b) under IAS 21, the financial statements in the new presentation currency should be reported as if such financial statements had always been reported in the new presentation currency, which implies that certain items in stockholders' equity including common stock, additional paid-in capital and retained earnings, among others, should be translated and accrued using historical exchange rates of the dates in which the transactions occurred. Although total amounts are the same, this methodology results in differences between line-by-line items within CEMEX's controlling interest and the Parent Company's stockholders' equity. Moreover, the official stockholders' equity for statutory purposes is that of the Parent Company as expressed in Mexican pesos. As of December 31, 2019, the line-by-line reconciliation between CEMEX's controlling interest, as reported using the dollar as presentation currency, and the Parent Company's stockholders' equity, using a convenience translation of the balances in pesos translated using the exchange rate of 18.92 as of December 31, 2019, is as follows:

	As of December 31, 2019	
	Consolidated	Parent Company
Common stock and additional paid-in capital ¹	\$ 10,424	7,836
Other equity reserves ^{1,2}	(2,724)	(32)
Retained earnings ²	1,621	1,517
Total controlling interest	\$ 9,321	9,321

- ¹ The difference relates to the method of accruing dollars using the historical exchange rates to translate each common stock and additional paid-in capital transaction denominated in Mexican pesos to dollars. The cumulative effect from these changes in exchange rates is recognized against other equity reserves.
- ² The difference relates with the method of accruing dollars using the exchange rates of each month during the period for income statement purposes. The cumulative effect from these changes in exchange rates is recognized against other equity reserves.

As of December 31, 2019 and 2018, stockholders' equity excludes investments in CPOs of the Parent Company held by subsidiaries of \$8 (20,541,277 CPOs) and \$10 (20,541,277 CPOs), respectively, which were eliminated within "Other equity reserves."

20.1) COMMON STOCK AND ADDITIONAL PAID-IN CAPITAL

As of December 31, 2019 and 2018, the breakdown of consolidated common stock and additional paid-in capital was as follows:

	2019	2018
Common stock	\$ 318	318
Additional paid-in capital	10,106	10,013
	<u>\$10,424</u>	<u>10,331</u>

As of December 31, 2019 and 2018 the common stock of CEMEX, S.A.B. de C.V. was presented as follows:

Shares ¹	2019		2018	
	Series A ²	Series B ²	Series A ²	Series B ²
Subscribed and paid shares	30,214,262,692	15,107,131,346	30,002,628,318	15,001,314,159
Unissued shares authorized for executives' stock compensation programs	881,442,830	440,721,415	936,375,524	468,187,762
Repurchased shares ³	315,400,000	157,700,000	307,207,506	153,603,753
Shares that guarantee/guaranteed the issuance of convertible securities ⁴	2,842,339,760	1,421,169,880	4,529,603,200	2,264,801,600
Shares authorized for the issuance of stock or convertible securities ⁵	<u>302,144,720</u>	<u>151,072,360</u>	<u>302,144,720</u>	<u>151,072,360</u>
	<u>34,555,590,002</u>	<u>17,277,795,001</u>	<u>36,077,959,268</u>	<u>18,038,979,634</u>

- ¹ As of December 31, 2019 and 2018, 13,068,000,000 shares correspond to the fixed portion, and 38,765,385,003 shares as of December 31, 2019 and 41,048,938,902 shares as of December 31, 2018, correspond to the variable portion.
- ² Series "A" or Mexican shares must represent at least 64% of CEMEX's capital stock; Series "B" or free subscription shares must represent at most 36% of CEMEX's capital stock.
- ³ Shares repurchased under the share repurchase program authorized by the Company's shareholders (note 20.2).
- ⁴ Refers to those shares that guarantee the conversion of outstanding convertible securities, of both, voluntary in 2019 and voluntary and mandatorily in 2018 and those that are leftover from the mandatory conversion that took place in November 2019 (note 16.2).

⁵ Shares authorized for issuance in a public offering or private placement and/or by issuance of new convertible securities.

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Common stock and additional paid-in capital – continued

On March 28, 2019, stockholders at the annual ordinary shareholders' meeting approved: (i) a cash dividend of \$150. The dividend was paid in two installments, the first installment, for half of the dividend was paid on June 17, 2019 at the rate of US\$0.001663 per share and the second installment for the remainder of the dividend was paid on December 17, 2019 at the rate of US\$0.001654 per share; (ii) the acquisition of own shares of up to \$500 or its equivalent in Mexican pesos, as the maximum amount of resources that through fiscal year 2019, and until the next ordinary annual shareholder's meeting is held, CEMEX may be used for the acquisition of its own shares or securities that represent such shares; (iii) a decrease of CEMEX's share capital, in its variable part for the amount in pesos equivalent to \$0.2826, through the cancellation of approximately 2 billion ordinary, registered and without par-value, treasury shares; (iv) a decrease of CEMEX's share capital, in its variable part for the amount in pesos equivalent to \$0.0670 by the cancellation of approximately 461 million ordinary, registered and without par-value, treasury shares; (v) the increase of CEMEX's share capital in its variable part for the amount \$22 thousands, through the issuance of 150 million ordinary shares. The subscription of shares representing the capital increase was made at a theoretical value of \$0.000143 dollars per share, and if applicable plus a premium defined by the Board of Directors. Until December 31, 2019, under the 2019 repurchase program, CEMEX has repurchased 157.7 million CEMEX CPOs, at a weighted-average price in pesos equivalent to \$0.3164 dollars per CPO. The total amount of these CPO repurchases, excluding value-added tax, was \$50.

On April 5, 2018, stockholders at the annual ordinary shareholders' meeting approved: (i) a resolution to increase the variable common stock by issuing up to 750 million shares (250 million CPOs), which will be kept in the Parent Company's treasury and used to be subscribed and paid pursuant to the terms and conditions of CEMEX's long-term compensation stock program; and (ii) the amount of a reserve of up to \$500 or its equivalent in pesos for the year ending December 31, 2018 and until the next ordinary annual shareholders meeting to be held in 2019 for purposes of a Parent Company's share repurchase program. On April 5, 2018, stockholders at the extraordinary shareholders' meeting approved a resolution to increase the variable common stock by issuing up to 453 million shares (151 million CPOs), which will be kept in the Parent Company's treasury for their subscription by means of issuance in a public offer or private placement and/or by issuance of new convertible securities. This authorization expires on April 4, 2023. Until December 31, 2018, under the 2018 repurchase program, CEMEX had repurchased 153.6 million CEMEX CPOs, at a weighted-average price in pesos equivalent to \$0.4883 dollars per CPO. The total amount of these CPO repurchases, excluding value-added tax, was \$75. These CPOs were cancelled during 2019 by resolution of the ordinary shareholders' meeting on March 28, 2019.

On March 30, 2017, stockholders at the annual ordinary shareholders' meeting approved resolutions to: (i) increase the variable common stock through the capitalization of retained earnings by issuing up to 1,687 million shares (562 million CPOs), which shares were issued, representing an increase in additional paid-in capital of \$506; and (ii) increase the variable common stock by issuing up to 258 million shares (86 million CPOs), which will be kept in the Parent Company's treasury to be used to preserve the anti-dilutive rights of note holders pursuant CEMEX's convertible securities (note 16.2).

In connection with the long-term executive share-based compensation programs (note 21) in 2019, 2018 and 2017, CEMEX issued 27.4 million CPOs, 49.3 million CPOs and 53.2 million CPOs, respectively, generating an additional paid-in capital of \$32 in 2019, \$34 in 2018 and \$42 in 2017 associated with the fair value of the compensation received by executives.

20.2) OTHER EQUITY RESERVES

As of December 31, 2019 and 2018 other equity reserves are summarized as follows:

	<u>2019</u>	<u>2018</u>
Cumulative translation effect, net of effects from perpetual debentures and deferred income taxes recognized directly in equity (notes 19.2 and 20.4)	\$(2,098)	(2,180)
Cumulative actuarial losses	(593)	(383)
Treasury shares repurchased under share repurchase program (note 20.1)	(50)	(75)
Effects associated with the Parent Company's convertible securities ¹	25	176
Treasury shares held by subsidiaries	(8)	(10)
	<u>\$(2,724)</u>	<u>(2,472)</u>

¹ Represents the equity component upon the issuance of CEMEX, S.A.B. de C.V.'s convertible securities described in note 16.2, as well as the effects associated with such securities in connection with the change in the Parent Company's functional currency (note 2.4). Upon conversion of these securities, the balances have been correspondingly reclassified to common stock and/or additional paid-in capital (note 16.1).

For the years ended December 31, 2019, 2018 and 2017, the translation effects of foreign subsidiaries included in the statements of comprehensive income were as follows:

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Foreign currency translation result ¹	\$ 88	(191)	328
Foreign exchange fluctuations from debt ²	19	120	(224)
Foreign exchange fluctuations from intercompany balances ³	(47)	(20)	(118)
	<u>\$ 60</u>	<u>(91)</u>	<u>(14)</u>

¹ These effects refer to the result from the translation of the financial statements of foreign subsidiaries and include the changes in fair value of foreign exchange forward contracts designated as hedge of a net investment (note 16.4).

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Other equity reserves – continued

- ² Generated by foreign exchange fluctuations over a notional amount of debt in CEMEX, S.A.B. de C.V., associated with the acquisition of foreign subsidiaries and designated as a hedge of the net investment in foreign subsidiaries (note 2.4).
- ³ Refers to foreign exchange fluctuations arising from balances with related parties in foreign currencies that are of a long-term investment nature considering that their liquidation is not anticipated in the foreseeable future and foreign exchange fluctuations over a notional amount of debt of a subsidiary of CEMEX España identified and designated as a hedge of the net investment in foreign subsidiaries.

20.3) RETAINED EARNINGS

The Parent Company's net income for the year is subject to a 5% allocation toward a legal reserve until such reserve equals one fifth of the common stock. As of December 31, 2019, the legal reserve amounted to \$95.

20.4) NON-CONTROLLING INTEREST AND PERPETUAL DEBENTURES

Non-controlling interest

Non-controlling interest represents the share of non-controlling stockholders in the equity and results of consolidated subsidiaries. As of December 31, 2019 and 2018, non-controlling interest in equity amounted to \$1,503 and \$1,572, respectively. In addition, in 2019, 2018 and 2017, non-controlling interests in consolidated net income were \$36, \$42 and \$75, respectively. These non-controlling interests arise mainly from the following CEMEX's subsidiaries:

- In February 2017, as described in note 4.1, CEMEX acquired a controlling interest in TCL, whose shares trade in the Trinidad and Tobago Stock Exchange. As of December 31, 2019 and 2018, there is a non-controlling interest in TCL of 30.17% of its common shares (see note 4.4 for certain relevant condensed financial information).
- In July 2016, CHP, a then indirect wholly owned subsidiary of CEMEX España, closed its initial offering of 2,337,927,954 common shares, or 45% of CHP's common shares. Pursuant to the repurchase of CHP's shares in the market during 2019, CEMEX's reduced the non-controlling interest in CHP from 45% in 2018 to 33.22% of CHP's outstanding common shares as of December 31, 2019. CHP's assets consist primarily of CEMEX's cement manufacturing assets in the Philippines (see note 4.4 for certain relevant condensed financial information).
- In November 2012, pursuant to a public offering in Colombia and an international private placement, CLH, a direct subsidiary of CEMEX España, concluded its initial offering of common shares. CLH's assets include substantially all of CEMEX's assets in Colombia, Panama, Costa Rica, Guatemala, El Salvador and until September 27, 2018 the operations in Brazil (note 4.2). As of December 31, 2019 and 2018, there is a non-controlling interest in CLH of 26.83% and 26.78%, respectively, of CLH's outstanding common shares, excluding shares held in treasury (see note 4.4 for certain relevant condensed financial information).

Perpetual debentures

As of December 31, 2019 and 2018, the balances of the non-controlling interest included \$443 and \$444, respectively, representing the notional amounts of perpetual debentures, which exclude any perpetual debentures held by subsidiaries.

Coupon payments on the perpetual debentures was included within "Other equity reserves" and amounted to \$29 in 2019, \$29 in 2018 and \$25 in 2017, excluding in all the periods the coupons accrued by perpetual debentures held by subsidiaries.

CEMEX's perpetual debentures have no fixed maturity date and there are no contractual obligations for CEMEX to exchange any series of its outstanding perpetual debentures for financial assets or financial liabilities. As a result, these debentures, issued entirely by Special Purpose Vehicles ("SPVs"), qualify as equity instruments and are classified within non-controlling interest, as they were issued by consolidated entities. In addition, subject to certain conditions, CEMEX has the unilateral right to defer indefinitely the payment of interest due on the debentures. The classification of the debentures as equity instruments was made under applicable IFRS. The different SPVs were established solely for purposes of issuing the perpetual debentures and were included in CEMEX's consolidated financial statements.

As of December 31, 2019 and 2018, the detail of CEMEX's perpetual debentures, excluding the perpetual debentures held by subsidiaries, was as follows:

Issuer	Issuance date	2019	2018	Repurchase option ¹	Interest rate
		Nominal amount	Nominal amount		
C10-EUR Capital (SPV) Ltd	May 2007	€ 64	€ 64	Tenth anniversary	EURIBOR + 4.79%
C8 Capital (SPV) Ltd	February 2007	\$135	\$135	Eighth anniversary	LIBOR + 4.40%
C5 Capital (SPV) Ltd	December 2006	\$61	\$61	Fifth anniversary	LIBOR + 4.277%
C10 Capital (SPV) Ltd	December 2006	\$175	\$175	Tenth anniversary	LIBOR + 4.71%

¹ Under the 2017 Credit Agreement, CEMEX is not permitted to call these debentures.

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21) EXECUTIVE SHARE-BASED COMPENSATION

CEMEX has long-term restricted share-based compensation programs providing for the grant of the CEMEX's CPOs to a group of eligible executives, pursuant to which, according to CEMEX's election, either new CPOs are issued, or CEMEX provides funds to the administration trust owned by the executives for the purchase of a portion or all of the required CPOs in the market for delivery to such executives under each annual program over a service period of four years (the "Ordinary Program"). The Parent Company's CPOs of the annual grant (25% of each annual ordinary program) are placed at the beginning of the service period in the executives' accounts to comply with a one-year restriction on sale. Under the Ordinary Programs, the Parent Company issued new shares for 27.4 million CPOs in 2019, 49.3 million CPOs in 2018 and 53.2 million CPOs in 2017, that were subscribed and pending for payment in the Parent Company's treasury and in addition, 21.2 million CPOs in 2019, net of taxes settled in cash, required for delivery were acquired by the executives' trust in the market on behalf of such executives. As of December 31, 2019, there are 157.0 million CPOs associated with these annual programs that are required for delivery in the following years as the executives render services.

Beginning in 2017, with the approval of the Parent Company's Board of Directors, for a group of key executives, the conditions of the program were modified for new awards by reducing the service period from four to three years and implementing tri-annual internal and external performance metrics, which depending on their weighted achievement, may result in a final payment of the Parent Company's CPOs at the end of the third year between 0% and 200% of the target for each annual program (the "key executives program"). During 2019 and 2018, no CPOs of the Parent Company were issued or delivered under the key executives' program.

Beginning January 1, 2013, those eligible executives belonging to the operations of CLH and subsidiaries ceased to receive Parent Company's CPOs and instead started receiving shares of CLH, sharing significantly the same conditions of CEMEX's plan also over a service period of four years. During 2019, 2018 and 2017, CLH physically delivered 393,855 shares, 258,511 shares and 172,981 shares, respectively, corresponding to the vested portion of prior years' grants, which were subscribed and held in CLH's treasury. As of December 31, 2019, there are 1,584,822 shares of CLH associated with these annual programs that are expected to be delivered in the following years as the executives render services.

In addition, beginning in 2018, those eligible executives belonging to the operations of CHP and subsidiaries ceased to receive Parent Company's CPOs and instead started receiving shares of CHP, sharing significantly the same conditions of CEMEX's plan. During 2019 and 2018, CHP provided funds to a broker for the purchase of 4,961,130 and 871,189 CHP's shares in the market, respectively, on behalf and for delivery to the eligible executives.

The combined compensation expense related to the programs described above as determined considering the fair value of the awards at the date of grant in 2019, 2018 and 2017, was recognized in the operating results against other equity reserves or a cash outflow, as applicable, and amounted to \$32, \$34 and \$42, respectively, including in 2019 and 2018 the cost of CEMEX's CPOs and the CHP's shares, as correspond, acquired in the market on behalf of the executives. The weighted-average price per CEMEX CPO granted during the period was determined in pesos and was equivalent to \$0.6263 dollars in 2019, \$0.7067 dollars in 2018 and \$0.7563 dollars in 2017. Moreover, the weighted-average price per CLH share granted during the period as determined in Colombian pesos was equivalent to \$1.31 dollars in 2019, \$2.14 dollars in 2018 and \$3.90 dollars in 2017. As of December 31, 2019 and 2018, there were no options or commitments to make payments in cash to the executives based on changes in the market price of the Parent Company's CPO, CLH's shares and/or CHP's shares.

22) EARNINGS PER SHARE

Basic earnings per share is calculated by dividing net income attributable to ordinary equity holders of the Parent Company (the numerator) by the weighted-average number of shares outstanding (the denominator) during the period. Shares that would be issued depending only on the passage of time should be included in the determination of the basic weighted-average number of shares outstanding. Diluted earnings per share should reflect in both the numerator and denominator the assumption that convertible instruments are converted, that options or warrants are exercised, or that ordinary shares are issued upon the satisfaction of specified conditions, to the extent that such assumption would lead to a reduction in basic earnings per share or an increase in basic loss per share. Otherwise, the effects of potential shares are not considered because they generate antidilution.

The amounts considered for calculations of earnings per share in 2019, 2018 and 2017 were as follows:

Denominator (thousands of shares)	2019	2018	2017
Weighted-average number of shares outstanding ¹	45,393,602	45,569,180	43,107,457
Capitalization of retained earnings ¹	—	—	1,687,295
Effect of dilutive instruments – mandatorily convertible securities (note 16.2) ²	—	708,153	708,153
Weighted-average number of shares – basic	45,393,602	46,277,333	45,502,905
Effect of dilutive instruments – share-based compensation (note 21) ²	470,985	316,970	237,102
Effect of potentially dilutive instruments – optionally convertible securities (note 16.2) ²	1,457,554	1,420,437	2,698,600
Weighted-average number of shares – diluted	<u>47,322,141</u>	<u>48,014,740</u>	<u>48,438,607</u>

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Earnings per share – continued

	2019	2018	2017
Numerator			
Net income from continuing operations	\$ 91	493	645
Less: non-controlling interest net income	36	42	75
Controlling interest net income from continuing operations	55	451	570
Plus: after tax interest expense on mandatorily convertible securities	1	3	5
Controlling interest net income from continuing operations – for basic earnings per share calculations	56	454	575
Plus: after tax interest expense on optionally convertible securities	18	23	48
Controlling interest net income from continuing operations – for diluted earnings per share calculations	\$ 74	477	623
Net income from discontinued operations	\$ 88	77	222
Basic earnings per share			
Controlling interest basic earnings per share	\$0.0031	0.0114	0.0174
Controlling interest basic earnings per share from continuing operations	0.0012	0.0098	0.0125
Controlling interest basic earnings per share from discontinued operations	0.0019	0.0016	0.0049
Controlling interest diluted earnings per share³			
Controlling interest diluted earnings per share	\$0.0031	0.0114	0.0174
Controlling interest diluted earnings per share from continuing operations	0.0012	0.0098	0.0125
Controlling interest diluted earnings per share from discontinued operations	0.0019	0.0016	0.0049

- ¹ The weighted-average number of shares outstanding in 2017 reflects the shares issued as a result of the capitalization of retained earnings approved by the general ordinary shareholders' meeting (the "Assembly") in such year. In 2019, the Assembly approved the delivery of a cash dividend, meanwhile, in 2018, the Assembly did not determine any cash dividend or capitalization of retained earnings (note 20.1).
- ² The number of Parent Company CPOs to be issued under the executive share-based compensation programs, as well as the total amount of Parent Company CPOs committed for issuance in the future under the mandatorily and optionally convertible securities, are computed from the beginning of the reporting period. The number of shares resulting from the executives' stock-based compensation programs is determined under the inverse treasury method.
- ³ For 2019, 2018 and 2017, the effects on the denominator and numerator of potential dilutive shares generate antidilution; therefore, there is no change between the reported basic earnings per share and diluted earnings per share.

23) COMMITMENTS

23.1) CONTRACTUAL OBLIGATIONS

As of December 31, 2019, CEMEX had the following contractual obligations:

Obligations	2019				Total
	Less than 1 year	1-3 years	3-5 years	More than 5 years	
Long-term debt	\$ 55	1,915	3,041	4,420	9,431
Leases ¹	333	546	295	552	1,726
Convertible notes ²	520	—	—	—	520
Total debt and other financial obligations ³	908	2,461	3,336	4,972	11,677
Interest payments on debt ⁴	469	870	720	471	2,530
Pension plans and other benefits ⁵	156	282	287	709	1,434
Acquisition of property, plant and equipment ⁶	155	30	1	3	189
Purchases of raw materials, fuel and energy ⁷	482	595	613	1,134	2,824
Total contractual obligations	\$ 2,170	4,238	4,957	7,289	18,654

- ¹ Represent nominal cash flows. As of December 31, 2019, the NPV of future payments under such leases was \$1,404, of which, \$508 refers to payments from 1 to 3 years and \$254 refers to payments from 3 to 5 years.
- ² Refers to the components of liability of the convertible notes described in note 16.2 and assumes repayment at maturity and no conversion of the notes.
- ³ The schedule of debt payments, which includes current maturities, does not consider the effect of any refinancing of debt that may occur during the following years. In the past, CEMEX has replaced its long-term obligations for others of a similar nature.

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Contractual obligations – continued

- ⁴ Estimated cash flows on floating rate denominated debt were determined using the floating interest rates in effect as of December 31, 2019.
- ⁵ Represents estimated annual payments under these benefits for the next 10 years (note 18), including the estimate of new retirees during such future years.
- ⁶ Refers mainly to the expansion of a cement-production line in the Philippines.
- ⁷ Future payments for the purchase of raw materials are presented on the basis of contractual nominal cash flows. Future nominal payments for energy were estimated for all contractual commitments on the basis of an aggregate average expected consumption per year using the future prices of energy established in the contracts for each period. Future payments also include CEMEX's commitments for the purchase of fuel.

23.2) OTHER COMMITMENTS

As of December 31, 2019 and 2018, CEMEX was party to other commitments for several purposes, including the purchase of fuel and energy, the estimated future cash flows over maturity of which are presented in note 23.1. A description of the most significant contracts is as follows:

- Beginning in April 2016, in connection with the Ventika S.A.P.I. de C.V. and the Ventika II S.A.P.I. de C.V. wind farms (jointly “Ventikas”) located in the Mexican state of Nuevo Leon with a combined generation capacity of 252 Megawatts (“MW”), CEMEX agreed to acquire a portion of the energy generated by Ventikas for its overall electricity needs in Mexico for a period of 20 years. The estimated annual cost of this agreement is \$18 (unaudited) assuming that CEMEX receives all its energy allocation. Nonetheless, energy supply from wind is variable in nature and final amounts are determined considering the final MW per hour (“MWh”) effectively received at the agreed prices per unit.
- On July 27, 2012, CEMEX signed a 10-year strategic agreement with International Business Machines Corporation (“IBM”) pursuant to which IBM provides, among others, data processing services (back office) in finance, accounting and human resources; as well as Information Technology (“IT”) infrastructure services, support and maintenance of IT applications in the countries in which CEMEX operates.
- Beginning in February 2010, for its overall electricity needs in Mexico CEMEX agreed with EURUS the purchase a portion of the electric energy generated for a period of no less than 20 years. EURUS is a wind farm with an installed capacity of 250 MW operated by ACCIONA in the Mexican state of Oaxaca. The estimated annual cost of this agreement is \$64 (unaudited) assuming that CEMEX receives all its energy allocation. Nonetheless, energy supply from wind source is variable in nature and final amounts will be determined considering the final MWh effectively received at the agreed prices per unit.
- CEMEX maintains a commitment initiated in April 2004 to purchase the energy generated by Termoeléctrica del Golfo (“TEG”) until 2027 for its overall electricity needs in Mexico. The estimated annual cost of this agreement is \$113 (unaudited) assuming that CEMEX receives all its energy allocation. Nonetheless, final amounts will be determined considering the final MWh effectively received at the agreed prices per unit.
- In regards with the above, CEMEX also committed to supply TEG and another third-party electrical energy generating plant adjacent to TEG all fuel necessary for their operations until the year 2027, equivalent to approximately 1.2 million tons of petroleum coke per year. CEMEX covers its commitments under this agreement acquiring the aforementioned volume of fuel from sources in the international markets and Mexico.
- CEMEX Zement GmbH (“CZ”), CEMEX’s subsidiary in Germany, held a long-term energy supply contract until 2023 with STEAG—Industriekraftwerk Rüdersdorf GmbH (“SIKW”) in connection with the overall electricity needs of CEMEX’s Rüdersdorf plant. Based on the contract, each year CZ has the option to fix in advance the volume of energy in terms of MW that it will acquire from SIKW, with the option to adjust the purchase amount one time on a monthly and quarterly basis. The estimated annual cost of this agreement is \$18 (unaudited) assuming that CEMEX receives all its energy allocation.
- On October 24, 2018, CEMEX, S.A.B. de C.V. entered into an energy financial hedge agreement in Mexico, commencing October 1, 2019 and for a period of 20 years. Through the aforementioned contract, the Company fixed the megawatt hour cost over an electric energy volume of 400 thousand megawatts hour per year, through the payment of US\$25.375 price per megawatt hour of electric power in exchange for a market price. The committed price to pay will increase 1.5% annually. The differential between the agreed price and the market price is settled monthly. CEMEX considers this agreement as a hedge for a portion of its aggregate consumption of electric energy in Mexico and recognizes the result of the exchange of price differentials described previously in the Income Statement as a part of the costs of energy. During 2019, the Company received \$1.1. CEMEX, S.A.B. de C.V. does not record this agreement at fair value due to the fact that there is not a deep market for electric power in Mexico that would effectively allow for its valuation.

23.3) COMMITMENTS FROM EMPLOYEE BENEFITS

In some countries, CEMEX has self-insured health care benefits plans for its active employees, which are managed on cost plus fee arrangements with major insurance companies or provided through health maintenance organizations. As of December 31, 2019, in certain plans, CEMEX has established stop-loss limits for continued medical assistance derived from a specific cause (e.g., an automobile accident, illness, etc.) ranging from 23 thousand dollars to 550 thousand dollars. In other plans, CEMEX has established stop-loss limits per employee regardless of the number of events ranging from 100 thousand dollars to 2.5 million dollars. The contingency for CEMEX if all employees qualifying for health care benefits required medical services simultaneously is significantly. However, CEMEX believes this scenario is remote. The amount expensed through self-insured health care benefits was \$62 in 2019, \$62 in 2018 and \$64 in 2017.

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24) LEGAL PROCEEDINGS

24.1) PROVISIONS RESULTING FROM LEGAL PROCEEDINGS

CEMEX is involved in various significant legal proceedings, the resolutions of which are deemed probable and imply the incurrence of losses and/or cash outflows or the delivery of other resources owned by CEMEX. As a result, certain provisions and/or losses have been recognized in the financial statements, representing the best estimate of cash outflows. Therefore, CEMEX believes that it will not make significant expenditure or incur significant losses in excess of the amounts recorded. As of December 31, 2019, the details of the most significant events giving effect to provisions or losses are as follows:

- On December 11, 2017, in the context of a market investigation opened in 2013 against five cement companies and 14 executives of those companies, including two former executives of CEMEX Colombia for purported practices that limited free competition, and after several processes over the years, the Colombian Superintendence of Industry and Commerce (*Superintendencia de Industria y Comercio* or the “SIC”) imposed a final fine to CEMEX Colombia for an amount equivalent to \$25. As a result, CEMEX Colombia recognized a provision for this amount against “Other expenses, net” in 2017. This fine was paid on January 5, 2018. On June 7, 2018, CEMEX Colombia filed a motion for annulment and reestablishment of right before the Administrative Court seeking for the annulment of the charges brought forth by the SIC and the restitution of the fine paid, with any adjustments provided by Colombian Law. This claim could take up to six years to be resolved. As of December 31, 2019, CEMEX is not able to assess the likelihood for the recovery of the fine imposed by the SIC.
- In January 2007, the Polish Competition and Consumers Protection Office (the “Protection Office”) initiated an antitrust proceeding against all cement producers in the country, including CEMEX Polska Sp. z o.o. (“CEMEX Polska”) and another subsidiary in Poland, arguing that there was an agreement between all cement producers in Poland regarding prices, market quotas and other sales conditions; and that the producers exchanged information, all of which limited competition in the Polish cement market. In December 2009, the Protection Office issued a resolution imposing fines on a number of Polish cement producers, including CEMEX Polska for the period of 1998 to 2006. After several appeals filed against the Protection Office’s fine before the relevant courts, in March 2018, CEMEX Polska’s fine was reduced from an amount in Polish Zloty equivalent to \$31 in 2009 to a final amount equivalent to \$18. This amount was paid in 2018. On November 19, 2018, CEMEX Polska filed an appeal before the Polish Supreme Court against the Appeal Court’s judgment seeking the reduction of the imposed fine, which was accepted by the Polish Supreme Court on August 8, 2019, as well as appeals of the Protection Office and those of other cement producers. A resolution by the Polish Supreme Court is expected during 2020. As of December 31, 2019, CEMEX is not able to assess the likelihood for the recovery of a portion of the fine imposed by the Protection Office.
- As of December 31, 2019, CEMEX had accrued environmental remediation liabilities through its subsidiaries in the United Kingdom pertaining to closed and current landfill sites for the confinement of waste, representing the NPV of such obligations for an amount in pounds sterling equivalent to \$174. Expenditure was assessed and quantified over the period in which the sites have the potential to cause environmental harm, which is generally consistent with the views taken by the regulator as being up to 60 years from the date of closure. The assessed expenditure included the costs of monitoring the sites and the installation, repair and renewal of environmental infrastructure.
- As of December 31, 2019, CEMEX had accrued environmental remediation liabilities through its subsidiaries in the United States for \$63, related to: a) the disposal of various materials in accordance with past industry practice, which might currently be categorized as hazardous substances or wastes; and b) the cleanup of sites used or operated by CEMEX, including discontinued operations, regarding the disposal of hazardous substances or waste, either individually or jointly with other parties. Most of the proceedings are in the preliminary stages and a final resolution might take several years. CEMEX does not believe that it will be required to spend significant sums on these matters in excess of the amounts previously recorded. The ultimate cost that may be incurred to resolve these environmental issues cannot be assured until all environmental studies, investigations, remediation work and negotiations with, or litigation against, potential sources of recovery have been completed.
- In 2012, in connection with a contract entered into in 1990 (the “Quarry Contract”) by CEMEX Granulats Rhône Méditerranée (“CEMEX GRM”), one of CEMEX’s subsidiaries in France, with SCI La Quinoniere (“SCI”) pursuant to which CEMEX GRM had drilling rights to extract reserves and do quarry remediation at a quarry in the Rhône region of France, SCI filed a claim against CEMEX GRM for breach of the Quarry Contract, requesting the rescission of such contract and damages plus interest for a revised amount in euros equivalent to \$75, arguing that CEMEX GRM partially filled the quarry allegedly in breach of the terms of the Quarry Contract. After many hearings, resolutions and appeals over the years, on March 13, 2018, the court of appeals issued an enforceable resolution ordering the rescission of the Quarry Contract and designated a judicial expert to: a) determine the volume of both excavated and backfilling materials, and b) give his opinion on the potential damages suffered by SCI, a process that is expected to end by February 28, 2020. CEMEX GRM appealed this resolution with the court of cassation, which on May 23, 2019 dismissed such appeal. As of December 31, 2019, CEMEX had accrued a provision through its subsidiaries in France for \$8 in connection with the best estimate of the remediation costs resulting from this claim. Although the final amount may differ, CEMEX considers that any such amount should not have a material adverse impact on CEMEX’s results of operations, liquidity and financial condition.

24.2) CONTINGENCIES FROM LEGAL PROCEEDINGS

CEMEX is involved in various legal proceedings, which have not required the recognition of accruals, considering that the probability of loss is less than probable. Nonetheless, until all stages in the procedures are exhausted in each proceeding, CEMEX cannot assure the achievement of a final favorable resolution. As of December 31, 2019, the most significant events with a quantification of the potential loss, when it is determinable and would not impair the outcome of the relevant proceeding, were as follows:

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Contingencies from legal proceedings – continued

- On September 20, 2018, triggered by heavy rainfall, a landslide causing damages and fatalities (the “Landslide”) occurred in a site located within an area covered by mining rights of APO Land & Quarry Corporation (“ALQC”) in Naga City, Cebu, Philippines. ALQC is a principal raw material supplier of APO Cement Corporation (“APO”), a wholly owned subsidiary of CHP. CEMEX indirectly owns a minority 40% stake in ALQC. On November 19, 2018, CHP and APO were served summons concerning an environmental class action lawsuit filed by 40 individuals and one legal entity (on behalf of 8,000 individuals allegedly affected by the Landslide) at the Regional Trial Court (the “Court”) of Talisay, Cebu, against CHP, ALQC, APO, the Mines and Geosciences Bureau of the Department of Environment and Natural Resources, the City Government of Naga, and the Province of Cebu. In the complaint, (i) among other allegations, plaintiffs claim that the Landslide occurred as a result of the defendants’ gross negligence; and (ii) seek, among other relief, (a) monetary damages for an amount in Philippine Pesos equivalent to \$85, (b) the establishment of a rehabilitation fund for an amount in Philippine Pesos equivalent to \$10, and (c) the issuance of a Temporary Environment Protection Order against ALQC aiming to prevent ALQC from performing further quarrying activities while the case is still pending. This last request was rejected by the Court on August 16, 2019. Moreover, on September 30, 2019 the Court dismissed the case against CHP and APO, order that is not yet final and that was appealed by the plaintiffs on November 26, 2019. As of December 31, 2019, CHP, APO and ALQC (collectively, the “Private Defendants”) hold and will defend its position that the Landslide occurred due to natural causes and deny any liability. In the event that the latter order is reconsidered, and a final adverse resolution is issued in this matter, plaintiffs will have the option to proceed against any one of ALQC, APO or CHP for satisfaction of the entirety of the potential judgement award, without the need to proceed against any other Private Defendant beforehand. Thus, ALQC’s, APO’s or CHP’s assets alone could be exposed to execution proceedings. As of December 31, 2019, because of the status and preliminary stage of the lawsuit, CEMEX is not able to assess with certainty the likelihood of an adverse result in this lawsuit; and, CEMEX is neither able to assess if a final adverse result in this lawsuit would have a material adverse impact on its results of operations, liquidity and financial position.
- On June 12, 2018, the Authority for Consumer Protection and Competition Defense of Panama (the “Panama Authority”) carried out an investigation against Cemento Bayano and other competitors for the alleged commission of monopolistic practices in relation to the gray cement and the ready-mix concrete markets. From this investigation, the Panama Authority considered the possible existence of monopolistic or anticompetitive practices consisting of: (i) price fixing and/or production restriction of gray cement sold to ready-mix concrete producers in Panama; and (ii) unilateral and/or joint predatory acts and/or cross subsidies in the ready-mix concrete market. In October 2018, the Panama Authority notified Cemento Bayano of a new information request in order to continue their investigation and confirm if there were violations to the law. In February 2019, Cemento Bayano finalized the delivery to the Panama Authority of the required information and documentation. Cemento Bayano considers it did not commit unlawful acts and is fully cooperating with the Panama Authority. As of December 31, 2019, Cemento Bayano has delivered all required information and the Panama Authority is analyzing the collected information. Considering the available judgment elements, CEMEX is not able to assess if this investigation will lead to any fines, penalties or remedies, or if such fines, penalties or remedies, if any, would have a material adverse effect on the Company’s results of operations, liquidity or financial position.
- Certain of CEMEX’s subsidiaries in the United States were notified of a grand jury subpoena dated March 29, 2018 issued by the United States Department of Justice (“DOJ”) related to an investigation of possible antitrust law violations in connection with CEMEX’s sales (and related sales practices) of gray Portland cement and slag in the United States and its territories. The objective of this subpoena is to gather facts necessary to make an informed decision about whether violations of U.S. law have occurred. CEMEX has been cooperating with the DOJ and is complying with the subpoena. As of December 31, 2019, given the status of the investigation, CEMEX is not able to assess if this investigation will lead to any fines, penalties or remedies, or if such fines, penalties or remedies, if any, would have a material adverse effect on the Company’s results of operations, liquidity or financial position.
- On March 16, 2018, a putative securities class action complaint was filed against the Parent Company and one of our members of the Board of Directors whom is also officer (the CEO) and other officer (the CFO) in the U.S. District Court for the Southern District of New York, on behalf of investors who purchased or otherwise acquired Parent Company’s securities between August 14, 2014 to March 13, 2018, inclusive. The complaint alleged violations are based in that press releases and filings to the United States Securities and Exchange Commission (“SEC”) that included materially false and misleading statements in connection with alleged misconduct relating to the Maceo Project and the potential regulatory or criminal actions that might arise as a result of such deficiencies. On July 12, 2019, the Judge granted CEMEX’s motion to dismiss the action but permitted plaintiffs an opportunity to re-plead. On August 1, 2019, plaintiffs filed an amended complaint, based on the same alleged violations, but changing the relevant class period that now starts on April 23, 2015 (before it was August 14, 2014) and including CLH as defendant in addition to CEMEX, S.A.B de C.V. All of the defendants moved to dismiss the action on September 5, 2019 and the plaintiffs filed an opposition brief on October 11, 2019 which was replied by the defendants on November 1, 2019. As of December 31, 2019, CEMEX is not able to assess the likelihood of an adverse result considering the current status and preliminary nature of this lawsuit, or if a final adverse result in this lawsuit would have a material adverse effect on the Company’s results of operations, liquidity or financial position.

- In December 2016, the Parent Company received subpoenas from the SEC seeking information to determine whether there have been any violations of the U.S. Foreign Corrupt Practices Act stemming from the Maceo Project. These subpoenas do not mean that the SEC has concluded that the Parent Company or any of its affiliates violated the law. The Parent Company has been cooperating with the SEC and intends to continue cooperating fully with the SEC. The DOJ also opened an investigation into this matter. In this regard, on March 12, 2018, the DOJ issued a grand jury subpoena to the Parent Company relating to its operations in Colombia and other jurisdictions. The Parent Company intends to cooperate fully with the SEC, the DOJ and any other investigatory entity. As of December 31, 2019, the Parent Company is unable to predict the duration, scope, or outcome of either the SEC investigation or the DOJ investigation, or any other investigation that may arise, or, because of the current status of the SEC investigation and the preliminary nature of the DOJ investigation, the potential sanctions which could be borne by the Parent Company, or if such sanctions, if any, would have a material adverse impact on CEMEX results of operations, liquidity or financial position.

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Contingencies from legal proceedings – continued

- In February 2014, the Egyptian Tax Authority requested Assiut Cement Company (“ACC”), a subsidiary of CEMEX in Egypt, the payment of a development levy on clay used in the Egyptian cement industry for an amount equivalent as of December 31, 2019 to \$20 for the period from May 5, 2008 to November 30, 2011. In March 2014, ACC appealed the levy and on September 2014 it was notified that it obtained a favorable resolution from the Ministerial Committee for Resolution of Investment Disputes, which instructed the Egyptian Tax Authority to cease claiming from ACC the aforementioned payment of the levy on clay. It was further decided that the levy on clay should not be imposed on imported clinker. Nonetheless, in May 2016, the Egyptian Tax Authority challenged ACC’s right to cancel the levy on clay before the North Cairo Court, which referred the cases to Cairo’s Administrative Judiciary Court. These cases have been adjourned by the Commissioners of the Cairo Administrative Judiciary Court to January 20, 2020 until the request submitted to the Committee for Resolution of Tax Disputes is resolved. CEMEX does not expect that such referral will prejudice ACC’s favorable legal position in this dispute. As of December 31, 2019, CEMEX does not expect a material adverse impact due to this matter in its results of operations, liquidity or financial position.
- In September 2012, in connection with a lawsuit submitted to a first instance court in Assiut, Egypt in 2011, the first instance court of Assiut issued a resolution in order to nullify the Share Purchase Agreement (the “SPA”) pursuant to which CEMEX acquired in 1999 a controlling interest in Assiut Cement Company. In addition, during 2011 and 2012, lawsuits seeking, among other things, the annulment of the SPA were filed by different plaintiffs, including 25 former employees of ACC, before Cairo’s State Council. After several appeals, hearings and resolutions over the years, the cases are held in Cairo’s 7th Circuit State Council Administrative Judiciary Court awaiting the High Constitutional Court to pronounce in regard to the challenges against the constitutionality of Law 32/2014 filed by the plaintiffs, which protects CEMEX’s investments in Egypt. These matters are complex and take several years to be resolved. As of December 31, 2019, CEMEX is not able to assess the likelihood of an adverse resolution regarding these lawsuits nor is able to assess if the Constitutional Court will dismiss Law 32/2014, but, regarding the lawsuits, if adversely resolved, CEMEX does not believe the resolutions in the first instance would have an immediate material adverse impact on CEMEX’s operations, liquidity and financial condition. However, if CEMEX exhausts all legal recourses available, a final adverse resolution of these lawsuits, or if the Constitutional Court dismisses Law 32/2014, this could adversely impact the ongoing matters regarding the SPA, which could have a material adverse impact on CEMEX’s operations, liquidity and financial condition.

In connection with the legal proceedings presented in notes 24.1 and 24.2, the exchange rates as of December 31, 2019 used by CEMEX to convert the amounts in local currency to their equivalents in dollars were the official closing exchange rates of 3.79 Polish zloty per dollar, 0.8917 Euro per dollar, 0.7550 British pounds sterling per dollar and 16.0431 Egyptian pounds per dollar.

In addition to the legal proceedings described above in notes 24.1 and 24.2, as of December 31, 2019, CEMEX is involved in various legal proceedings of minor impact that have arisen in the ordinary course of business. These proceedings involve: 1) product warranty claims; 2) claims for environmental damages; 3) indemnification claims relating to acquisitions or divestitures; 4) claims to revoke permits and/or concessions; and 5) other diverse civil, administrative, commercial and lawless actions. CEMEX considers that in those instances in which obligations have been incurred, CEMEX has accrued adequate provisions to cover the related risks. CEMEX believes these matters will be resolved without any significant effect on its business, financial position or results of operations. In addition, in relation to certain ongoing legal proceedings, CEMEX is sometimes able to make and disclose reasonable estimates of the expected loss or range of possible loss, as well as disclose any provision accrued for such loss, but for a limited number of ongoing legal proceedings, CEMEX may not be able to make a reasonable estimate of the expected loss or range of possible loss or may be able to do so but believes that disclosure of such information on a case-by-case basis would seriously prejudice CEMEX’s position in the ongoing legal proceedings or in any related settlement discussions. Accordingly, in these cases, CEMEX has disclosed qualitative information with respect to the nature and characteristics of the contingency but has not disclosed the estimate of the range of potential loss.

24.3) OTHER SIGNIFICANT PROCESSES

In connection with the cement plant located in the municipality of Maceo in Colombia, as described in note 14.1, as of December 31, 2019, the plant has not initiated commercial operations considering several significant processes for the profitability of the investment. The evolution and status of the main issues related to such plant are described as follows:

Memorandums of understanding

- In August 2012, CEMEX Colombia signed a memorandum of understanding (the “MOU”) with the representative of the entity CI Calizas y Minerales S.A. (“CI Calizas”), for the acquisition and transfer of assets mainly comprising land, the mining concession and the shares of Zona Franca Especial Cementera del Magdalena Medio S.A.S. (“Zomam”) (holder of the free trade zone concession). In addition, in December 2013, CEMEX Colombia engaged the same representative of CI Calizas to also represent in the name and on behalf of CEMEX Colombia in the acquisition of certain land adjacent to the plant, signing a new memorandum of understanding (the “Land MOU”). Under the MOU and the Land MOU, CEMEX Colombia made cash advances to this representative for amounts in Colombian Pesos equivalent to approximately \$13.4 million of a total of approximately \$22.5 million, and paid interest accrued over the unpaid committed amount for approximately \$1.2 million. These amounts considering the exchange rate as of December 31, 2016 of 3,000.75 Colombian Pesos per U.S. Dollar. In September 2016, after confirming irregularities in the acquisition processes by means of investigations and internal audits initiated in response to complaints received, which were reported to Colombia’s Attorney General (the “Attorney General”), providing the findings obtained, and considering that such payments were made in breach of the Parent Company’s and CLH’s policies, the Company decided to terminate the employment relationship with then those responsible for the Planning and Legal areas and accepted the resignation of the then Chief Executive Officer. Moreover, as a result of the findings and considering the available legal opinions as well as the low likelihood of recovering those advances, in December 2016, CEMEX Colombia write off such advances from its investments in progress (note 14.1) and cancelled the remaining advance payable.

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Expiration of property process and other related matters

- After the signing of the MOU, in December 2012, a former shareholder of CI Calizas, who presumptively transferred its shares of CI Calizas two years before the signing of the MOU, was linked to a process of expiration of property initiated by the Attorney General. Amongst other measures, the Attorney General ordered the seizure and consequent suspension of the right to dispose the assets subject to the MOU, including the shares of Zomam acquired by CEMEX Colombia before the beginning of such process. As a third party acting in good faith and free of guilt, CEMEX Colombia joined the expiration of property process fully cooperating with the Attorney General. As of December 31, 2019, it is estimated that a final resolution in the ongoing expiration of property process, under which is about to begin the evidentiary phase, may take between 10 and 15 years from its beginning. As of December 31, 2019, pursuant to the expiration of property process of the assets subject to the MOU and the failures to legally formalize the purchases under the Land MOU, CEMEX Colombia does not have the legal representation of Zomam, is not the rightful owner of the land and is not the assigned entity of the mining concession.

In addition, there is an ongoing criminal investigation that resulted in a legal resolution by means of which an indictment was issued to two of the Company's former officers and to CI Calizas' representative. CEMEX is not able to anticipate the actions that criminal judges may impose against these people.

Lease contract, mandate agreement and operation contract

- In July 2013, CEMEX Colombia signed with the provisional depository designated by the former Drugs National Department (then depository of the assets subject to the expiration of property process), which functions after its liquidation were assumed by the Administrator of Special Assets (*Sociedad de Activos Especiales S.A.S.* or the "SAE"), a lease contract for a period of five years by means of which CEMEX Colombia was duly authorized to build and operate the plant (the "Lease Contract"). Moreover, in 2014, the provisional depository granted a mandate (the "Mandate") to CEMEX Colombia for an indefinite period for the same purpose of continuing the construction and operation of the plant. On July 15, 2018, the aforementioned Lease Contract expired.
- On April 12, 2019, CEMEX Colombia, CCL and another of its subsidiaries reached a conciliatory agreement with the SAE and CI Calizas before the Attorney General's Office and signed a contract of Mining Operation, Manufacturing and Delivery Services and Leasing of Properties for Cement Production (the "Operation Contract"), which will allow CEMEX Colombia to continue using the assets subject to the aforementioned expiration of property process for an initial term of 21 years that can be renewed for 10 additional years, provided that the extension of the mining concession is obtained. The Operation Contract was signed by CI Calizas and Zomam with the authorization of the SAE as delegate of these last two companies, considering the following terms:
 - As consideration for entering into the agreement, CEMEX Colombia and/or a subsidiary will pay to CI Calizas and Zomam the following amounts in Colombian Pesos equivalent: a) an annual payment of \$15 to CI Calizas for the use of land that will be adjusted annually for changes in the Consumer Price Index; b) a single payment for the rental of the aforementioned land from July 2013 to the signing date, based on the agreed upon rental amounts, reducing the lease payments made by CEMEX Colombia prior to the signing of the Operation Contract; c) an additional single payment in Colombian Pesos equivalent to \$305 already paid for considerations not received during the negotiations of the Operation Contract; and d) a payment for the limestone extracted to date for an amount in Colombian Pesos equivalent to \$1 million payable in two installments, the first already paid and the second a year after the signing of the Operation Contract.
 - Once the Maceo Plant begins commercial operations, CEMEX Colombia and/or a subsidiary will pay on a quarterly basis: a) 0.9% of the net sales resulting from the cement produced in the plant as compensation to CI Calizas for the right of CEMEX Colombia to extract and use the mineral reserves; and b) 0.8% of the net sales resulting from the cement produced in the plant as payment to Zomam for cement manufacturing and delivery services, as long as Zomam maintains the Free Zone benefit, or, 0.3% of the aforementioned net sales exclusively for the use of equipments, in case that Zomam losses the benefits as Free Trade Zone.
 - The Operation Contract will continue in force regardless of the result in the expiration of property process, except that the applicable criminal judge would recognize ownership rights of the assets under expiration of property to CEMEX Colombia and its subsidiary, in which case the Operation Contract would no longer be needed and would be early terminated.

Under the presumption that CEMEX Colombia conducted itself in good faith, CEMEX considers that it will be able to keep ownership of the plant, and that the rest of its investments are protected by Colombian law, under which, if a person builds on the property of a third party, with full knowledge of such third party, this third party may: a) take ownership of the plant, provided a corresponding indemnity to CEMEX Colombia, or otherwise, b) oblige CEMEX Colombia to purchase the land. Nonetheless, had this not be the case, CEMEX Colombia would take all necessary actions to safeguard its rights. In the event that the expiration of property over the assets subject to the MOU is ordered in favor of the State, if the assets were adjudicated to a third party in a public tender offer, considering the signing of the Operation Contract, such third party would have to subrogate to the Operation Contract. As of December 31, 2019, CEMEX is not able to estimate whether the expiration of property over the assets subject to the MOU will be ordered in favor of the State, or, if applicable, if the assets would be adjudicated to a third party in a public tender offer.

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Status in connection with the commissioning of the plant

On September 3, 2019, CEMEX Colombia was notified of the resolution issued by Corantioquia's Directive Council, the regional environmental authority, regarding to the approval for the subtraction from the Integrated Management District ("IMD") of the Canyon of the Alicante River of 169.2 hectares corresponding to the surface of the Maceo Plant. As of December 31, 2019, after the signing of the Operation Contract and the subtraction of the plant's surface from the IMD, the commissioning of the Maceo plant and the conclusion of the access road remain suspended until favorable resolutions would be obtained in other significant procedures in process with the respective authorities to guarantee the commissioning of the plant, such as: a) modify the land use where the project is located to harmonize it with industrial and mining use; b) modify the environmental license to expand the extraction capacity of limestone, essential raw material for the production of cement, up to 990 thousand tons per year; and c) obtaining several permits for the conclusion of the access road. CEMEX Colombia continues to work to address these issues as soon as possible and limits its activities to those on which it has the relevant authorizations. As of December 31, 2019, CEMEX continues working intensively in the necessary processes for the commissioning of the plant, nonetheless, at this date, the Company cannot provide a precise date for the plant's startup.

25) RELATED PARTIES

All significant balances and transactions between the entities that constitute the CEMEX group have been eliminated in the preparation of the consolidated financial statements. These balances with related parties resulted primarily from: (i) the sale and purchase of goods between group entities; (ii) the sale and/or acquisition of subsidiaries' shares within the CEMEX group; (iii) the invoicing of administrative services, rentals, trademarks and commercial name rights, royalties and other services rendered between group entities; and (iv) loans between related parties. Transactions between group entities are conducted on arm's length terms based on market prices and conditions. When market prices and/or market conditions are not readily available, CEMEX conducts transfer pricing studies in the countries in which it operates to assure compliance with regulations applicable to transactions between related parties.

The definition of related parties includes entities or individuals outside the CEMEX group, which, due to their relationship with CEMEX, may take advantage of being in a privileged situation. Likewise, this applies to cases in which CEMEX may take advantage of such relationships and obtain benefits in its financial position or operating results. CEMEX's transactions with related parties are executed under market conditions.

For the years ended December 31, 2019, 2018 and 2017, in ordinary course of business, CEMEX has entered into transactions with related parties for the sale and/or purchase of products, sale and/or purchase of services or the lease of assets, all of which are not significant for CEMEX and to the best of CEMEX's knowledge are not significant to the related party, are incurred for non-significant amounts for CEMEX and are executed under market terms and conditions following the same commercial principles and authorizations applied to other third parties. These identified transactions, as applicable, are approved or ratified at least annually by the Parent Company's Board of Directors. For CEMEX, none of these transactions are material to be disclosed separately.

In addition, for the years ended December 31, 2019, 2018 and 2017, the aggregate amount of compensation of CEMEX, S.A.B. de C.V. Board of Directors, including alternate directors, and CEMEX's top management executives was \$40, \$38 and \$47, respectively. Of these amounts, \$34 in 2019, \$29 in 2018, \$35 in 2017, were paid as base compensation plus performance bonuses, including pension and post-employment benefits. In addition, \$6 in 2019, \$9 in 2018 and \$12 in 2017 of the aggregate amounts in each year, corresponded to allocations of Parent Company CPOs under CEMEX's executive share-based compensation programs.

26) SUBSEQUENT EVENTS

- On January 8, 2020, in connection with the assets held for sale in the United Kingdom (note 4.2), CEMEX announced that one of its subsidiaries signed an agreement for the sale of such assets to Breedon Group plc, for a total consideration of \$235, which includes \$31 of debt. Furthermore, on January 20, 2020, the Competition and Markets Authority (the "CMA") served an initial enforcement order on Breedon Group plc, Breedon Southern Limited and CEMEX Investments Limited in relation to the proposed acquisition of a portfolio of assets by Breedon Group plc from CEMEX Investments Limited. The initial enforcement requires both companies to operate separately while the CMA reviews the deal. CEMEX expects to finalize this divestment during the second quarter of 2020.
- On January 8, 2020, in connection with the tax proceeding related to the year 2012 in Colombia, CEMEX Colombia was notified of the resolution that concludes the reconsideration request in which, the Tax Authority confirmed the official settlement in all respects. CEMEX Colombia has a period of four months to appeal this resolution before the administrative courts. Notwithstanding this resolution, in this stage of the proceeding, CEMEX considers that an adverse resolution in this proceeding after conclusion of all available defense procedures is not probable, however, it is difficult to assess with certainty the likelihood of an adverse result in the proceeding; but if adversely resolved, CEMEX believes this proceeding could have a material adverse impact on the operating results, liquidity or financial position of CEMEX.
- In connection with the putative securities class action complaint filed in the U.S. District Court for the Southern District of New York on March 16, 2018, as amended on August 1, 2019 (note 24.2), on February 11, 2020, the aforementioned complaint was dismissed and has concluded as a result of the plaintiffs' agreement of not appealing the resolution.
- On March 4, 2020, pursuant to CHP's share rights offering, CEMEX informed that, an indirect subsidiary of CEMEX, increased its interest in CHP, from 66.78% to 75.66% after giving effect to the mentioned share rights offerings (note 20.4).

- On March 6, 2020, CEMEX announced that it successfully closed its divestment of the Kosmos assets in the United States, a partnership with a subsidiary of BUZZI UNICEM S.p.A. in which CEMEX held a 75% interest, to Eagle Materials Inc. for an aggregate amount of \$665, of which the proceeds to CEMEX were \$499 (note 4.2).

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- As part of the corporate reorganization approved on November 13, 2019 and the resulting intragroup mergers, by means of which, CEMEX, S.A.B. de C.V. merged and absorbed Empresas Tolteca de México, S.A. de C.V. and CEMEX, S.A.B. de C.V. merged and absorbed CEMEX México, S.A. de C.V., with effects among the participants beginning December 1, 2019 (note 27), on March 11, 2020, CEMEX announced that those mergers became effective on February 26, 2020 and March 9, 2020, respectively. As a result of the mergers, which were executed in compliance with CEMEX's debt agreements and other financial instruments, CEMEX México, S.A. de C.V. and Empresas Tolteca de México, S.A. de C.V. have ceased to guarantee CEMEX's indebtedness to the extent that they provided guarantees. In addition, shares of CEMEX México, S.A. de C.V. that were pledged or transferred to trustees to benefit certain creditors of CEMEX are no longer part of the collateral (note 16.1).
- In connection with the 2019 share repurchase program described in note 20.1, from March 10, 2020 to March 24, 2020, CEMEX, S.A.B. de C.V. repurchased 378.2 million CEMEX CPOs, at a weighted-average price of 5.01 pesos per CPO, which was equivalent to \$83.2, excluding value-added tax.
- On March 13, 2020, CEMEX paid \$521 as full settlement of the aggregate outstanding amount of the 2020 Convertible Notes which matured on March 15, 2020 without conversion (note 16.2).
- On March 11, 2020, the World Health Organization declared a pandemic the outbreak of the novel spread of the Coronavirus COVID-19 (the "COVID-19 Pandemic"), due to its rapid spread throughout the world, having affected as of such date more than 150 countries. Most governments took and are taking restrictive measures to contain the spread of such pandemic, which, have resulted, or may result in the following implications for the Company's business units: (i) temporary restrictions on, or suspended access to, or shutdown, or suspension or the halt of, its manufacturing facilities, personnel shortages, production slowdowns or stoppages and disruptions in the delivery systems; (ii) disruptions or delays in the supply chains, including shortages of materials, products and services on which the Company and its businesses depend; (iii) reduced availability of land and sea transport, including labor shortages, logistics constraints and increased border controls or closures; (iv) increased cost of materials, products and services on which the Company and its businesses depend; (v) reduced investor confidence and consumer spending in the countries where the Company operates; (vi) a general slowdown in economic activity, including construction, and a decrease in demand for the Company's products and services and industry demand generally; (vii) constraints on the availability of financing in the financial markets, if available at all; or (viii) inability to, if required, to further refinance the Company's existing indebtedness in desired conditions, if financing is available at all. The wide spread of COVID-19 Pandemic has adversely affected and may continue to adversely affect CEMEX's business continuity in some of the countries and markets in which the Company operates and offer its products and services.

These measures are negatively affecting and may further affect the workforce and operations of CEMEX, as well as the operations of its customers, distributors and suppliers. The Company maintains significant uncertainty regarding such measures and potential future measures, and restrictions on its access to its operating facilities, on its operations or on its workforce, or similar limitations for its distributors and suppliers, which could limit customer demand and/or the Company's capacity to meet customers demand, any of which could have a material adverse effect on CEMEX's financial condition and results of operations. The degree to which the COVID-19 Pandemic would affect the financial condition and results of operations of CEMEX will depend on future developments, which are highly uncertain, including, but not limited to, the duration and spread of the outbreak, its severity, the actions taken by local governments to contain the COVID-19 virus or ease its effects, and how quickly and to which extent normal economic and operating conditions will recover.

From the beginning of the COVID-19 Pandemic, CEMEX implemented, and has continue to implement, strict hygiene guidelines in all its operations and modified its manufacturing, selling and distributions processes in order to implement physical distancing for employees, and reduce the possibility of contagion. CEMEX's operations have begun to be affected to different degrees. As of the date hereof, according and in compliance to the quarantine measures enacted and implemented by the local governments, certain CEMEX's cement, ready-mix concrete and aggregates operating facilities in different parts of the world have been operating with reduced volumes and, in some cases, have temporarily halted operations due to the effects of the COVID-19 Pandemic. CEMEX most important segments are, or have been, affected as follows:

- In Mexico, CEMEX is operating in accordance with technical guidelines set by the Mexican government. CEMEX had initially, announced that the Company would temporarily halt all production and certain related activities in Mexico until April 30, 2020, in accordance with a decree (the "Mexico COVID-19 Decree") issued by the Health Ministry in Mexico in response to COVID-19 Pandemic. However, on April 7, 2020, relying on technical guidelines to the Mexico COVID-19 Decree issued by the Health Ministry of Mexico in the Official Mexican Gazette, CEMEX announced that the Company would be permitted to resume production and related activities in Mexico to support the development of sectors designated as essential by the Mexican government during the COVID-19 Pandemic.
- In most of CEMEX's South America, Central America and Caribbean region, the Company's operations have been temporarily affected. As a result of different regulations, CEMEX's operations in Trinidad and Tobago, Barbados and Panama, have been temporarily halted in most of its operations. Furthermore, in Colombia, CEMEX temporarily halted production and related activities on March 25, 2020. However, pursuant to a subsequent nationwide decree on April 8, 2020, CEMEX partially resumed certain operations that were deemed essential to attend to the COVID-19 pandemic in Colombia from April 13 to April 27, 2020, after which time our full operations in Colombia would resume. CEMEX has also adopted certain preventive measures with respect to its operations in Guatemala and the Dominican Republic, resulting in reduced activity and, in turn, production, in these countries.

- In Europe, Middle East, Africa and Asia region, CEMEX's main effects have been experienced in Spain and the Philippines, where its operations are running on a limited basis or have temporarily halted. Other countries have experienced negative effect on the market side, with drops in demand resulting in some temporary site closures.

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- In the United States, except for a few ready-mix concrete plants in the San Francisco area that have been temporarily shut down, all sites that were operational before the COVID-19 Pandemic remain active. Although states and local governments continue to modify terms of shelter in place orders, while CEMEX has seen some decrease in volumes attributable to COVID-19 Pandemic, CEMEX believes that its customers have generally adjusted to the increased operating safety requirements on projects under construction and do not seem to be ceasing their activity.

The International Monetary Fund recently published its World Economic Outlook report, which stated that as a result of the COVID-19 Pandemic and its effects on supply chains, global trade, mobility of persons, business continuity, lower demand for goods and services and oil prices, have significantly increased the risk of a deep global recession and projects the global economy to contract sharply. Even though some governments and central banks have implemented monetary and fiscal policies to curb the potential adverse effects on economies and financial markets, these measures may vary by country and may not be enough to deter material adverse economic and financial effects. The Company expects that the construction activity across most of the markets in which it operates will be adversely affected for a few months, once that restrictive measures would be lifted, before returning to pre-COVID-19 Pandemic levels.

The consequences resulting from the COVID-19 Pandemic have started to considerably affect the Company. CEMEX considers that, as the effects and duration of such pandemic may extend, there could be significant adverse effects in the future mainly in connection with: (i) increases in estimated credit losses on trade accounts receivable; (ii) impairment of long-lived assets including goodwill; (iii) variation in exchange rates; (iv) further disruption in supply chains; and (v) liquidity effects to meet the Company's short-term obligations. As of the issuance date of these financial statements it is not possible to make reliable estimates of potential unforeseen adverse effects on the Company's business from the COVID-19 Pandemic that may arise due to the uncertainty associated to the duration and consequences of the COVID-19 in the different markets in which the Company operates. Nonetheless, as events evolve during the year 2020 and there will be increased visibility identify and measure such effects, CEMEX will continue to evaluate and recognize the possible adverse effects in its financial condition, results of operations and cash flow.

In order to mitigate short-term liquidity risks to the Company, in March 2020, CEMEX drew down \$1,135 under the committed revolving facility, which consist of the full amount available under the committed revolving credit facility (note 16.1). CEMEX also has identified several cost-savings and cash enhancing initiatives for year-2020. Among other things, CEMEX intends to suspend, reduce or delay certain planned (i) capital expenditures; (ii) budgeted operating expenses in line with the evolution of demand per market in which CEMEX operates, (iii) production and, where required, inventory levels in all of CEMEX's markets in line with lower demand conditions; and (iv) corporate and global network activities that detract from the Company's business focus on managing the crisis and their respective operations. In addition, CEMEX is suspending its share repurchase program for the remainder of the year and, as previously informed, CEMEX, S.A.B. de C.V. will not be paying dividends during 2020. The Company projects it will generate sufficient cash flows from operations in 2020 which, will enable the Company to meet its short-term obligations.

Moreover, CEMEX shall undertake the following temporary measures, starting May 1st, 2020 and for a 90-day period and subject to all applicable laws and regulations, CEMEX, S.A.B. de C.V.'s Chairman of the Board of Directors, Chief Executive Officer and the members of our Executive Committee have agreed to forgo 25% of their salaries; the members of the Board of Directors of CEMEX, S.A.B. de C.V. have agreed to forgo 25% of their remuneration (including with respect to the upcoming meetings in April 2020). In addition, CEMEX has asked certain senior executives to voluntarily forgo 15% of their monthly salaries also during May, June and July 2020. Finally, CEMEX has asked other salaried employees to voluntarily defer 10% of their monthly salary during the same three-month period, the deferred amount to be paid in full during December 2020; and for hourly employees, where applicable, CEMEX will work to mitigate the effects on jobs derived from any operational shutdowns due to demand contraction or government measures as a consequence of the COVID-19 Pandemic and economic crisis.

Going concern

- As of December 31, 2019, the Company was in compliance with its financial covenants (note 16.1) under the 2017 Credit Agreement. Nonetheless, the anticipated adverse effects on the Company's business and operating performance in 2020 as a result of the COVID-19 Pandemic, as discussed above, could result in the Company not meeting its financial covenants under the 2017 Credit Agreement in a future compliance date during 2020, including the leverage and coverage ratios. Considering this, on April 23, 2020 the Company formally requested its lenders under the 2017 Credit Agreement to modify the financial covenants contained therein. CEMEX's failure to comply with such financial covenants could result in an event of default under the 2017 Credit Agreement, as well as the notes payable under the cross-default provisions thereof (note 16.1), which if that were to occur would materially and adversely affect the Company's business, financial condition, liquidity and results of operations. In seeking any modifications to the 2017 Credit Agreement, it is expected that the lenders under the 2017 Credit Agreement may require CEMEX to agree to additional restrictions, for example with respect to capital expenditures, share repurchase programs, acquisitions or the use of proceeds from asset sales and fundraising activities, and may increase the financial expense CEMEX would be required to pay under the 2017 Credit Agreement.

While CEMEX has historically successfully renegotiated credit facilities in the normal course, its ability to reach an agreement with its lenders to modify the 2017 Credit Agreement is not within the Company's control. As of the date of these financial statements, CEMEX cannot assure that it will be able to reach an agreement with its lenders to amend the 2017 Credit Agreement, or to waive any potential non-compliance of the 2017 Credit Agreement. In an event of default and in the absence of a waiver of compliance or a negotiation thereof, after certain procedures upon

CEMEX's lenders' request, the amounts due under the 2017 Credit Agreement would be accelerated and due on demand, along with amounts due under the notes payable. In that event, CEMEX would seek alternative financing arrangements, which it could not guarantee would be available to the Company at acceptable terms, or at all.

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The consolidated financial statements have been prepared under the principle of going concern. Considering past and recent experience of negotiations with its lenders, the Company anticipates it may be successful in its current negotiations with its lenders under the 2017 Credit Agreement, to avoid a potential event of default as explained above. However, as of the date of issuance of these financial statements, its ability to reach an agreement with its lenders to modify the 2017 Credit Agreement is not within the Company's control which raises significant doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

- The accompanying consolidated financial statements were authorized for issuance in the Company's annual report on Form 20-F, by the Chief Executive Officer of CEMEX, S.A.B. de C.V. on April 29, 2020, hereby updated for subsequent events, to be filed with the United States Securities and Exchange Commission.

27) MAIN SUBSIDIARIES

As mentioned in notes 4.4 and 20.4, as of December 31, 2019 and 2018, there are non-controlling interests on certain consolidated entities that are in turn holding companies of relevant operations. The main subsidiaries as of December 31, 2019 and 2018, which ownership interest is presented according to the interest maintained by CEMEX, were as follows:

Subsidiary	Country	% Interest	
		2019	2018
CEMEX México, S. A. de C.V. ¹	Mexico	—	100.0
CEMEX España, S.A. ²	Spain	99.9	99.9
CEMEX, Inc.	United States of America	100.0	100.0
CEMEX Latam Holdings, S.A. ³	Spain	73.2	73.2
CEMEX (Costa Rica), S.A.	Costa Rica	99.2	99.1
CEMEX Nicaragua, S.A.	Nicaragua	100.0	100.0
Assiut Cement Company	Egypt	95.8	95.8
CEMEX Colombia S.A. ⁴	Colombia	99.7	99.9
Cemento Bayano, S.A. ⁵	Panama	100.0	100.0
CEMEX Dominicana, S.A.	Dominican Republic	100.0	100.0
Trinidad Cement Limited	Trinidad and Tobago	69.8	69.8
Caribbean Cement Company Limited ⁶	Jamaica	79.0	79.0
CEMEX de Puerto Rico Inc.	Puerto Rico	100.0	100.0
CEMEX France Gestion (S.A.S.)	France	100.0	100.0
CEMEX Holdings Philippines, Inc. ⁷	Philippines	66.8	55.0
Solid Cement Corporation ⁷	Philippines	100.0	100.0
APO Cement Corporation ⁷	Philippines	100.0	100.0
CEMEX U.K.	United Kingdom	100.0	100.0
CEMEX Deutschland, AG.	Germany	100.0	100.0
CEMEX Czech Republic, s.r.o.	Czech Republic	100.0	100.0
CEMEX Polska sp. Z.o.o.	Poland	100.0	100.0
CEMEX Holdings (Israel) Ltd.	Israel	100.0	100.0
CEMEX SIA	Latvia	—	100.0
CEMEX Topmix LLC, CEMEX Supermix LLC and CEMEX Falcon LLC ⁸	United Arab Emirates	100.0	100.0
Neoris N.V. ⁹	The Netherlands	99.8	99.8
CEMEX International Trading LLC ¹⁰	United States of America	100.0	100.0
Transenergy, Inc. ¹¹	United States of America	100.0	100.0

¹ Effective among the participants beginning December 1, 2019, the corporate reorganization approved on November 13, 2019 was formalized, by means of which, CEMEX, S.A.B. de C.V. merged and absorbed CEMEX México, S.A. de C.V. and Empresas Tolteca de México, S.A. de C.V., among other Mexican subsidiaries merged by the Parent Company as part of the aforementioned reorganization. The merge of CEMEX México, S.A. de C.V. and Empresas Tolteca de México, S.A. de C.V. was registered in the Public Registry of Commerce in Monterrey on December 12, 2019 and November 26, 2019, respectively, and both will be effective with third-parties three months after such applicable date.

² CEMEX España is the indirect holding company of most of CEMEX's international operations.

³ The interest reported excludes own shares held in CLH's treasury. CLH, incorporated in Spain, trades its ordinary shares in the Colombian Stock Exchange under the symbol CLH, and is the indirect holding company of CEMEX's operations in Colombia, Panama, Costa Rica, Guatemala, Nicaragua and El Salvador (note 20.4).

⁴ Represents CEMEX's direct and indirect interest of 99.74% and 98.93% interest in ordinary and preferred shares, respectively. The interest reported excludes shares held in CEMEX Colombia, S.A.'s treasury.

⁵ Includes a 0.515% interest held in Cemento Bayano's treasury.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
As of December 31, 2019, 2018 and 2017
(Millions of U.S. dollars)

Main subsidiaries – Continued

- 6 Represents the aggregate ownership interest of CEMEX in this entity of 79.04%, which includes TCL’s direct and indirect 74.08% interest.
- 7 Represents CHP direct and indirect interest. CEMEX’s operations in the Philippines are conducted through CHP, subsidiary incorporated in the Philippines which since July 2016 trades its ordinary shares on the Philippines Stock Exchange under the symbol CHP (note 20.4).
- 8 CEMEX owns a 49% equity interest in each of these entities and holds the remaining 51% of the economic benefits, through agreements with other shareholders.
- 9 Neoris N.V. is the holding company of the entities involved in the sale of information technology solutions and services.
- 10 CEMEX International Trading, LLC is involved in the international trading of CEMEX’s products.
- 11 Formerly named Gulf Coast Portland Cement Co., it is engaged in the procurement and trading of fuels, such as coal and petroleum coke, used in certain operations of CEMEX.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

CEMEX, S.A.B. de C.V.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of CEMEX, S.A.B. de C.V. and subsidiaries (the Company) as of December 31, 2019 and 2018 and January 1, 2018, the related consolidated income statements, comprehensive income (loss), changes in stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018 and January 1, 2018, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2019, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated April 29, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Going concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 26 to the consolidated financial statements, the Company's future compliance with financial covenants under the 2017 Credit Agreement is uncertain given the impact of COVID-19. The Company's plans with regard to this matter, which includes its request of lenders under the 2017 Credit Agreement to modify the related financial covenants, are described in the Note 26. This condition raises substantial doubt about the Company's ability to continue as a going concern. The Consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Changes in Accounting Policy

As discussed in Note 2.1 to the consolidated financial statements, the Company has elected to change its presentation currency .

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Evaluation of the goodwill impairment analysis for certain groups of cash-generating units (Millions of U.S. dollars)

As discussed in Notes 2.10 and 15.2 to the consolidated financial statements, the goodwill balance as of December 31, 2019 was \$9,562 which represented 33% of the Company's total consolidated assets as of that date. The goodwill balance includes \$7,469 related to groups of cash-generating units (CGUs) in the United States of America (USA), \$494 related to groups of CGUs in Spain, and \$296 related to groups of CGUs in Colombia. Goodwill is tested for impairment upon the occurrence of internal or external indicators of impairment or at least once a year, during the last quarter of such year.

We identified the evaluation of the goodwill impairment analysis for these three groups of CGUs as a critical audit matter because the estimated value in use involved a high degree of subjectivity. Specifically, the long-term growth rate and the discount rate used to calculate the value in use of the three groups of CGUs were challenging to audit and minor changes to these assumptions had a significant effect on the value in use.

The primary procedures we performed to address this critical audit matter included the following.

We tested certain internal controls over the Company's goodwill impairment assessment process, including controls related to the determination of the value in use of the groups of CGUs, and the development of the long-term growth rate and discount rate assumptions.

We performed sensitivity analyses over the long-term growth rate and discount rate assumptions to assess their impact on the determination of the value in use of the groups of CGUs. We evaluated the Company's forecasted long-term growth rates for these groups of CGUs by comparing the growth assumptions to publicly available data.

We compared the Company's historical cash flows forecasts to actual results to assess the Company's ability to accurately forecast. In addition, we involved valuation professionals with specialized skills and knowledge, who assisted in:

- Evaluating the discount rate used for each group of CGUs, by comparing it with a discount rate range that was independently developed using publicly available data for comparable entities; and
- Developing an estimate of the value in use of the groups of CGUs using the Company's cash flow forecasts and determining an independently developed discount rate, and compared the results of our estimates to the Company's estimates of value in use.

Evaluation of certain tax and legal proceedings

As discussed in Notes 2.11, 2.13, 19.4 and 24 to the consolidated financial statements, the Company is involved in certain significant tax and legal proceedings in Mexico (Corporate), Spain, Egypt and Colombia.

The Company records provisions for legal proceedings when it is probable that an outflow of resource embodying economic benefits will be required to settle a present obligation and when the outflow can be reliably estimated. The Company discloses a contingency for legal proceedings whenever the likelihood of loss from the proceedings is considered possible or when it is considered probable but it is not possible to reliably estimate the amount of the outflow. The Company recognizes the effect of an uncertain tax treatment when it is probable that it would be accepted by the tax authorities. If an uncertain tax treatment is considered not probable of being accepted, the Company reflects the effect of uncertainty in its tax balances.

We identified the evaluation of certain tax and legal proceedings and the related provisions recognized and/or disclosures made as a critical audit matter because it required significant challenging auditor judgment and effort. This is specifically due to the nature of the estimates and assumptions, including judgments about the likelihood of loss and the amounts that would be paid in the event of loss.

The primary procedures we performed to address this critical audit matter included the following.

We tested certain internal controls over the Company's evaluation of tax and legal proceedings, including controls related to the evaluation of information from external and internal legal counsel, the determination of the likelihood of loss and the estimate of the loss amount, as well as controls over the financial statement disclosures.

We evaluated the competence and capabilities of the internal and external legal counsel that assessed the likelihood of loss and the estimate of the outflow of resources.

In addition, we assessed the amounts recorded and/or disclosed by:

- Reading letters received directly from the Company's internal and external legal counsel that evaluated and quantified the Company's probable or possible exposure to the tax and legal proceedings and, for certain specific tax and legal proceedings, comparing these assessments and estimates to those made by the Company; and
- Reading the latest correspondence between the Company, internal and external legal counsel and the various tax authorities or plaintiffs, as applicable.

We involved tax and legal professionals with specialized knowledge, who assisted in evaluating the conclusions reached by the Company.

We assessed that the disclosures reflect the underlying facts and circumstances of each tax and legal proceeding.

/s/ KPMG Cárdenas Dosal, S.C.

We have not been able to determine the specific year that we began serving as the Company's auditor, however we are aware that we have served as the Company's auditor since at least 1998.

Monterrey, N.L. México
April 29, 2020

INTERNAL CONTROL REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

CEMEX, S.A.B. de C.V.

Opinion on Internal Control Over Financial Reporting

We have audited CEMEX, S.A.B. de C.V. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, and January 1, 2018, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements), and our report dated April 29, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting as of December 31, 2019. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Cardenas Dosal, S. C.

Monterrey, N.L., Mexico
April 29, 2020