

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES

Consolidated Financial Statements

December 31, 2018, 2017 and 2016

(With Independent Auditor's Report Thereon)

INDEX

CEMEX, S.A.B. de C.V. and Subsidiaries:

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CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Income Statements
(Millions of Mexican pesos, except for earnings per share)

	Notes	Years ended December 31,		
		2018	2017	2016
Revenues	3	\$ 276,855	257,437	249,477
Cost of sales	2.16	(182,965)	(168,858)	(159,946)
Gross profit		93,890	88,579	89,531
Operating expenses	2.16, 5	(60,694)	(55,967)	(53,913)
Operating earnings before other expenses, net.....	2.1	33,196	32,612	35,618
Other expenses, net	6	(5,837)	(3,815)	(1,670)
Operating earnings		27,359	28,797	33,948
Financial expense	16	(12,597)	(19,301)	(21,487)
Financial income and other items, net	7	96	3,616	4,467
Share of profit of equity accounted investees.....	13.1	653	588	688
Earnings before income tax		15,511	13,700	17,616
Income tax	19	(4,467)	(520)	(3,125)
Net income from continuing operations		11,044	13,180	14,491
Discontinued operations	4.2	212	3,461	713
CONSOLIDATED NET INCOME		11,256	16,641	15,204
Non-controlling interest net income		789	1,417	1,173
CONTROLLING INTEREST NET INCOME		\$ 10,467	15,224	14,031
Basic earnings per share.....	22	\$ 0.22	0.34	0.32
Basic earnings per share from continuing operations	22	\$ 0.22	0.26	0.30
Diluted earnings per share	22	\$ 0.22	0.34	0.32
Diluted earnings per share from continuing operations	22	\$ 0.22	0.26	0.30

The accompanying notes are part of these consolidated financial statements.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
(Millions of Mexican pesos)

	Notes	Years ended December 31,		
		2018	2017	2016
CONSOLIDATED NET INCOME		\$ 11,256	16,641	15,204
Items that will not be reclassified subsequently to the income statement				
Net actuarial gains (losses) from remeasurements of defined benefit pension plans	18	3,404	3	(4,019)
Income tax recognized directly in other comprehensive income	19	(530)	(1)	788
		<u>2,874</u>	<u>2</u>	<u>(3,231)</u>
Items that are or may be reclassified subsequently to the income statement				
Effects from available-for-sale investments and derivative financial instruments designated as cash flow hedges	13.2, 16.4	(2,285)	275	36
Currency translation results of foreign subsidiaries	20.2	(1,700)	(9,519)	11,630
Income tax recognized directly in other comprehensive income	19	752	233	(696)
		<u>(3,233)</u>	<u>(9,011)</u>	<u>10,970</u>
Total items of other comprehensive income, net		<u>(359)</u>	<u>(9,009)</u>	<u>7,739</u>
TOTAL COMPREHENSIVE INCOME		10,897	7,632	22,943
Non-controlling interest comprehensive income		9	1,928	5,164
CONTROLLING INTEREST COMPREHENSIVE INCOME		\$ 10,888	5,704	17,779

The accompanying notes are part of these consolidated financial statements.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Financial Position
(Millions of Mexican pesos)

		December 31,	
		2018	2017
		Notes	
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	8	\$ 6,068	13,741
Trade accounts receivable, net	9	29,248	30,588
Other accounts receivable	10	6,149	4,970
Inventories, net	11	21,248	18,852
Assets held for sale.....	12.1	2,100	1,378
Other current assets	12.2	2,447	1,946
Total current assets		67,260	71,475
NON-CURRENT ASSETS			
Equity accounted investees	13.1	9,492	8,572
Other investments and non-current accounts receivable	13.2	5,271	5,758
Property, machinery and equipment, net	14	224,440	232,160
Goodwill and intangible assets, net	15	234,598	234,909
Deferred income tax assets	19.2	11,567	14,817
Total non-current assets		485,368	496,216
TOTAL ASSETS		\$ 552,628	567,691
LIABILITIES AND STOCKHOLDERS' EQUITY			
CURRENT LIABILITIES			
Short-term debt	16.1	\$ 883	16,973
Other financial obligations	16.2	12,739	19,362
Trade payables		49,846	46,428
Income tax payable		4,169	5,129
Other current liabilities	17	22,200	24,396
Liabilities directly related to assets held for sale	12.1	314	6
Total current liabilities		90,151	112,288
NON-CURRENT LIABILITIES			
Long-term debt	16.1	182,074	177,022
Other financial obligations	16.2	12,028	12,859
Employee benefits	18	18,937	23,653
Deferred income tax liabilities	19.2	14,900	15,801
Other non-current liabilities	17	15,005	15,649
Total non-current liabilities		242,944	244,984
TOTAL LIABILITIES		333,095	357,272
STOCKHOLDERS' EQUITY			
Controlling interest:			
Common stock and additional paid-in capital	20.1	145,322	144,654
Other equity reserves	20.2	11,869	13,483
Retained earnings	20.3	20,992	6,179
Net income		10,467	15,224
Total controlling interest		188,650	179,540
Non-controlling interest and perpetual debentures	20.4	30,883	30,879
TOTAL STOCKHOLDERS' EQUITY		219,533	210,419
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY		552,628	567,691

The accompanying notes are part of these consolidated financial statements.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
(Millions of Mexican pesos)

		Years ended December 31,		
		2018	2017	2016
	Notes			
OPERATING ACTIVITIES				
Consolidated net income		\$ 11,256	16,641	15,204
Discontinued operations.....		212	3,461	713
Net income from continuing operations		\$ 11,044	13,180	14,491
Non-cash items:				
Depreciation and amortization of assets	5	16,070	15,988	15,987
Impairment losses.....	6	1,188	2,936	2,518
Share of profit of equity accounted investees	13.1	(653)	(588)	(688)
Results on sale of subsidiaries, other disposal groups and others.....		(239)	(4,340)	(2,128)
Financial income and other items, net.....		12,501	15,685	17,020
Income taxes	19	4,467	520	3,125
Changes in working capital, excluding income taxes		(1,062)	8,039	11,017
Net cash flow provided by operating activities from continuing operations before financial expense, coupons on perpetual debentures and income taxes		43,316	51,420	61,342
Financial expense and coupons on perpetual debentures paid	20.4	(12,846)	(15,759)	(18,129)
Income taxes paid.....		(3,935)	(4,664)	(5,183)
Net cash flow provided by operating activities from continuing operations.....		26,535	30,997	38,030
Net cash flow provided by operating activities from discontinued operations		10	108	1,192
Net cash flows provided by operating activities		26,545	31,105	39,222
INVESTING ACTIVITIES				
Property, machinery and equipment, net	14	(11,631)	(10,753)	(4,563)
Acquisition and disposal of subsidiaries and other disposal groups, net	4.1, 13.1	(481)	23,841	1,424
Intangible assets and other deferred charges	15	(3,627)	(1,607)	(1,427)
Non-current assets and others, net		52	126	(914)
Net cash flows provided by (used in) investing activities from continuing operations		(15,687)	11,607	(5,480)
Net cash flows provided by (used in) investing activities from discontinued operations		6	6	1
Net cash flows provided by (used in) investing activities		(15,687)	11,607	(5,479)
FINANCING ACTIVITIES				
Sale of non-controlling interests in subsidiaries	20.4	6	(55)	9,777
Derivative instruments		392	246	399
Repayment of debt, net	16.1	(9,260)	(37,826)	(41,044)
Other financial obligations, net	16.2	(7,082)	(1,473)	(5,779)
Share repurchase program.....	20.1	(1,520)	6	6
Securitization of trade receivables		644	169	(999)
Non-current liabilities, net		(2,716)	(3,745)	(1,972)
Net cash flows used in financing activities		(19,542)	(42,684)	(39,618)
Decrease in cash and cash equivalents from continuing operations		(8,694)	(80)	(7,068)
Increase in cash and cash equivalents from discontinued operations.....		10	108	1,193
Cash conversion effect, net		1,011	2,097	2,169
Cash and cash equivalents at beginning of period		13,741	11,616	15,322
CASH AND CASH EQUIVALENTS AT END OF PERIOD	8	\$ 6,068	13,741	11,616
Changes in working capital, excluding income taxes:				
Trade receivables, net		\$ 207	1,489	(4,386)
Other accounts receivable and other assets		(1,670)	1,120	(286)
Inventories		(2,970)	526	(1,239)
Trade payables		4,680	3,635	13,729
Other accounts payable and accrued expenses		(1,309)	1,269	3,199
Changes in working capital, excluding income taxes		\$ (1,062)	8,039	11,017

The accompanying notes are part of these consolidated financial statements.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Statements of Changes in Stockholders' Equity
(Millions of Mexican pesos)

	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, 2015.....		\$ 4,158	115,466	15,273	8,582	143,479	20,289	163,768
Net income		6	6	6	14,031	14,031	1,173	15,204
Total other items of comprehensive income	20.2	6	6	3,748	6	3,748	3,991	7,739
Capitalization of retained earnings	20.1	4	6,966	6	(6,970)	6	6	6
Share-based compensation	21	6	742	6	6	742	6	742
Effects of perpetual debentures	20.4	6	6	(507)	6	(507)	6	(507)
Changes in non-controlling interest	20.4	6	6	6,279	6	6,279	3,498	9,777
Balance as of December 31, 2016.....		4,162	123,174	24,793	15,643	167,772	28,951	196,723
Net income		6	6	6	15,224	15,224	1,417	16,641
Total other items of comprehensive income, net	20.2	6	6	(9,520)	6	(9,520)	511	(9,009)
Capitalization of retained earnings	20.1	5	9,459	6	(9,464)	6	6	6
Effects of early conversion of convertible subordinated notes	16.2	4	7,059	(1,334)	6	5,729	6	5,729
Share-based compensation	21	6	791	26	6	817	6	817
Effects of perpetual debentures	20.4	6	6	(482)	6	(482)	6	(482)
Balance as of December 31, 2017.....		4,171	140,483	13,483	21,403	179,540	30,879	210,419
Effects from adoption of IFRS 9 (note 2.1).....					(411)	(411)	(5)	(416)
Balance as of January 1, 2018.....		4,171	140,483	13,483	20,992	179,129	30,874	210,003
Net income		6	6	6	10,467	10,467	789	11,256
Total other items of comprehensive income, net	20.2	6	6	421	6	421	(780)	(359)
Own shares purchased under share repurchase program.....	20.1	6	6	(1,520)	6	(1,520)	6	(1,520)
Share-based compensation	21	6	668	38	6	706	6	706
Effects of perpetual debentures	20.4	6	6	(553)	6	(553)	6	(553)
Balance as of December 31, 2018.....		\$ 4,171	141,151	11,869	31,459	188,650	30,883	219,533

The accompanying notes are part of these consolidated financial statements.

CEMEX, S.A.B. DE C.V. AND SUBSIDIARIES
Notes to the Consolidated Financial Statements
As of December 31, 2018, 2017 and 2016
(Millions of Mexican pesos)

1) DESCRIPTION OF BUSINESS

CEMEX, S.A.B. de C.V., founded in 1906, is a public stock corporation with variable capital (S.A.B. de C.V.) organized under the laws of the United Mexican States, or Mexico, 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, in order to facilitate the acquisition of financing and to run its operations in Mexico more efficiently, CEMEX, S.A.B. de C.V. carries out all businesses and operational activities of the cement, ready-mix concrete and aggregates sectors in Mexico.

The shares of CEMEX, S.A.B. de C.V. are listed on the Mexican Stock Exchange (öMSEö) as Ordinary Participation Certificates (öCPOsö) under the symbol öCEMEXCPOö. Each CPO represents two series öAö shares and one series öBö share of common stock of CEMEX, S.A.B. de C.V. In addition, CEMEX, S.A.B. de C.V.ö shares are listed on the New York Stock Exchange (öNYSEö) as *American Depositary Shares* (öADSsö) under the symbol öCXö. Each ADS represents ten CPOs.

The terms öCEMEX, S.A.B. de C.V.ö and/or the öParent Companyö 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 öCompanyö or öCEMEXö 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 January 30, 2019 considering the favorable recommendation of its Audit Committee. These financial statements will be submitted for authorization to the Annual General Ordinary Shareholders' Meeting of the Parent Company on March 28, 2019.

2) SIGNIFICANT ACCOUNTING POLICIES

2.1) BASIS OF PRESENTATION AND DISCLOSURE

The consolidated financial statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016, were prepared in accordance with International Financial Reporting Standards (öIFRSö) as issued by the International Accounting Standards Board (öIASBö).

Presentation currency and definition of terms

During the reported periods, the presentation currency of the consolidated financial statements was the Mexican peso. When reference is made to pesos or ö\$ö it means Mexican pesos. 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 öUS\$ö or ödollarsö, it means dollars of the United States of America (öUnited Statesö). When reference is made to öö or öeurosö, it means the currency in circulation in a significant number of European Union (öEUö) countries. When reference is made to öö or öpoundsö, 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 pesos or dollars, as applicable, represent those peso or dollar amounts or could be converted into pesos or dollars at the rate indicated. As of December 31, 2018 and 2017, translations of pesos into dollars and dollars into pesos, were determined for statement of financial position amounts using the closing exchange rate of \$19.65 for both years, and for statements of operations amounts, using the average exchange rates of \$19.26, \$18.88 and \$18.72 pesos per dollar for 2018, 2017 and 2016, respectively. When the amounts between parentheses are the peso and the dollar, the amounts were determined by translating the euro amount into dollars using the closing exchange rates at year-end and then translating the dollars into pesos as previously described.

Amounts disclosed in the notes in connection with tax and/or legal proceedings (notes 19.4 and 24), which are originated in jurisdictions where currencies are different from the peso or 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.

Newly issued IFRS adopted in 2018

IFRS 9, *Financial Instruments: classification and measurement* (“IFRS 9”) (note 2.6)

Effective beginning January 1, 2018, IFRS 9 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* (öIAS 39ö). CEMEX 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 aspects, 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 entityö business model for managing the financial asset:

- Cash and cash equivalents, trade and other accounts receivable and other financial assets, which were classified as öLoans and receivablesö and measured at amortized cost under IAS 39, are now classified as öHeld to collectö under IFRS 9 and continue to be measured at amortized cost.

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Newly issued IFRS adopted in 2018 – IFRS 9 – continued

- 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 as 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.

CEMEX assessed which business models applied to its financial assets and liabilities as of the date of initial application of IFRS 9 and classified its 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 CEMEX’s retained earnings.

In addition, under 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, 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. 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 for expected credit losses of \$570 recognized against retained earnings, net of a deferred income tax asset of \$154. The balances of such allowance and deferred tax assets increased from the reported amounts as of December 31, 2017 of \$2,145 and \$14,817, respectively, to \$2,715 and \$14,971 as of January 1, 2018, respectively, after the adoption effects.

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 of 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. CEMEX performed an analysis of its 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 its derivative financial instruments and there was no effect on CEMEX’s retained earnings.

IFRS 15, *Revenues from contracts with customers* (“IFRS 15”) (note 2.15)

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). IFRS 15 also includes disclosure requirements to provide comprehensive information about the nature, amount, timing and uncertainty of revenue and cash flows arising from the entity’s contracts with customers. IFRS 15 was effective on January 1, 2018 and supersedes all existing guidance on revenue recognition.

After an extensive analysis of its contracts with customers, business practices and operating systems for all the reported periods in all the countries in which the Company operates in order to review the different performance obligations and other promises (discounts, loyalty programs, rebates, etc.) included in such contracts, aimed to determine the differences in the accounting recognition of revenue with respect to prior IFRS, CEMEX adopted IFRS 15 on January 1, 2018 using the retrospective approach, without any significant effects on its operating results and financial situation, and restated the previously reported amounts of revenues for 2017 and 2016, resulting in an initial reclassification of other provisions to contract liabilities of \$660 as of January 1, 2016, and a subsequent net decrease in revenue of \$2 in 2016 and a net decrease in revenue of \$8 in 2017 related to IFRS 15 (note 3). These changes in revenues refer to certain discounts and rebates included in certain contracts and were recognized against deferred revenue as contract liabilities in the statement of financial position after IFRS 15 effects (note 17). Changes in equity upon adoption were not significant.

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Discontinued operations (note 4.2)

Considering the disposal of entire reportable operating segments, CEMEX's income statements present in the single line item of "Discontinued operations," the results of: a) its construction materials operations in Brazil sold on September 27, 2018 for the years 2016, 2017 and the period from January 1 to September 27, 2018; b) its Pacific Northwest Materials Business operations in the United States sold on June 30, 2017 for the year 2016 and the six-months ended June 30, 2017; c) its Concrete Pipe Business operations in the United States sold on January 31, 2017 for the year 2016 and the one-month ended January 31, 2017; and d) its operations in Bangladesh and Thailand sold on May 26, 2016 for the period from January 1 to May 26, 2016. Discontinued operations are presented net of income tax.

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. 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 2017 and 2016, in connection with the capitalization of retained earnings (note 20.1), the increases in common stock and additional paid-in capital associated against retained earnings for \$9,464 and \$6,970, respectively; and in connection with the CPOs issued as part of the executive share-based compensation programs (note 21), the total increases in equity for \$706 in 2018, \$817 in 2017 and \$742 in 2016;
- 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 \$5,468, the net decrease in other equity reserves for \$1,334, the increase in common stock for \$4 and the increase in additional paid-in capital for \$7,059; and
- In 2016, the increase in debt and in other current accounts receivable for \$148, in connection with a structure pursuant to which CEMEX Colombia, S.A. ("CEMEX Colombia") guarantees the debt of a trust committed to the development of housing projects in Colombia. CEMEX Colombia in turn holds a beneficial interest in the assets of such trust, which are comprised by titles to land (note 10).

Investing activities:

- In 2018, 2017 and 2016, in connection with the finance leases negotiated during the year, the increases in property, plant and equipment for \$88, \$2,096 and \$7, respectively (note 14).

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 purposes entities), by means of which the Parent Company 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 recycled 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 pesos 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 and the approximate average exchange rates for statement of financial position accounts and statement of operations accounts as of December 31, 2018, 2017 and 2016, were as follows:

Currency	2018		2017		2016	
	Closing	Average	Closing	Average	Closing	Average
Dollar	19.6500	19.2583	19.6500	18.8800	20.7200	18.7200
Euro	22.5169	22.7036	23.5866	21.4122	21.7945	20.6564
British Pound Sterling	25.0557	25.6059	26.5361	24.4977	25.5361	25.0731
Colombian Peso	0.0060	0.0065	0.0066	0.0064	0.0069	0.0062
Egyptian Pound	1.0943	1.0806	1.1082	1.0620	1.1234	1.8261
Philippine Peso	0.3737	0.3655	0.3936	0.3747	0.4167	0.3927

The financial statements of foreign subsidiaries are initially translated from their functional currencies into dollars and subsequently into pesos. Therefore, the foreign exchange rates presented in the table above between the functional currency and the peso represent the implied exchange rates resulting from this methodology. The peso to U.S. dollar exchange rate used by CEMEX is an average of free market rates available to settle its foreign currency transactions. No significant differences exist, in any case, between the foreign exchange rates used by CEMEX and those exchange rates published by the Central Bank of Mexico.

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."

The amount of cash and cash equivalents in the statement of financial position includes restricted cash and investments, comprised of deposits in margin accounts that guarantee certain of CEMEX's obligations, to the extent that the restriction will be lifted in less than three months from the statement of financial position reporting date. When the restriction period is greater than three months, such restricted cash and investments are not considered cash equivalents and are included within short-term or long-term "Other accounts receivable," as appropriate. When contracts contain provisions for net settlement, these restricted amounts of cash and cash equivalents are offset against the liabilities that CEMEX has with its counterparties.

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2.6) FINANCIAL INSTRUMENTS

As mentioned in note 2.1, IFRS 9 was adopted prospectively by CEMEX for the period starting January 1, 2018. The accounting policies under IFRS 9 are described as follows:

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 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.

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.

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Finance leases

Finance leases are recognized as financing liabilities against a corresponding fixed asset for the lesser of the market value of the leased asset and the NPV of future minimum lease payments, using the contract's implicit interest rate to the extent available, or the incremental borrowing cost. The main factors that determine a finance lease are: a) ownership title of the asset is transferred to CEMEX at the expiration of the contract; b) CEMEX has a bargain purchase option to acquire the asset at the end of the lease term; c) the lease term covers the majority of the useful life of the asset; and/or d) the NPV of minimum payments represents substantially all the fair value of the related asset at the beginning of the lease.

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 liability component represents the difference between the principal amount and the fair value of the conversion option premium, which reflects the equity 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 and investees

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 subsidiary of CEMEX. When the obligation should be settled in cash or through the delivery of another financial asset, CEMEX recognizes 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 CEMEX has the election to settle using its own shares.

In respect of a put option granted for the purchase of an investee, CEMEX would recognize a liability against a loss in the statements of operations whenever the estimated purchase price exceeds the fair value of the net assets to be acquired by CEMEX, had the counterparty exercised its right to sell. As of December 31, 2018 and 2017, there were no written put options.

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).

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Fair value measurements – continued

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 quote 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 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, whereas, if an obsolescence situation occurs, the inventory obsolescence reserve is increased. In both 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 (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, 2018, the average useful lives by category of fixed assets were as follows:

	Years
Administrative buildings.....	32
Industrial buildings	29
Machinery and equipment in plant	16
Ready-mix trucks and motor vehicles	8
Office equipment and other assets	6

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.

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 on fixed assets is expensed as incurred. Advances to suppliers of fixed assets are presented as part of other long-term accounts receivable.

The useful lives and residual values of property, machinery and equipment are reviewed at each reporting date and adjusted if appropriate.

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 correction 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.

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Business combinations, goodwill and other intangible assets – continued

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 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 maximum useful lives that range from 30 to 100 years, depending on the sector and the expected life of the related reserves. As of December 31, 2018, 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, intangible assets of definite life and other investments

These assets are tested for impairment upon the occurrence of a significant adverse event, 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 determined by 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.

Impairment of long-lived assets – Goodwill

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. 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 and is confident and can demonstrate its ability, based on past experience, to forecast cash flows accurately over that longer period. 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.

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Impairment of long-lived assets – Goodwill – continued

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. Likewise, the amounts of discounted estimated future cash flows are significantly sensitive to the weighted average cost of capital (discount rate) applied. The higher the growth rate in perpetuity applied, the higher the amount of undiscounted future cash flows by group of CGUs obtained. Conversely, 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, 2018 and 2017, 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 until 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.

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.

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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: a) defined benefit pension plans; and b) other post-employment benefits, basically 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, based on actuarial estimations of the benefits' present value with 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. 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.

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.

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, and they are measured using a cumulative probability model. Each position has been considered on its own, regardless of its relation to any other broader tax settlement. The high 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.

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Income taxes – continued

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, 2018, 2017 and 2016, the statutory tax rates in CEMEX’s main operations were as follows:

Country	2018	2017	2016
Mexico	30.0%	30.0%	30.0%
United States.....	21.0%	35.0%	35.0%
United Kingdom.....	19.3%	19.3%	20.0%
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.....	37.0%	40.0%	40.0%
Egypt.....	22.5%	22.5%	22.5%
Others.....	7.8% - 39.0%	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 rates 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:

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 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.

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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)

As mentioned in note 2.1, CEMEX adopted IFRS 15 on January 1, 2018 using the retrospective approach. CEMEX 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 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 and costs related to such 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: 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 a short-term or long-term advanced payments, as appropriate.

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.

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2.18) EMISSION RIGHTS

In certain countries where CEMEX operates, such as EU countries, mechanisms aimed at reducing carbon dioxide emissions (δCO₂) have been established by means of which, the relevant environmental authorities have granted certain number of emission rights (δcertificates) 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 (δUNFCCC) grants Certified Emission Reductions (δCERs) 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 2018, 2017 and 2016, 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, 2018, 2017 and 2016, 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.

2.20) NEWLY ISSUED IFRS NOT YET ADOPTED

IFRS issued as of the date of issuance of these financial statements which have not yet been adopted are described as follow:

IFRS 16, Leases (“IFRS 16”)

IFRS 16 defines leases as any contract or part of a contract that conveys to the lessee the right to use an asset for a period in exchange for consideration and the lessee directs the use of the identified asset throughout that period. IFRS 16 introduces a single lessee accounting model, and requires a lessee to recognize, for all leases, allowing exemptions in case of the leases with a term of less than 12 months or when the underlying asset is of low value, assets for the right-of-use the underlying asset against a corresponding financial liability, representing the NPV of estimated lease payments under the contract, with a single income statement model in which a lessee recognizes amortization of the right-of-use asset and interest on the lease liability. A lessee shall present either in the statement of financial position, or disclose in the notes, right-of-use assets separately from other assets, as well as, lease liabilities separately from other liabilities. IFRS 16 is effective beginning January 1, 2019 and will supersede all current standards and interpretations related to lease accounting.

As of December 31, 2018, by means of analyses of its outstanding lease contracts and other contracts that may have embedded the use of an asset and the assessment of the most relevant characteristics of such contracts (types of assets, committed payments, maturity dates, renewal clauses, etc.), CEMEX has substantially concluded the inventory and measurement of its leases for purposes of adopting IFRS 16 and is in its final review. Moreover, CEMEX has defined its accounting policy under IFRS 16 and will apply the recognition exception for short-term leases and low-value assets, as well as the practical expedient to not separate the non-lease component from the lease component included in the same contract. CEMEX will adopt IFRS 16 using the full retrospective approach pursuant to which prior periods will be restated. Upon adoption of IFRS 16 beginning on January 1, 2019, CEMEX has estimated a range for its opening statement of financial position effects as of January 1, 2017, as follows:

		As of January 1, 2017	
		Low	High
Assets for the right-of-use	US\$	920	942
Financial liabilities.....		(1,030)	(1,060)
Retained earnings ¹	US\$	(110)	(118)

¹ The effect refers to a timing difference between depreciation expense of the assets calculated under the straight-line method and the interest expense from the liability determined under the effective interest rate method since the beginning of the contracts. This difference will reverse over the remaining life of the contracts.

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Newly issued IFRS not yet adopted – continued

In addition to IFRS 16, 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:

Standard	Main topic	Effective date
Amendments to IFRS 9.....	Prepayment features with negative compensation do not automatically preclude amortized cost accounting.	January 1, 2019
IFRIC 23, <i>Uncertainty over income tax treatments</i>	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.	January 1, 2019
Amendments to IAS 28, <i>Long-term interests in associates and joint ventures</i> (IAS 28)	The amendment clarifies that IFRS 9, including its impairment requirements, applies to long-term interests.	January 1, 2019
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.	January 1, 2019
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.	January 1, 2019
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.	January 1, 2019
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).	January 1, 2019
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
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, 2018, 2017 and 2016, revenue, after eliminations between related parties resulting from consolidation, is as follows:

	2018	2017	2016
From the sale of goods associated to CEMEX's main activities ¹	\$ 265,584	246,135	239,230
From the sale of services ²	3,064	3,313	3,110
From the sale of other goods and services ³	8,207	7,989	7,137
	<u>\$ 276,855</u>	<u>257,437</u>	<u>249,477</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 2018, 2017 and 2016 is presented in note 4.4

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Revenues and construction contracts – continued

As of December 31, 2018 and 2017, amounts receivable for progress billings to customers of construction contracts and/or advances received by CEMEX from these customers were not significant. For 2018, 2017 and 2016, revenues and costs related to construction contracts in progress were as follows:

	Accrued ¹	2018	2017	2016
Revenue from construction contracts included in consolidated revenues ²	\$ 1,063	1,383	992	1,033
Costs incurred in construction contracts included in consolidated cost of sales ³ ..	(1,055)	(1,312)	(1,205)	(1,133)
Construction contracts gross operating profit (loss).....	\$ 8	71	(213)	(100)

1 Revenues and costs recognized from inception of the contracts until December 31, 2018 in connection with those projects still in progress.

2 Revenues from construction contracts during 2018, 2017 and 2016, were mainly obtained in Mexico and Colombia.

3 Refers to actual costs incurred during the periods.

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 that 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, 2018, 2017 and 2016 changes in the balance of contract liabilities with customers are as follows:

	2018	2017	2016
Opening balance of contract liabilities with customers.....	\$ 770	645	660
Increase during the period for new transactions.....	1,070	1,156	1,040
Decrease during the period for exercise or expiration of incentives.....	(890)	(1,148)	(1,038)
Currency translation effects.....	(175)	117	(17)
Closing balance of contract liabilities with customers.....	\$ 775	770	645

For the years 2018, 2017 and 2016, 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

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, to acquire up to 132,616,942 ordinary shares in TCL (equivalent to approximately 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 approximately 69.8% of the outstanding shares of TCL. The total consideration paid by Sierra for the TCL shares under the Offer was US\$86 (\$1,791). CEMEX started consolidating TCL on February 1, 2017. CEMEX determined a fair value of TCL's assets as of February 1, 2017 of US\$531 (\$11,061), which considered a price of TT\$5.07 per share for the percentage acquired in the Offer and TT\$4.15 per share, or the market price before the Offer, for the remaining shares, and US\$113 (\$2,354) of debt assumed, among other effects. The purchase of TCL represented a step acquisition. As a result, the remeasurement of CEMEX's previous held ownership interest in TCL of 39.5% generated a gain of US\$32 (\$623) in 2017 as part of Financial income and other items, net. All convenience translations to pesos above consider an exchange rate of 20.83 pesos per dollar as of February 1, 2017.

After concluding in 2018 the allocation of TCL's fair value to the assets acquired and liabilities assumed, the statement of financial position of TCL at the acquisition date of February 1, 2017 was as follows:

		As of February 1, 2017
Current assets	US\$	84
Property, machinery and equipment		331
Intangible assets and other non-current assets (include goodwill of US\$106).....		116
Total assets		531
Current liabilities (includes debt of US\$47).....		122
Non-current liabilities (includes debt of US\$97 and deferred tax liabilities of US\$19)		160
Total liabilities		282
Net assets	US\$	249
Non-controlling interest net assets		70
Controlling interest net assets	US\$	179

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Business combinations – continued

In addition, 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 US\$22, considering the pound sterling to dollar exchange rate as of August 31, 2018. As of December 31, 2018, based on the preliminary valuation of the fair values of the assets acquired and liabilities assumed, the net assets of Procon amount to US\$10 (\$196) and goodwill was determined in the amount of US\$12 (\$244).

4.2) 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 US\$31 (\$54). CEMEX determined a net gain on sale of US\$12 (\$234), including a withholding tax expense of US\$3 and the reclassification of a foreign currency translation loss accrued in equity of US\$7 (\$140). CEMEX's Brazilian Operations for the period from January 1 to September 27, 2018 and the years 2017 and 2016 were reclassified to 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 US\$150. CEMEX determined a net gain on disposal of these assets of US\$22 (\$399), which included a proportional allocation of goodwill of US\$73 (\$1,324). Considering the disposal of its Pacific Northwest Materials Business, the operations of that business for the six-month period ending June 30, 2017 and for the year 2016 were reclassified to 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 US\$500 plus an additional US\$40 contingent consideration based on future performance. CEMEX determined a net gain on disposal of these assets for US\$148 (\$3,083), which included a proportional allocation of goodwill of US\$260 (\$5,369). Considering the disposal of the entire Concrete Pipe Business, its operations for the one-month period ending January 31, 2017 and the year 2016 were reclassified to the single line item Discontinued Operations.

On May 26, 2016, CEMEX closed the sale of its operations in Bangladesh and Thailand to Siam City Cement Public Company Ltd. for US\$70 (\$1,450). CEMEX determined a gain on sale of US\$24 (\$424) net of the reclassification of foreign currency translation gains accrued in equity of US\$7 (\$122). The operations in Bangladesh and Thailand for the period from January 1 to May 26, 2016, included in CEMEX's income statements, were reclassified to the single line item Discontinued operations.

The following table presents condensed combined information of the statement of operations of CEMEX's discontinued operations in Brazil for the period from January 1 to September 27, 2018 and for the years 2017 and 2016, in the Pacific Northwest Materials Business in the United States for the six-months period ended June 30, 2017 and for the year 2016; the Concrete Pipe Business operations in the United States for the one-month period ended January 31, 2017 and for the year 2016, and the operations in Bangladesh and Thailand for the period from January 1 to May 26, 2016:

	2018	2017	2016
Sales	\$ 503	2,235	9,445
Cost of sales and operating expenses	(495)	(2,257)	(8,983)
Other products (expenses), net	(1)	14	(3)
Financial expenses, net and others	(5)	6	(32)
Earnings before income tax	2	(8)	427
Income tax	(6)	(1)	(102)
Result of discontinued operations	(4)	(9)	325
Disposal result, withholding taxes and reclassification of currency translation effects	216	3,470	388
Net result of discontinued operations	\$ 212	3,461	713

As of December 31, 2017, the condensed information of the statement of financial position of the Brazilian Operations was as follows:

	2017
Current assets	\$ 148
Property, machinery and equipment, net and other non-current assets	140
Total assets	288
Current liabilities	66
Non-current liabilities	6
Total liabilities	66
Net assets	\$ 222

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4.3) OTHER DISPOSAL GROUPS

As of December 31, 2018, CEMEX is in negotiations for the sale of its ready-mix and aggregates business in the central region of France. The transaction is subject to several customary authorizations and CEMEX expects to conclude this sale in the short-term. The assets and liabilities of this business are presented as assets held for sale and liabilities directly related in the statement of financial position as of December 31, 2018, including a proportional allocation of goodwill related to this reporting segment of US\$22 (\$439).

On November 18, 2016, a subsidiary of CEMEX in the United States closed the sale to an affiliate of Grupo Cementos de Chihuahua, S.A.B. de C.V. (GCC) of certain assets consisting of CEMEX's cement plant in Odessa, Texas, two cement terminals and the building materials business in El Paso, Texas and Las Cruces, New Mexico, for an amount of US\$306 (\$6,340). The Odessa plant had an annual production capacity of approximately 537 thousand metric tons (unaudited). The transfer of control was effective on November 18, 2016. As a result of the sale of these assets, CEMEX recognized in 2016 a gain of US\$104 (\$2,159) as part of Other expenses, net in the income statement of 2016, net of an expense for the proportional write-off of goodwill associated to CEMEX's reporting segment in the United States based on their relative fair values for US\$161 (\$3,340) and the reclassification of proportional foreign currency translation gains associated with these net assets accrued in equity until disposal for US\$65 (\$1,347).

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 US\$400 (\$8,288). 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 US\$188 (\$3,694) as part of Other expenses, net in the income statement, net of an expense for the proportional write-off of goodwill associated to CEMEX's reporting segment in the United States based on their relative fair values for US\$211 (\$4,365).

The operations of the net assets in the central region of France and those sold to GCC and Eagle Materials, mentioned above, did not represent discontinued operations and were consolidated by CEMEX line-by-line in the income statements for the year 2018, 2017 and 2016, until their disposal. In arriving at this conclusion, CEMEX evaluated: a) the Company's ongoing operations in France and cement operations of its CGUs in Texas and the Mid-West; and b) the relative size of the net assets sold and held for sale in respect to the Company's remaining overall ongoing operations in France and the United States. Moreover, as a reasonability check, CEMEX measured the materiality of such net assets as a percentage of consolidated net sales, operating earnings before other expenses, net, net income and total assets. The percentage was not material in any case.

For the year 2018, 2017 and 2016, selected combined income statement information of the net assets in the central region of France and those sold to GCC and Eagle Materials, until their disposal, was as follows:

	2018	2017	2016
Net sales	\$ 1,169	1,194	4,544
Operating costs and expenses.....	(1,205)	(1,201)	(4,064)
Operating earnings (losses) before other expenses, net	\$ (36)	(7)	480

As of December 31, 2018, the condensed balance sheet of the net assets expected to be sold in the central region of France was as follows:

	2018
Current assets	\$ 189
Non-current assets	763
Total assets of the disposal group.....	952
Current liabilities.....	211
Non-current liabilities.....	103
Total liabilities directly related to disposal group.....	314
Total net assets of disposal group.....	\$ 638

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 \$1,649, which included the sale of fixed assets for \$309, 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 \$1,340, which are recognized each period as services are rendered. There is the possibility of a contingent revenue subject to results for up to \$557 linked to annual metrics beginning in the first year and up to the fifth year of the agreement. For the first year of operation under the agreements from May 2017 to April 2018, CEMEX received \$25 of this contingent revenue.

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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.

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 Croatia, Latvia, Scandinavia and Finland; b) Rest of South, Central America and the Caribbean refers mainly to CEMEX's operations and activities in 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 Asia, Middle East and Africa refers mainly to CEMEX's operations in the United Arab Emirates and Malaysia. 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 2018, 2017 and 2016, excluding the share of profits of equity accounted investees by reportable segment that is included in the note 13.1., was as follows:

2018	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
Mexico	\$ 63,543	(1,759)	61,784	22,204	2,198	20,006	(626)	(469)	(29)
United States	72,345	ó	72,345	12,069	5,917	6,152	(362)	(571)	(217)
Europe									
United Kingdom	20,431	ó	20,431	2,071	1,064	1,007	133	(67)	(406)
France	18,308	ó	18,308	1,272	577	695	(959)	(62)	(3)
Germany	10,836	(1,450)	9,386	748	531	217	(152)	(14)	(79)
Spain	7,627	(898)	6,729	220	662	(442)	(303)	(43)	58
Poland	6,989	(80)	6,909	783	390	393	8	(4)	7
Czech Republic	3,796	(31)	3,765	867	300	567	16	(2)	(36)
Rest of Europe	6,365	(869)	5,496	747	375	372	(447)	(10)	(10)
SCA&C									
Colombia ¹	10,088	ó	10,088	1,845	533	1,312	(251)	(132)	(483)
Panama ¹	4,490	(226)	4,264	1,234	313	921	(52)	(4)	3
Costa Rica ¹	2,674	(274)	2,400	873	91	782	(5)	(2)	148
Caribbean TCL ³	4,893	(99)	4,794	1,080	375	705	(316)	(48)	(28)
Dominican Republic	4,218	(310)	3,908	1,153	180	973	(17)	(7)	(64)
Rest of SAC ¹	7,781	(393)	7,388	1,427	170	1,257	(128)	(15)	70
AMEA									
Philippines ²	8,612	ó	8,612	1,183	523	660	54	(20)	(50)
Egypt	4,586	ó	4,586	529	303	226	(176)	(29)	(70)
Israel	12,128	ó	12,128	1,548	292	1,256	8	(36)	(8)
Rest of AMEA	2,263	ó	2,263	352	88	264	(4)	(3)	(5)
Others	24,667	(13,396)	11,271	(2,939)	1,188	(4,127)	(2,258)	(11,059)	1,298
Continuing operations	296,640	(19,785)	276,855	49,266	16,070	33,196	(5,837)	(12,597)	96
Discontinued operations	503	ó	503	11	3	8	(1)	ó	(5)
Total	\$ 297,143	(19,785)	277,358	49,277	16,073	33,204	(5,838)	(12,597)	91

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Selected information of the income statements by reportable segment – continued

2017	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
Mexico	\$ 58,442	(1,075)	57,367	21,215	2,246	18,969	(687)	(409)	(534)
United States	65,536	ó	65,536	10,652	6,200	4,452	3,202	(631)	(177)
Europe									
United Kingdom	20,179	ó	20,179	2,763	997	1,766	450	(77)	(397)
France	16,162	ó	16,162	855	549	306	(129)	(61)	18
Germany	10,056	(1,339)	8,717	743	509	234	(11)	(14)	(63)
Spain	6,870	(990)	5,880	344	638	(294)	(711)	(34)	12
Poland	5,552	(74)	5,478	647	361	286	(140)	(30)	(8)
Czech Republic	3,450	(33)	3,417	815	333	482	37	44	53
Rest of Europe	5,989	(831)	5,158	648	355	293	(168)	(68)	18
SCA&C									
Colombia ¹	10,685	ó	10,685	2,166	507	1,659	(642)	(129)	(36)
Panama ¹	5,112	(98)	5,014	2,007	319	1,688	(20)	(5)	7
Costa Rica ¹	2,805	(379)	2,426	1,000	99	901	ó	(5)	29
Caribbean TCL ³	4,332	(49)	4,283	1,059	610	449	(139)	(215)	(25)
Dominican Republic	3,913	(339)	3,574	1,073	191	882	(23)	(10)	(5)
Rest of SAC ¹	7,803	(533)	7,270	1,529	258	1,271	(1,046)	(13)	(7)
AMEA									
Philippines ²	8,296	ó	8,296	1,394	528	866	89	(3)	(24)
Egypt	3,862	ó	3,862	594	299	295	(210)	(60)	574
Israel	11,377	ó	11,377	1,469	287	1,182	(15)	3	21
Rest of AMEA	2,139	ó	2,139	386	76	310	(159)	(31)	(9)
Others	21,820	(11,203)	10,617	(2,759)	626	(3,385)	(3,493)	(17,553)	4,169
Continuing operations	274,380	(16,943)	257,437	48,600	15,988	32,612	(3,815)	(19,301)	3,616
Discontinued operations	2,235	ó	2,235	39	61	(22)	14	ó	ó
Total	\$ 276,615	(16,943)	259,672	48,639	16,049	32,590	(3,801)	(19,301)	3,616
2016									
Mexico	\$ 53,579	(848)	52,731	19,256	2,390	16,866	(608)	(339)	2,695
United States	66,554	ó	66,554	10,973	6,400	4,573	2,919	(487)	(212)
Europe									
United Kingdom	21,153	ó	21,153	3,606	1,047	2,559	711	(63)	(393)
France	14,535	ó	14,535	669	484	185	(110)	(53)	2
Germany	9,572	(1,385)	8,187	553	464	89	(64)	(15)	(85)
Spain	6,563	(841)	5,722	814	663	151	(112)	(37)	(9)
Poland	4,799	(88)	4,711	579	330	249	6	(11)	123
Czech Republic	3,027	(30)	2,997	622	328	294	(117)	(4)	2
Rest of Europe	4,908	(511)	4,397	519	332	187	14	(29)	75
SCA&C									
Colombia ¹	12,415	(1)	12,414	3,975	489	3,486	(575)	46	38
Panama ¹	4,906	(124)	4,782	2,170	340	1,830	(7)	(27)	5
Costa Rica ¹	2,818	(351)	2,467	1,127	116	1,011	(23)	(11)	27
Dominican Republic	4,223	(525)	3,698	1,210	199	1,011	(67)	(6)	34
Rest of SAC ¹	7,155	(253)	6,902	1,665	238	1,427	(1,159)	(22)	(216)
AMEA									
Philippines ²	9,655	ó	9,655	2,687	530	2,157	21	(1)	(24)
Egypt	6,950	(5)	6,945	2,454	539	1,915	(213)	(78)	(253)
Israel	9,650	ó	9,650	1,346	232	1,114	5	(24)	6
Rest of AMEA	2,208	(12)	2,196	271	67	204	(117)	(3)	21
Others	18,381	(8,600)	9,781	(2,891)	799	(3,690)	(2,174)	(20,323)	2,631
Continuing operations	263,051	(13,574)	249,477	51,605	15,987	35,618	(1,670)	(21,487)	4,467
Discontinued operations	9,652	(207)	9,445	1,159	697	462	(3)	(10)	(22)
Total	\$ 272,703	(13,781)	258,922	52,764	16,684	36,080	(1,673)	(21,497)	4,445

1 CEMEX Latam Holdings, S.A. (óCLHó), 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 2018 and 2017, there is a non-controlling interest in CLH of approximately 26.75% and 26.72%, respectively, of its ordinary shares, excluding shares held in CLH's treasury (note 20.4).

2 CEMEX's operations in the Philippines are mainly conducted through CEMEX Holdings Philippines, Inc. (óCHPó), a Philippine company whose shares trade on the Philippines Stock Exchange. As of December 31, 2018 and 2017, there is a non-controlling interest in CHP of 45.0% of its ordinary shares (note 20.4).

3 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, 2018 and 2017, there is a non-controlling interest in TCL of approximately 30.2% of its ordinary shares in both years (note 20.4).

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Debt by reportable segment is included in note 16. As of December 31, 2018 and 2017, selected statement of financial position information by reportable segment was as follows:

2018	Equity accounted investees	Other segment assets	Total assets	Total liabilities	Net assets by segment	Additions to fixed assets ¹
Mexico	6	68,449	68,449	17,906	50,543	2,285
United States	2,485	267,011	269,496	33,756	235,740	4,611
Europe						
United Kingdom	118	32,248	32,366	19,220	13,146	908
France	927	16,316	17,243	7,111	10,132	441
Germany	85	8,350	8,435	6,546	1,889	314
Spain	6	25,134	25,140	2,957	22,183	499
Poland	8	5,523	5,531	2,605	2,926	564
Czech Republic.....	157	4,195	4,352	1,224	3,128	169
Rest of Europe.....	6	11,299	11,299	2,250	9,049	226
South, Central America and the Caribbean						
Colombia	6	24,514	24,514	8,721	15,793	428
Panama.....	6	7,156	7,156	1,187	5,969	231
Costa Rica	6	1,640	1,640	580	1,060	61
Caribbean TCL.....	6	11,230	11,230	4,954	6,276	535
Dominican Republic	6	4,010	4,010	1,182	2,828	150
Rest of South, Central America and the Caribbean ..	29	6,430	6,459	2,621	3,838	183
Asia, Middle East and Africa						
Philippines	6	12,235	12,241	2,929	9,312	544
Egypt	1	4,795	4,796	1,906	2,890	176
Israel	6	9,592	9,592	6,712	2,880	412
Rest of Asia, Middle East and Africa		3,991	3,991	1,451	2,540	103
Others	5,670	16,918	22,588	206,963	(184,375)	129
Continuing operations	9,492	541,036	550,528	332,781	217,747	12,969
Assets held for sale and related liabilities (note 12.1).....	29	2,071	2,100	314	1,786	6
Total	9,521	543,107	552,628	333,095	219,533	12,969

2017	Equity accounted investees	Other segment assets	Total assets	Total liabilities	Net assets by segment	Additions to fixed assets ¹
Mexico	241	71,280	71,521	23,574	47,947	2,133
United States	1,573	266,769	268,342	32,366	235,976	3,498
Europe						
United Kingdom	107	34,774	34,881	24,160	10,721	1,010
France	1,055	18,481	19,536	7,360	12,176	372
Germany	85	9,010	9,095	6,848	2,247	441
Spain	6	25,731	25,731	3,543	22,188	553
Poland	9	5,477	5,486	3,086	2,400	230
Czech Republic.....	149	4,867	5,016	1,338	3,678	157
Rest of Europe.....	9	11,256	11,265	2,289	8,976	164
South, Central America and the Caribbean						
Colombia	6	24,406	24,406	11,307	13,099	1,178
Panama.....	6	7,232	7,232	1,029	6,203	152
Costa Rica	6	1,869	1,869	646	1,223	42
Caribbean TCL.....	6	11,004	11,004	4,917	6,087	584
Dominican Republic		4,362	4,362	1,132	3,230	172
Rest of South, Central America and the Caribbean ...	31	6,936	6,967	3,234	3,733	185
Asia, Middle East and Africa						
Philippines	6	11,548	11,554	2,617	8,937	518
Egypt	1	4,602	4,603	1,776	2,827	418
Israel	6	9,760	9,760	6,838	2,922	391
Rest of Asia, Middle East and Africa	6	3,911	3,911	1,189	2,722	58
Others	5,306	24,466	29,772	218,023	(188,251)	163
Continuing operations	8,572	557,741	566,313	357,272	209,041	12,419
Assets held for sale and related liabilities (note 12.1).....	6	1,378	1,378	6	1,378	6
Total	8,572	559,119	567,691	357,272	210,419	12,419

¹ In 2018 and 2017, the column "Additions to fixed assets" includes capital expenditures of \$12,141 and \$9,514, respectively (note 14).

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Revenues by line of business and reportable segment for the years ended December 31, 2018, 2017 and 2016 were as follows:

<u>2018</u>	<u>Cement</u>	<u>Concrete</u>	<u>Aggregates</u>	<u>Others</u>	<u>Eliminations</u>	<u>Revenues</u>
Mexico	\$ 44,295	17,277	4,051	12,358	(16,197)	61,784
United States	30,518	40,249	16,393	7,581	(22,396)	72,345
Europe						
United Kingdom	4,837	7,441	8,139	8,102	(8,088)	20,431
France	6	15,092	7,321	176	(4,281)	18,308
Germany	3,608	4,841	2,353	2,732	(4,148)	9,386
Spain	6,010	1,365	377	609	(1,632)	6,729
Poland	3,864	3,066	960	299	(1,280)	6,909
Czech Republic.....	1,555	2,377	835	362	(1,364)	3,765
Rest of Europe	5,263	565	221	24	(577)	5,496
South, Central America and the Caribbean						
Colombia	6,792	3,631	1,065	1,769	(3,169)	10,088
Panama.....	3,285	1,368	445	355	(1,189)	4,264
Costa Rica	2,126	427	120	114	(387)	2,400
Caribbean TCL.....	4,712	199	91	1,716	(1,924)	4,794
Dominican Republic	3,441	526	171	470	(700)	3,908
Rest of South, Central America and the Caribbean	7,668	782	150	122	(1,334)	7,388
Asia, Middle East and Africa						
Philippines	8,549	4	59	43	(43)	8,612
Egypt	3,993	511	14	225	(157)	4,586
Israel	6	10,026	3,061	2,127	(3,086)	12,128
Rest of Asia, Middle East and Africa	943	1,763	6	6	(443)	2,263
Others.....	6	6	6	24,667	(13,396)	11,271
Continuing operations.....	141,459	111,510	45,826	63,851	(85,791)	276,855
Discontinued operations.....	503	6	6	6	6	503
Total	\$ 141,962	111,510	45,826	63,851	(85,791)	277,358

<u>2017</u>	<u>Cement</u>	<u>Concrete</u>	<u>Aggregates</u>	<u>Others</u>	<u>Eliminations</u>	<u>Revenues</u>
Mexico	\$ 42,195	14,672	3,416	11,211	(14,127)	57,367
United States	27,804	35,400	14,436	6,235	(18,339)	65,536
Europe						
United Kingdom	4,879	7,459	7,758	8,067	(7,984)	20,179
France	6	13,367	6,373	205	(3,783)	16,162
Germany	3,595	4,668	2,134	2,335	(4,015)	8,717
Spain	5,499	944	259	676	(1,498)	5,880
Poland	3,230	2,532	701	226	(1,211)	5,478
Czech Republic.....	1,287	2,148	880	334	(1,232)	3,417
Rest of Europe	4,949	567	175	128	(661)	5,158
South, Central America and the Caribbean						
Colombia	7,043	4,024	1,224	1,960	(3,566)	10,685
Panama.....	3,876	1,725	452	180	(1,219)	5,014
Costa Rica	2,095	386	122	120	(297)	2,426
Caribbean TCL.....	4,097	29	19	215	(77)	4,283
Dominican Republic	3,193	564	191	117	(491)	3,574
Rest of South, Central America and the Caribbean	7,534	744	77	190	(1,960)	6,585
Asia, Middle East and Africa						
Philippines	8,093	67	159	52	(75)	8,296
Egypt	3,347	479	16	173	(153)	3,862
Israel	6	9,400	2,875	2,146	(3,045)	11,376
Rest of Asia, Middle East and Africa	928	1,678	6	2	(468)	2,140
Others.....	6	6	6	22,505	(11,203)	11,302
Continuing operations.....	133,644	100,853	41,267	57,077	(75,404)	257,437
Discontinued operations.....	686	525	340	687	(3)	2,235
Total	\$ 134,330	101,378	41,607	57,764	(75,407)	259,672

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2016	Cement	Concrete	Aggregates	Others	Eliminations	Revenues
Mexico	\$ 37,647	13,664	3,156	11,773	(13,509)	52,731
United States	28,585	35,843	14,565	7,107	(19,546)	66,554
Europe						
United Kingdom	5,267	7,830	8,195	7,889	(8,028)	21,153
France	6	11,883	5,640	278	(3,266)	14,535
Germany	3,416	4,539	2,112	2,262	(4,142)	8,187
Spain	5,478	823	196	472	(1,247)	5,722
Poland	2,811	2,237	579	219	(1,135)	4,711
Czech Republic.....	1,118	1,871	796	336	(1,124)	2,997
Rest of Europe	4,168	383	115	2	(271)	4,397
South, Central America and the Caribbean						
Colombia	8,814	4,522	1,364	1,761	(4,047)	12,414
Panama.....	3,794	1,577	413	139	(1,141)	4,782
Costa Rica.....	2,144	390	179	126	(372)	2,467
Dominican Republic	3,255	620	210	124	(511)	3,698
Rest of South, Central America and the Caribbean	7,276	906	112	174	(2,032)	6,436
Asia, Middle East and Africa						
Philippines	9,405	143	164	70	(127)	9,655
Egypt	6,076	943	26	217	(317)	6,945
Israel	6	8,016	2,519	1,372	(2,258)	9,649
Rest of Asia, Middle East and Africa	961	1,519	6	7	(290)	2,197
Others	6	6	6	18,849	(8,602)	10,247
Continuing operations	130,215	97,709	40,341	53,177	(71,965)	249,477
Discontinued operations	889	1,366	785	6,665	(260)	9,445
Total	\$ 131,104	99,075	41,126	59,842	(72,225)	258,922

5) OPERATING EXPENSES, DEPRECIATION AND AMORTIZATION

Consolidated operating expenses during 2018, 2017 and 2016 by function are as follows:

	2018	2017	2016
Administrative expenses ¹	\$ 22,387	21,053	20,733
Selling expenses	6,315	6,429	6,945
Distribution and logistics expenses	31,992	28,485	26,235
	\$ 60,694	55,967	53,913

¹ All significant R&D activities are executed by several internal areas as part of their daily activities. In 2018, 2017 and 2016, total combined expenses of these departments recognized within administrative expenses were \$758 (US\$38), \$754 (US\$38) and \$712 (US\$38), respectively.

Depreciation and amortization recognized during 2018, 2017 and 2016 are detailed as follows:

	2018	2017	2016
Included in cost of sales	\$ 14,181	14,143	14,177
Included in administrative, selling and distribution and logistics expenses	1,889	1,845	1,810
	\$ 16,070	15,988	15,987

6) OTHER EXPENSES, NET

The detail of the line item "Other expenses, net" in 2018, 2017 and 2016 was as follows:

	2018	2017	2016
Results from the sale of assets and others, net ¹	\$ (2,994)	91	1,719
Restructuring costs ²	(1,382)	(843)	(778)
Impairment losses ³	(1,188)	(2,936)	(2,518)
Remeasurement of pension liabilities ⁴	(168)	6	6
Charitable contributions	(105)	(127)	(93)
	\$ (5,837)	(3,815)	(1,670)

¹ In 2018, includes \$1,080 in connection with property damages and natural disasters. In 2017, includes an expense of \$491 (US\$25) related to a penalty in connection with a market investigation in Colombia (note 24.2).

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Other expenses, net – continued

- 2 In 2018, 2017 and 2016, restructuring costs mainly refer to severance payments and the definite closing of operating sites.
- 3 In 2018, 2017 and 2016, among others, includes impairment losses of fixed assets for \$445, \$984 and \$1,899, respectively, as well in 2018 losses in the valuation of assets held for sale of \$439 and impairment losses of goodwill in 2017 of \$1,920 (notes 13.2, 14 and 15).
- 4 Refers to a remeasurement of the employee benefits liability in connection with CEMEX's defined benefit plan in the United Kingdom determined in 2018 as a result of a recently enacted gender parity law.

7) FINANCIAL INCOME AND OTHER ITEMS, NET

The detail of financial income and other items, net in 2018, 2017 and 2016 was as follows:

	2018	2017	2016
Results in the sale of associates and remeasurement of previously held interest before change in control of associates (notes 4.1 and 13.1).....	\$ (204)	4,164	6
Financial income.....	355	338	402
Results from financial instruments, net (notes 13.2 and 16.4).....	692	161	113
Foreign exchange results	341	(26)	4,982
Effects of amortized cost on assets and liabilities and others, net	(1,088)	(1,021)	(1,030)
	<u>\$ 96</u>	<u>3,616</u>	<u>4,467</u>

8) CASH AND CASH EQUIVALENTS

As of December 31, 2018 and 2017, consolidated cash and cash equivalents consisted of:

	2018	2017
Cash and bank accounts	\$ 5,071	9,292
Fixed-income securities and other cash equivalents	997	4,449
	<u>\$ 6,068</u>	<u>13,741</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 \$234 in 2018 and \$196 in 2017, 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.

9) TRADE ACCOUNTS RECEIVABLE, NET

As of December 31, 2018 and 2017, consolidated trade accounts receivable consisted of:

	2018	2017
Trade accounts receivable	\$ 31,584	32,733
Allowances for expected credit losses.....	(2,336)	(2,145)
	<u>\$ 29,248</u>	<u>30,588</u>

As of December 31, 2018 and 2017, trade accounts receivable include receivables of \$13,048 (US\$664) and \$12,713 (US\$647), 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 \$11,770 (US\$599) in 2018 and \$11,313 (US\$576) in 2017, were recognized within the line item of "Other financial obligations," 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 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 \$446 in 2018, \$308 in 2017 and \$258 in 2016. CEMEX's securitization programs are 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 a model that calculates the expected credit loss (ECL) of the trade accounts receivable (note 2.1).

Under this ECL model, 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.

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Trade accounts receivable, net – continued

As of December 31, 2018, the balances of trade accounts receivable and the allowance for ECL were as follows:

	Accounts receivable	ECL allowance	ECL average rate
Mexico.....	\$ 5,185	717	13.8%
United States	8,432	78	0.9%
Europe.....	9,087	618	6.8%
South, Central America and the Caribbean.....	2,817	550	19.5%
Asia, Middle East and Africa.....	5,327	272	5.1%
Others.....	736	101	13.7%
	<u>\$ 31,584</u>	<u>2,336</u>	

Changes in the allowance for expected credit losses in 2018, 2017 and 2016, were as follows:

	2018	2017	2016
Allowances for expected credit losses at beginning of period.....	\$ 2,145	2,196	2,152
Adoption effects of IFRS 9 charged to retained earnings (note 2.1).....	570	6	6
Charged to selling expenses	156	252	556
Additions through business combinations	6	141	6
Deductions	(385)	(449)	(867)
Foreign currency translation effects	(150)	5	355
Allowances for expected credit losses at end of period	<u>\$ 2,336</u>	<u>2,145</u>	<u>2,196</u>

10) OTHER ACCOUNTS RECEIVABLE

As of December 31, 2018 and 2017, consolidated other accounts receivable consisted of:

	2018	2017
Non-trade accounts receivable ¹	\$ 2,712	1,918
Interest and notes receivable ²	895	1,125
Current portion of valuation of derivative financial instruments	8	1,056
Loans to employees and others	243	233
Refundable taxes	2,291	638
	<u>\$ 6,149</u>	<u>4,970</u>

1 Non-trade accounts receivable are mainly attributable to the sale of assets.

2 In 2018 and 2017, includes CEMEX Colombia's residual interest in a trust oriented to promote housing projects, which its only asset is land in the municipality of Zipaquirá, Colombia and its only liability is a bank credit for \$129 and \$141, respectively, obtained to purchase the land, guaranteed by CEMEX Colombia. The estimated realizable value of the land as determined by external appraiser covers the amount of the loan. Related to this structure, on December 17, 2018, CEMEX Colombia and the other partner in the project accepted the binding offer of a local construction firm, pending of execution, whom, pursuant to the agreements, will join the trust as beneficiary and joint obligor of the debt and will acquire the project through the full repayment of the trust's debt by means of a repayment of approximately 50% during 2019 and the remaining portion in November 2020. Once the respective agreements are formalized in 2019, the construction firm will sign promissory notes to CEMEX Colombia securing its obligations and additionally the firm and the other partner will pledge their beneficial interest in the trust in favor of CEMEX Colombia.

11) INVENTORIES, NET

As of December 31, 2018 and 2017, the consolidated balance of inventories was summarized as follows:

	2018	2017
Finished goods	\$ 6,777	5,933
Work-in-process	3,818	3,814
Raw materials	3,813	3,237
Materials and spare parts	5,964	4,996
Inventory in transit	876	872
	<u>\$ 21,248</u>	<u>18,852</u>

For the years ended December 31, 2018, 2017 and 2016, CEMEX recognized within "Cost of sales" in the income statement, inventory impairment losses of \$114, \$23 and \$52, respectively.

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12) ASSETS HELD FOR SALE AND OTHER CURRENT ASSETS

12.1) ASSETS HELD FOR SALE

As of December 31, 2018 and 2017, 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:

	2018			2017		
	Assets	Liabilities	Net assets	Assets	Liabilities	Net assets
Assets in the central region of France (note 4.3).. \$	952	314	638	6	6	6
Idle assets in Spain ¹	6	6	6	580	6	580
Other assets held for sale.....	1,148	6	1,148	798	6	798
\$	2,100	314	1,786	\$ 1,378	6	1,378

¹ During December 2018, considering the withdrawal of potential buyers and the absence of new offers, CEMEX reclassified these assets to fixed assets.

12.2) OTHER CURRENT ASSETS

As of December 31, 2018 and 2017, other current assets are mainly comprised of advance payments.

In addition, as of December 31, 2018, the balance of other current assets includes cash for US\$12 (\$236) of CEMEX Colombia subject to a temporary restriction on its availability due to a seizure order issued by a civil court in Colombia within an executory proceeding initiated by a supplier in connection with a commercial dispute over an amount being claimed of approximately US\$2 (\$39). CEMEX Colombia considers that such seizure order was excessive in relation to the amount claimed, and as of the reporting date, because of the nature of the proceeding, CEMEX Colombia's defense arguments that were put forth in its negotiations with the supplier have not yet been evaluated. As of the issuance date of these consolidated financial statements, CEMEX Colombia is following required legal procedures in the civil court and considers probable that the cash amounts will be released in 2019.

13) EQUITY ACCOUNTED INVESTEEES, OTHER INVESTMENTS AND NON-CURRENT ACCOUNTS RECEIVABLE

13.1) EQUITY ACCOUNTED INVESTEEES

As of December 31, 2018 and 2017, the investments in common shares of associates were as follows:

	Activity	Country	%	2018		2017	
				2018	2017	2018	2017
Camcem, S.A. de C.V.	Cement	Mexico	40.1	\$ 4,087	\$ 3,618	\$ 4,087	\$ 3,618
Concrete Supply Co. LLC.....	Concrete	United States	40.0	1,306	1,192	1,306	1,192
Lehigh White Cement Company	Cement	United States	36.8	1,172	375	1,172	375
Akmenes Cementas AB	Cement	Lithuania	37.8	527	585	527	585
ABC Capital, S.A. Institución de Banca Múltiple	Financing	Mexico	6	6	228	6	228
Société Méridionale de Carrières	Aggregates	France	33.3	318	367	318	367
Société d'Exploitation de Carrières	Aggregates	France	50.0	306	318	306	318
Cemento Interoceánico S.A.	Cement	Panama	25.0	160	168	160	168
Other companies	6	6	6	1,616	1,721	1,616	1,721
				\$ 9,492	8,572	\$ 9,492	8,572
Out of which:							
Book value at acquisition date.....				\$ 7,218	6,957	\$ 7,218	6,957
Changes in stockholders' equity.....				\$ 2,274	1,615	\$ 2,274	1,615

In April 2018, CEMEX entered into an agreement for the sale of its 33.9% equity interest to the controlling shareholders of ABC Capital, S.A. Institución de Banca Múltiple for \$105, recognizing a loss of \$157 as part of "Financial income and other items, net". The transaction is pending authorization of the Mexican authorities. As of December 31, 2018, the investment is presented within assets held for sale in the statement of financial position (note 12.1).

During 2018, a subsidiary of CEMEX in the United States invested a total of US\$36 (\$707) and increased the Company's ownership over the Lehigh White Cement Company investee from 24.5% to 36.8%. This deal also includes 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 will receive and pack white cement for Lehigh White Cement Company to sell and distribute in the Florida market.

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Equity accounted investees – continued

On January 25, 2017, in a public offering to investors in Mexico conducted through the BMV and in a concurrent private placement to eligible investors outside of Mexico, the Parent Company and Grupo Cementos de Chihuahua, S.A.B. de C.V. (GCC) announced the offering of up to 76,483,332 shares (then all the shares of GCC owned by CEMEX). During 2017, after conclusion of the public offering and the private placement, CEMEX sold 45 million shares, 13.53% of the common stock of GCC, at a price of 95.00 pesos per share receiving \$4,094 after deducting commissions and offering expenses and recognized a gain on sale in 2017 of \$1,859 as part of Financial income and other items, net in the income statement.

In addition, on September 28, 2017, CEMEX announced the definitive sale to two financial institutions of the remaining 31,483,332 shares of GCC, which represented approximately 9.47% of the equity capital of GCC. Proceeds from the sale were \$3,012 and generated a gain on sale of \$1,682 in 2017 recognized as part of Financial income and other items, net in the income statement. CEMEX continues to have an approximate 20% indirect interest in GCC through Camcem, S.A. de C.V., GCC's parent company.

Combined condensed statement of financial position information of CEMEX's associates as of December 31, 2018 and 2017 is set forth below:

	2018	2017
Current assets	\$ 16,677	21,527
Non-current assets	32,901	32,071
Total assets	49,578	53,598
Current liabilities	5,685	10,863
Non-current liabilities	17,272	17,730
Total liabilities	22,957	28,593
Total net assets	\$ 26,621	25,005

Combined selected information of the statements of operations of CEMEX's associates in 2018, 2017 and 2016 is set forth below:

	2018	2017	2016
Sales.....	\$ 28,487	28,158	29,791
Operating earnings.....	4,401	4,458	4,730
Income before income tax	2,182	2,451	3,111
Net income	1,711	1,891	1,860

The share of equity accounted investees by reportable segment in the income statements for 2018, 2017 and 2016 is detailed as follows:

	2018	2017	2016
Mexico	\$ 254	269	452
United States	297	266	253
Europe	134	108	54
Corporate and others	(32)	(55)	(71)
	\$ 653	588	688

13.2) OTHER INVESTMENTS AND NON-CURRENT ACCOUNTS RECEIVABLE

As of December 31, 2018 and 2017, consolidated other investments and non-current accounts receivable were summarized as follows:

	2018	2017
Non-current accounts receivable ¹	\$ 4,329	4,248
Investments at fair value through the income statement ²	428	441
Non-current portion of valuation of derivative financial instruments (note 16.4).....	297	794
Investments in strategic equity securities ³	217	275
	\$ 5,271	5,758

¹ Includes, among other items: a) accounts receivable from investees and joint ventures of \$1,273 in 2018 and \$1,301 in 2017, b) advances to suppliers of fixed assets of \$886 in 2018 and \$55 in 2017, c) employee prepaid compensation of \$114 in 2018 and \$112 in 2017, d) refundable taxes of \$263 in 2018 and \$261 in 2017, and e) warranty deposits of \$246 in 2018 and \$240 in 2017.

² Refers to investments in private funds and investments related to employee's savings funds. In 2018 and 2017, 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.

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14) PROPERTY, MACHINERY AND EQUIPMENT, NET

As of December 31, 2018 and 2017, consolidated property, machinery and equipment, net and the changes in such line item during 2018, 2017 and 2016, were as follows:

	2018				
	Land and mineral reserves ¹	Building ¹	Machinery and equipment ²	Construction in progress	Total
Cost at beginning of period	\$ 95,495	53,927	242,636	19,457	411,515
Accumulated depreciation and depletion	(16,842)	(26,225)	(136,288)	ó	(179,355)
Net book value at beginning of period	78,653	27,702	106,348	19,457	232,160
Capital expenditures	525	578	11,038	ó	12,141
Additions through capital leases	ó	ó	88	ó	88
Stripping costs	740	ó	ó	ó	740
Total capital expenditures	1,265	578	11,126	ó	12,969
Disposals ⁴	(258)	(116)	(597)	ó	(971)
Reclassifications ⁵	(353)	(45)	(81)	580	101
Business combinations	83	ó	133	ó	216
Depreciation and depletion for the period	(3,618)	(2,001)	(8,400)	ó	(14,019)
Impairment losses	(121)	(33)	(291)	ó	(445)
Foreign currency translation effects	210	(349)	(5,733)	301	(5,571)
Cost at end of period	94,692	53,292	242,740	20,338	411,062
Accumulated depreciation and depletion	(18,831)	(27,556)	(140,235)	ó	(186,622)
Net book value at end of period	\$ 75,861	25,736	102,505	20,338	224,440

	2017					2016 ³
	Land and mineral reserves ¹	Building ¹	Machinery and equipment ²	Construction in progress	Total	
Cost at beginning of period	\$ 97,218	51,740	229,717	17,247	395,922	360,089
Accumulated depreciation and depletion	(16,301)	(24,224)	(125,263)	ó	(165,788)	(143,395)
Net book value at beginning of period	80,917	27,516	104,454	17,247	230,134	216,694
Capital expenditures	547	802	8,165	ó	9,514	12,676
Additions through capital leases	ó	ó	2,096	ó	2,096	7
Capitalization of financial expense	ó	ó	ó	ó	ó	175
Stripping costs	809	ó	ó	ó	809	421
Total capital expenditures	1,356	802	10,261	ó	12,419	13,279
Disposals ⁴	(347)	(223)	(1,274)	ó	(1,844)	(1,841)
Reclassifications ⁵	(784)	(82)	(768)	ó	(1,634)	(4,549)
Business combinations	2,179	749	3,136	428	6,492	ó
Depreciation and depletion for the period	(2,571)	(1,967)	(9,413)	ó	(13,951)	(14,037)
Impairment losses	(202)	(1)	(763)	(18)	(984)	(1,899)
Foreign currency translation effects	(1,895)	908	715	1,800	1,528	22,487
Cost at end of period	95,495	53,927	242,636	19,457	411,515	395,922
Accumulated depreciation and depletion	(16,842)	(26,225)	(136,288)	ó	(179,355)	(165,788)
Net book value at end of period	\$ 78,653	27,702	106,348	19,457	232,160	230,134

¹ Includes corporate buildings and related land sold to financial institutions in previous years, which were leased back. The aggregate carrying amount of these assets as of December 31, 2018 and 2017 was \$1,602 and \$1,690, respectively.

² Includes assets, mainly mobile equipment, acquired through finance leases, which carrying amount as of December 31, 2018 and 2017 was \$88 and \$2,096, respectively.

³ In 2016, CEMEX Colombia 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, the works remain suspended and the beginning of commercial operations is subject to the successful conclusion of several ongoing processes related to certain operating permits and other legal proceedings (note 24.1). As a result internal audits of the project, in 2016, CEMEX Colombia reduced construction in progress for \$483 (US\$23), of which, \$295 (US\$14) were recognized as impairment losses against "Other expenses, net" in connection with the write off of certain advances for the purchase of land through a representative have low probability for their recoverability due to deficiencies in the legal processes, and \$188 (US\$9) were decreased against "Other accounts payable" in connection with the cancellation of the portion payable of such assets (note 24.1). As of December 31, 2018, the carrying amount of the plant, net of adjustments, is for an amount in Colombian pesos equivalent to US\$280 (\$5,502).

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Property, machinery and equipment, net – continued

- 4 In 2018, includes sales of non-strategic fixed assets in the United States, Spain and Mexico for \$371, \$158 and \$125, respectively. In 2017, includes sales of non-strategic fixed assets in Mexico, the United States, and Spain for \$343, \$223 and \$220, respectively. In 2016, includes sales of non-strategic fixed assets in the United States, Mexico, and France for \$317, \$281 and \$165, respectively.
- 5 In 2018, refers mainly to the reclassification of the assets in Spain (note 12.1) for \$580. In 2017, refers mainly to those assets of the Pacific Northwest Materials Business in the United States for \$1,634 (note 4.2). In 2016, refers mainly to those assets of the Concrete Pipe Business in the United States for \$2,747, as well as other disposal groups in the United States reclassified to assets available for sale for \$1,386.

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 situation in Puerto Rico in the last quarter of 2016 due to the adverse outlook and the overall uncertain economic conditions in such country; b) the transferring of installed capacity to more efficient plants, such as the change in operating model of a cement mill to distribution center in Colombia; as well as c) the recoverability of certain investments in Colombia as described above, for the years ended December 31, 2018, 2017 and 2016, 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, 2018, 2017 and 2016 impairment losses of fixed assets by country are as follows:

	2018	2017	2016
United States	\$ 252	153	277
Poland	94	6	6
Colombia	37	6	454
Spain	35	452	6
Mexico	25	45	46
Czech Republic	6	157	6
Panama	6	56	6
France	6	50	6
Latvia	6	46	6
Puerto Rico	6	6	1,087
Others	2	25	35
	<u>\$ 445</u>	<u>984</u>	<u>1,899</u>

15) GOODWILL AND INTANGIBLE ASSETS, NET

15.1) BALANCES AND CHANGES DURING THE PERIOD

As of December 31, 2018 and 2017, consolidated goodwill, intangible assets and deferred charges were summarized as follows:

	2018			2017		
	Cost	Accumulated amortization	Carrying Amount	Cost	Accumulated amortization	Carrying Amount
Intangible assets of indefinite useful life:						
Goodwill	\$ 194,779	6	194,779	\$ 195,474	6	195,474
Intangible assets of definite useful life:						
Extraction rights	38,881	(7,017)	31,864	39,603	(6,480)	33,123
Industrial property and trademarks	864	(397)	467	929	(364)	565
Customer relationships	3,859	(3,859)	6	3,859	(3,852)	7
Mining projects	834	(107)	727	797	(96)	701
Others intangible assets	18,048	(11,287)	6,761	14,941	(9,902)	5,039
	<u>\$ 257,265</u>	<u>(22,667)</u>	<u>234,598</u>	<u>\$ 255,603</u>	<u>(20,694)</u>	<u>234,909</u>

The amortization of intangible assets of definite useful life was \$2,051 in 2018, \$2,037 in 2017 and \$1,950 in 2016, and was recognized within operating costs and expenses.

Goodwill

Changes in consolidated goodwill in 2018, 2017 and 2016, were as follows:

	2018	2017	2016
Balance at beginning of period	\$ 195,474	206,319	184,156
Business combinations	309	1,965	6
Disposals, net (note 4.3)	6	6	(3,340)
Reclassification to assets held for sale and other current assets (notes 4.2, 4.3 and 12) ..	(439)	(1,804)	(9,734)
Impairment losses	6	(1,920)	6
Foreign currency translation effects	(565)	(9,086)	35,237
Balance at end of period	<u>\$ 194,779</u>	<u>195,474</u>	<u>206,319</u>

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Intangible assets of definite life

Changes in intangible assets of definite life in 2018, 2017 and 2016, were as follows:

	2018					
	Extraction rights	Industrial property and trademarks	Customer relations	Mining projects	Others ¹	Total
Balance at beginning of period	\$ 33,123	565	7	701	5,039	39,435
Additions (disposals), net ¹	(219)	(32)	ó	120	2,913	2,782
Reclassifications (notes 4.1, 4.2 and 12).....	(223)	ó	ó	ó	6	(217)
Amortization for the period	(626)	(93)	(7)	(12)	(1,313)	(2,051)
Impairment losses	(186)	ó	ó	ó	ó	(186)
Foreign currency translation effects	(5)	27	ó	(82)	116	56
Balance at the end of period	\$ 31,864	467	ó	727	6,761	39,819

	2017						2016
	Extraction rights	Industrial property and trademarks	Customer relations	Mining projects	Others ¹	Total	
Balance at beginning of period	\$ 35,047	357	259	877	4,648	41,188	36,566
Additions (disposals), net ¹	278	(783)	ó	(148)	424	(229)	(598)
Business combinations (note 4.1).....	ó	ó	ó	4	72	76	ó
Reclassifications (notes 4.1, 4.2 and 12).....	ó	ó	(27)	ó	ó	(27)	ó
Amortization for the period	(716)	(110)	(225)	(12)	(974)	(2,037)	(1,950)
Impairment losses	(38)	ó	ó	ó	(12)	(50)	(25)
Foreign currency translation effects	(1,448)	1,101	ó	(20)	881	514	7,195
Balance at the end of period	\$ 33,123	565	7	701	5,039	39,435	41,188

¹ As of December 31, 2018 and 2017, "Others" includes the carrying amount of internal-use software of \$4,459 and \$2,981, 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 \$2,583 in 2018, \$1,422 in 2017 and \$769 in 2016.

15.2) ANALYSIS OF GOODWILL IMPAIRMENT

As of December 31, 2018 and 2017, goodwill balances allocated by operating segment were as follows:

	2018	2017
Mexico	\$ 7,371	7,371
United States	152,486	152,486
Europe		
Spain	10,270	10,000
United Kingdom	6,367	6,335
France	4,154	4,796
Czech Republic.....	589	709
South, Central America and the Caribbean		
Colombia	5,874	6,146
Dominican Republic	264	279
TCL	2,042	2,027
Others South, Central America and the Caribbean ¹	972	985
Asia, Middle East and Africa		
Philippines	1,751	1,817
United Arab Emirates	1,885	1,769
Egypt	232	232
Others		
Other reporting segments ²	522	522
	\$ 194,779	195,474

¹ This caption refers to the operating segments in 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.

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Analysis of goodwill impairment – continued

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 South, Central America and the Caribbean, 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. 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 \$1,920 (US\$98) the amount of the net present value of projected cash flows. 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.

During 2018 and 2016, CEMEX did not determine impairment losses of goodwill.

Impairment tests are significantly sensitive to, among other factors, 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 long-term growth rates applied. CEMEX's cash flow projections to determine the value in use of its CGUs to which goodwill has been allocated considering the use of long-term economic assumptions. CEMEX believes that its discounted cash flow projections and the discount rates used reasonably reflect current economic conditions at the time of the calculations, considering, among other factors that: a) the cost of capital reflects current risks and volatility in the markets; and b) the cost of debt represents the average of industry specific interest rates observed in recent transactions. Other key assumptions used to determine CEMEX's discounted cash flows are volume and price increases or decreases by main product during the projected periods. Volume increases or decreases generally reflect forecasts issued by trustworthy external sources, occasionally adjusted based on CEMEX's actual backlog, experience and judgment considering its concentration in certain sectors, while price changes normally reflect the expected inflation in the respective country. Operating costs and expenses during all periods are maintained as a fixed percent of revenues considering historic performance.

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		
	2018	2017	2016	2018	2017	2016
United States	8.5%	8.8%	8.6%	2.5%	2.5%	2.5%
Spain	8.8%	9.5%	9.5%	1.7%	1.7%	1.6%
Mexico	9.4%	10.2%	9.8%	3.0%	2.7%	2.9%
Colombia	9.5%	10.5%	10.0%	3.6%	3.7%	4.0%
France	8.4%	9.0%	9.1%	1.6%	1.8%	1.8%
United Arab Emirates	11.0%	10.4%	10.2%	2.9%	3.1%	3.4%
United Kingdom	8.4%	9.0%	8.8%	1.6%	1.7%	1.9%
Egypt	10.8%	11.8%	11.4%	6.0%	6.0%	6.0%
Range of rates in other countries.....	8.5% - 13.3%	9.1% - 11.7%	9.1% - 12.8%	2.5% - 6.9%	2.3% - 6.8%	2.2% - 7.0%

As of December 31, 2018, the discount rates used by CEMEX in its cash flows projections in the countries with the most significant goodwill balances 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 the values determined in 2017. This reduction was mainly attributable to a decrease in the Parent Company's 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. As of December 31, 2017, the discount rates increased slightly in most cases as compared to the values determined in 2016. Among other factors, the funding cost observed in industry decreased from 6.2% in 2016 to 6.1% in 2017 and the risk-free rate increased from approximately 2.7% in 2016 to 2.8% in 2017. Nonetheless, these decreases were offset by increases in 2017 in the country specific sovereign yields in most of the countries where CEMEX operates. As of December 31, 2016, the discount rates remained almost flat in most cases as compared to the values determined in the previous year. With respect to long-term growth rates, following general practice under IFRS, CEMEX uses country specific rates, which are mainly obtained from Consensus Economics, a compilation of analysts' forecasts worldwide, or from the International Monetary Fund when the former is not available for a specific country.

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Analysis of goodwill impairment – continued

In connection with the assumptions included in the table above, CEMEX performed 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, and an independent possible decrease of 1% in the long-term growth rate. In addition, CEMEX performed cross-check analyses for reasonableness of its results using multiples of Operating EBITDA. To arrive at these multiples, which represent a reasonableness check of the discounted cash flow models, 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 weighted average Operating EBITDA multiple of 11.1 times in 2018 and multiple of 9.0 times in 2017 and 2016. The lowest multiple observed in CEMEX's benchmark was 6.7 times in 2018, 6.5 times in 2017 and 5.9 times in 2016, and the highest being 14.9 times in 2018, 18.9 times in 2017 and 18.3 times in 2016.

As of December 31, 2018, 2017 and 2016, except for the operating segment in Spain described above, in which CEMEX determined an impairment loss of goodwill in 2017, none of the other CEMEX's sensitivity analyses resulted in a potential impairment risk in CEMEX's operating segments. CEMEX continually monitors the evolution of the specific 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 cash flows projections would be negatively affected, it may result in a goodwill impairment loss in the future.

As of December 31, 2018 and 2017, goodwill allocated to the United States accounted in both years for approximately 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. CEMEX has also considered recent developments in its operations in the United States, such as the decrease in ready-mix concrete volumes of approximately 1% in 2017, affected by the hurricanes occurred in Texas and Florida during the year, and the increase of 1% in 2016, and the increases in ready-mix concrete prices of approximately 2% in 2018, 1% in 2017 and 1% in 2016, which are key drivers for cement consumption and CEMEX's profitability, and which trends are expected to continue over the next few years, as anticipated in CEMEX's cash flow projections.

16) FINANCIAL INSTRUMENTS

16.1) SHORT-TERM AND LONG-TERM DEBT

As of December 31, 2018 and 2017, CEMEX's consolidated debt summarized by interest rates and currencies, was as follows:

	2018			2017		
	Short-term	Long-term	Total	Short-term	Long-term	Total
Floating rate debt..... \$	262	66,819	67,081	\$ 7,282	53,389	60,671
Fixed rate debt.....	621	115,255	115,876	9,691	123,633	133,324
	\$ 883	182,074	182,957	\$ 16,973	177,022	193,995
Effective rate ¹						
Floating rate	7.8%	3.6%		6.1%	3.0%	
Fixed rate	4.2%	5.6%		4.8%	5.7%	

	2018				2017			
	Short-term	Long-term	Total	Effective rate ¹	Short-term	Long-term	Total	Effective rate ¹
Dollars.....	589	114,696	115,285	5.8%	6,206	107,508	113,714	5.9%
Euros	12	52,368	52,380	3.3%	9,705	54,906	64,611	3.5%
Pounds.....	6	8,631	8,631	2.9%	6	9,141	9,141	2.6%
Philippine pesos.....	52	5,041	5,093	4.6%	6	5,408	5,408	4.6%
Other currencies	230	1,338	1,568	5.9%	1,062	59	1,121	6.2%
	883	182,074	182,957		16,973	177,022	193,995	

¹ In 2018 and 2017, represents the weighted-average nominal interest rate of the related debt agreements.

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As of December 31, 2018 and 2017, CEMEX's consolidated debt summarized by type of instrument, was as follow:

2018	Short-term	Long-term	2017	Short-term	Long-term
Bank loans			Bank loans		
Loans in foreign countries, 2019 to 2024 . \$	614	6,436	Loans in foreign countries, 2018 to 2022.. \$	910	5,439
Syndicated loans, 2020 to 2022	6	62,460	Syndicated loans, 2018 to 2022	6	50,132
	<u>614</u>	<u>68,896</u>		<u>910</u>	<u>55,571</u>
Notes payable			Notes payable		
Medium-term notes, 2023 to 2026	6	110,157	Medium-term notes, 2018 to 2026.....	224	133,949
Other notes payable, 2019 to 2025	140	3,150	Other notes payable, 2018 to 2025	154	3,187
	<u>140</u>	<u>113,307</u>		<u>378</u>	<u>137,136</u>
Total bank loans and notes payable	754	182,203	Total bank loans and notes payable	1,288	192,707
Current maturities	129	(129)	Current maturities	15,685	(15,685)
	<u>\$ 883</u>	<u>182,074</u>		<u>\$ 16,973</u>	<u>177,022</u>

As of December 31, 2018 and 2017, discounts, fees and other direct costs incurred in the issuance of CEMEX's outstanding notes payable and bank loans for US\$65 and US\$84, respectively, reduce the balance of notes payable and are amortized to financing expense over the maturity of the related debt instruments under the amortized cost method.

As of December 31, 2018 and 2017, from total debt of \$182,957 and \$193,995, respectively, approximately 79% in 2018 and 80% in 2017 was held in the Parent Company, 15% in 2018 and 15% in 2017 was in finance subsidiaries in the Netherlands and the United States, and 6% in 2018 and 5% in 2017 was in other countries.

Changes in consolidated debt for the years ended December 31, 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Debt at beginning of year	\$ 193,995	236,238	229,343
Proceeds from new debt instruments.....	43,765	93,620	48,748
Debt repayments	(53,025)	(131,446)	(89,792)
Foreign currency translation and accretion effects	(1,778)	(4,417)	47,939
Debt at end of year.....	<u>\$ 182,957</u>	<u>193,995</u>	<u>236,238</u>

As of December 31, 2018 and 2017, as presented in the table above of debt by type of instrument, approximately 38% and 29%, respectively, of CEMEX's total indebtedness, was represented by bank loans, of which the most significant portion corresponded to those balances under CEMEX's facilities agreement entered into with 20 financial institutions on July 19, 2017 for an amount in different currencies equivalent to approximately US\$4,050 at the origination date (the "2017 Credit Agreement"), as described elsewhere in this note.

As of December 31, 2018 and 2017, non-current notes payable for \$113,307 and \$137,136, respectively, was detailed as follows:

Description	Date of issuance	Issuer ^{1,2}	Currency	Principal amount	Rate ¹	Maturity Date	Repurchased		Outstanding	
							amount	amount ³	2018	2017
							US\$	US\$		
April 2026 Notes ⁸	16/Mar/16	CEMEX, S.A.B. de C.V.	Dollar	1,000	7.75%	16/Apr/26	6	1,000	\$ 19,575	19,568
July 2025 Notes	02/Apr/03	CEMEX Materials LLC	Dollar	150	7.70%	21/Jul/25	6	150	3,042	3,061
March 2025 Notes.....	03/Mar/15	CEMEX, S.A.B. de C.V.	Dollar	750	6.125%	05/May/25	6	750	14,696	14,691
January 2025 Notes.....	11/Sep/14	CEMEX, S.A.B. de C.V.	Dollar	1,100	5.70%	11/Jan/25	(29)	1,071	20,994	20,988
December 2024 Notes ⁷	05/Dec/17	CEMEX, S.A.B. de C.V.	Euro	650	2.75%	05/Dec/24	6	745	14,572	15,257
June 2024 Notes ⁸	14/Jun/16	CEMEX Finance LLC	Euro	400	4.625%	15/Jun/24	6	458	8,968	9,390
April 2024 Notes	01/Apr/14	CEMEX Finance LLC	Dollar	1,000	6.00%	01/Apr/24	(10)	990	18,995	18,924
March 2023 Notes.....	03/Mar/15	CEMEX, S.A.B. de C.V.	Euro	550	4.375%	05/Mar/23	6	630	12,356	12,938
October 2022 Notes ⁶	12/Oct/12	CEMEX Finance LLC	Dollar	1,500	9.375%	12/Oct/22	(1,500)	6	6	6
January 2022 Notes ⁴	11/Sep/14	CEMEX, S.A.B. de C.V.	Euro	400	4.75%	11/Jan/22	(480)	6	6	9,434
April 2021 Notes ⁸	01/Apr/14	CEMEX Finance LLC	Euro	400	5.25%	01/Apr/21	(480)	6	6	6
January 2021 Notes ^{5,8}	02/Oct/13	CEMEX, S.A.B. de C.V.	Dollar	1,000	7.25%	15/Jan/21	(1,000)	6	6	6,606
December 2019 Notes ^{6,8}	12/Aug/13	CEMEX, S.A.B. de C.V.	Dollar	1,000	6.50%	10/Dec/19	(1,000)	6	6	6
October 2018 Variable Notes ^{5,8}	02/Oct/13	CEMEX, S.A.B. de C.V.	Dollar	500	L+475bps	15/Oct/18	(500)	6	6	6,154
Other notes payable									109	125
									<u>\$ 113,307</u>	<u>137,136</u>

¹ The letter "L" included above refers to LIBOR, which represents the London Inter-Bank Offered Rate, variable rate used in international markets for debt denominated in U.S. dollars. As of December 31, 2018 and 2017, 3-Month LIBOR rate was 2.8076% and 1.6943%, respectively. The contraction "bps" means basis points. One hundred basis points equal 1%.

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Consolidated debt – continued

- 2 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 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 March 2018, CEMEX Egyptian Investments B.V. changed its legal name to CEMEX Africa & Middle East Investments B.V.
- 3 Presented net of all outstanding notes repurchased and held by CEMEX's subsidiaries.
- 4 On January 10, 2018, CEMEX completed the purchase of the outstanding amount of the January 2022 Notes for an aggregate principal amount of p400 using available funds from the issuance of the December 2024 Notes by means of an offer communicated on November 28, 2017.
- 5 In March 2018, CEMEX early redeemed the outstanding amount of the October 2018 Variable Notes and the January 2021 Notes for US\$313 and US\$341, respectively.
- 6 In December 2017, CEMEX repurchased the outstanding amount of the December 2019 Notes for an aggregate principal amount of US\$611. During September and October 2017, CEMEX repurchased US\$1,044 aggregate principal amount of the October 2022 Notes that remained outstanding.
- 7 On December 5, 2017, CEMEX issued " 650 of 2.75% senior secured notes due December 5, 2024 (the "December 2024 Notes"). The proceeds were used to repay other indebtedness.
- 8 In May 2017, CEMEX redeemed the remaining p400 of aggregate principal amount of the April 2021 Notes. Moreover, in February 2017, CEMEX repurchased US\$385 aggregate principal amount of the January 2021 Notes. In addition, during 2016, using available funds from the issuance of the April 2026 Notes, the June 2024 Notes, the sale of assets and cash flows provided by operating activities, CEMEX completed the purchase of US\$178 principal amount of the October 2018 Variable Notes and US\$242 principal amount of the January 2021 Notes, among other debt repurchases incurred that year with those resources.

During 2018, 2017 and 2016, as a result of the debt transactions incurred including exchange offers and tender offers to replace and/or repurchase existing debt instruments, CEMEX paid premiums, fees and issuance costs for a combined amount of US\$51 (\$1,006), US\$251 (\$4,930) and US\$196 (\$4,061), respectively, of which US\$51 (\$1,006) in 2018, US\$212 (\$4,160) in 2017 and US\$151 (\$3,129) in 2016, associated with the extinguished portion of the exchanged or repurchased notes, were recognized in the income statement in each year within "Financial expense". In addition, US\$39 (\$770) in 2017 and US\$45 (\$932) in 2016, corresponding to issuance costs of new debt and/or the portion of the combined premiums, fees and issuance costs treated as a refinancing of the old instruments, adjusted the carrying amount of the new debt instruments, and are amortized over the remaining term of each instrument. Moreover, proportional fees and issuance costs related to the extinguished debt instruments for US\$4 (\$87) in 2018, US\$16 (\$310) in 2017 and US\$37 (\$767) in 2016 that were pending for amortization were recognized in the income statement of each year as part of "Financial expense."

The maturities of consolidated long-term debt as of December 31, 2018, were as follows:

	2018
2020	\$ 11,523
2021	23,603
2022	30,175
2023	15,342
2024 and thereafter	101,431
	<u>\$ 182,074</u>

As of December 31, 2018, CEMEX had the following lines of credit, of which, the only committed portion refers to the revolving credit facility, at annual interest rates ranging between 0.75% and 8.50%, depending on the negotiated currency:

	Lines of credit	Available
Other lines of credit in foreign subsidiaries	\$ 9,440	7,286
Other lines of credit from banks	11,294	8,956
Revolving credit facility	22,303	16,211
	<u>\$ 43,037</u>	<u>32,453</u>

2017 Credit Agreement and 2014 Credit Agreement

On July 19, 2017, the Parent Company and certain subsidiaries entered into the 2017 Credit Agreement with 20 financial institutions for an amount in different currencies equivalent to US\$4,050 at the origination date, the proceeds from which were used to refinance in full the US\$3,680 then outstanding under the 2014 Credit Agreement and other debt repayments, allowing CEMEX to increase the average life of its syndicated bank debt with a final maturity in July 2022. All tranches under the 2017 Credit Agreement have substantially the same terms, including an applicable margin over the benchmark interest rate of between 125 to 350 basis points, depending on CEMEX's consolidated debt leverage ratio; and the tranches share the same guarantors and collateral package as the original tranches under the 2014 Credit Agreement and other secured debt obligations of CEMEX. As of December 31, 2018 and 2017, total commitments under the 2017 Credit Agreement included US\$2,746, p741 and £344, in both years, out of which about US\$1,135 in both years were in a revolving credit facility. 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.

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2017 Credit Agreement, 2014 Credit Agreement and Facilities Agreement – continued

All tranches under the 2017 Credit Agreement have substantially the same terms, including an applicable margin over LIBOR or EURIBOR, as applicable, of between 125 to 350 basis points, depending on the leverage ratio (as defined below) of CEMEX, as follows:

Consolidated leverage ratio	Applicable margin
> = 5.50x	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

The 2017 Credit Agreement also modified the consolidated leverage ratio and consolidated coverage ratio limits as described below in the financial covenants section.

The balance of debt under the 2017 Credit Agreement and previously under the 2014 Credit Agreement is 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, S.A., 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, S.A. (the "Collateral"); and (b) all proceeds of such Collateral.

For the years ended December 31, 2018, 2017 and 2016, under both the 2017 Credit Agreement and the 2014 Credit Agreement, CEMEX was required to comply with the following thresholds: (a) the aggregate amount allowed for capital expenditures cannot exceed US\$1,000 per year excluding certain capital expenditures, and, joint venture investments and acquisitions by CHP and its subsidiaries and CLH and its subsidiaries, which capital expenditures, joint venture investments and acquisitions at any time then incurred are subject to a separate aggregate limit for each of CHP and CLH of US\$500 (or its equivalent); and (b) the amounts allowed for permitted acquisitions and investments in joint ventures cannot exceed US\$400 per year. Nonetheless, such limitations do not apply if capital expenditures or acquisitions do not exceed free cash flow generation or are 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: (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 Credit Agreement); (iv) enter into mergers; (v) enter into agreements that restrict its 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 while the Leverage Ratio remains above 4.0 times; and (xi) enter into speculative derivatives transactions. The 2017 Credit Agreement contains several affirmative covenants that, among other things, require CEMEX to provide periodic financial information to its lenders. However, a number of those covenants and restrictions will automatically cease to apply or become less restrictive if CEMEX so elects when: (i) CEMEX's Leverage Ratio (as defined hereinafter) for the two most recently completed quarterly testing periods is less than or equal to 3.75 times; and (ii) no default under the 2017 Credit Agreement is continuing. At that point the Leverage Ratio must not exceed 3.75 times. Restrictions that will cease to apply when CEMEX satisfies such conditions include the capital expenditure limitations mentioned above and several negative covenants, including limitations on CEMEX's ability to declare or pay cash dividends and distributions to shareholders, limitations on CEMEX's ability to repay existing financial indebtedness, certain asset sale restrictions, and restrictions on exercising call options in relation to any perpetual bonds CEMEX issues. At such time, several baskets and caps relating to negative covenants will also increase, including permitted financial indebtedness, permitted guarantees and limitations on liens. However, 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, 2018 and 2017, CEMEX was not aware of any event of default. CEMEX cannot assure that in the future it will be able to comply with the restrictive covenants and limitations contained in the 2017 Credit Agreement. 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.

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Financial Covenants

The 2017 Credit Agreement and previously the 2014 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 according to the formulas established in the debt contracts using the consolidated amounts under IFRS.

As of December 31, 2018, CEMEX must comply with a Coverage Ratio and a Leverage Ratio for each period of four consecutive fiscal quarters as follows:

Period	Coverage ratio	Period	Leverage ratio
For the period ending on December 31, 2018 up to and including the period ending on March 31, 2020	> = 2.50	For the period ending on December 31, 2018 up to and including the period ending on March 31, 2019	< = 4.75
		For the period ending on June 30, 2019 up to and including the period ending on March 31, 2020	< = 4.50
For the period ending on June 30, 2020 and each subsequent reference period	> = 2.75	For the period ending on June 30, 2020 and each subsequent reference period	< = 4.25

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. For the compliance periods ended as of December 31, 2018, 2017 and 2016, under the 2017 Credit Agreement and the 2014 Credit Agreement, as applicable, the main consolidated financial ratios were as follows:

		Consolidated financial ratios		
		2018	2017	2016
Leverage ratio ^{1,2}	Limit	< = 4.75	< = 5.25	< = 6.00
	Calculation	3.84	3.85	4.22
Coverage ratio ³	Limit	> = 2.50	> = 2.50	> = 1.85
	Calculation	4.41	3.46	3.18

1 The leverage ratio is calculated in pesos by dividing "Funded debt" by pro forma Operating EBITDA for the last twelve months as of the calculation date. Funded debt equals debt, as reported in the statement of financial position, excluding finance leases, components of liability of convertible subordinated notes, plus perpetual debentures and guarantees, plus or minus the fair value of derivative financial instruments, as applicable, among other adjustments.

2 Pro forma Operating EBITDA represents, all calculated in pesos, Operating EBITDA for the last twelve months as of the calculation date, 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.

3 The coverage ratio is calculated in pesos using the amounts from the financial statements, by dividing the pro forma Operating EBITDA by the financial expense for the last twelve months as of the calculation date. Financial expense includes interest accrued on the perpetual debentures.

CEMEX will classify all of its outstanding debt as current debt in its statement of financial position 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) a signed refinancing agreement to refinance the relevant debt on a long-term basis. Moreover, concurrent with such classification of debt as short-term, the noncompliance of CEMEX with the financial ratios agreed upon pursuant to the 2017 Credit Agreement 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.

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16.2) OTHER FINANCIAL OBLIGATIONS

As of December 31, 2018 and 2017, other financial obligations in the consolidated statement of financial position are detailed as follows:

	2018			2017		
	Short-term	Long-term	Total	Short-term	Long-term	Total
I. Convertible subordinated notes due 2020.....	\$ 0	10,097	10,097	\$ 0	9,985	9,985
II. Convertible subordinated notes due 2018.....	0	0	0	7,115	0	7,115
III. Mandatorily convertible securities due 2019.	374		374	323	371	694
IV. Liabilities secured with accounts receivable.	11,770		11,770	11,313	0	11,313
V. Finance leases	595	1,931	2,526	611	2,503	3,114
	<u>\$ 12,739</u>	<u>12,028</u>	<u>24,767</u>	<u>\$ 19,362</u>	<u>12,859</u>	<u>32,221</u>

Financial instruments convertible into CEMEX's shares contain components of liability and equity, which are recognized differently depending upon the currency in which the instrument is denominated and the functional currency of the issuer (note 2.6).

I. Optional convertible subordinated notes due 2020

During 2015, the Parent Company issued US\$521 aggregate principal amount of 3.72% 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 aggregate fair value of the conversion option as of the issuance dates which amounted to \$199 was recognized in other equity reserves. As of December 31, 2018 and 2017, the conversion price per ADS for the 2020 Convertible Notes was approximately 11.01 dollars in both years. After antidilution adjustments, the conversion rate for the 2020 Convertible Notes as of December 31, 2018 and 2017 was 90.8592 ADS per each 1 thousand dollars principal amount of such notes in both years.

II. Optional convertible subordinated notes due in 2018

On March 15, 2011, the Parent Company closed the offering of US\$690 principal amount of 3.75% convertible subordinated notes due in 2018 (the "2018 Convertible Notes"). The notes were subordinated to all of CEMEX's liabilities and commitments. The notes were convertible into a fixed number of the Parent Company ADSs and are subject to antidilution adjustments. On June 19, 2017, the Parent Company agreed with certain institutional holders on the early conversion of US\$325 of the 2018 Convertible Notes in exchange for the issuance of approximately 43 million ADSs, which included the number of additional ADSs issued to the holders as non-cash inducement premiums. As a result of the early conversion, the liability component of the converted notes of \$5,468 was reclassified from other financial obligations to other equity reserves. In addition, the Parent Company increased common stock for \$4 and additional paid-in capital for \$7,059 against other equity reserves, and recognized expense for the inducement premiums paid in shares of \$769, recognized within "Financial income and other items, net" in the income statement for 2017. After the early conversion of notes described above, the US\$365 of the 2018 Convertible Notes that remained outstanding, were repaid in cash at their maturity on March 15, 2018. Concurrent with the offering of the 2018 Convertible Notes, a portion of the net proceeds from this transaction was used to fund the purchase of capped call options, which, when purchased, were generally expected to reduce the potential dilution cost to CEMEX upon the potential conversion of such notes (note 16.4).

III. Mandatorily convertible securities due in 2019

In December 2009, the Parent Company exchanged debt into US\$315 principal amount of 10% mandatorily convertible securities in pesos with maturity in 2019 (the "2019 Mandatorily Convertible Securities"). Reflecting antidilution adjustments, the notes will be converted at maturity or earlier if the price of the CPO reaches \$26.22 into approximately 236 million CPOs at a conversion price of \$17.48 per CPO. Holders have an option to voluntarily convert their securities on any interest payment date into CPOs. The conversion option embedded in these securities is treated as a stand-alone derivative liability at fair value through the statement of operations (note 16.4).

IV. Liabilities secured with accounts receivable

As mentioned in note 9, as of December 31, 2018 and 2017, in connection with CEMEX's sale of trade accounts receivable under securitization programs and/or factoring programs with recourse, the funded amounts of such receivables sold are recognized in "Other financial obligations" in the statement of financial position.

V. Finance leases

CEMEX has several operating and administrative assets, including buildings and mobile equipment, under finance lease contracts. Future payments associated with these contracts are presented in note 23.5.

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16.3) FAIR VALUE OF FINANCIAL INSTRUMENTS

Financial assets and liabilities

The carrying amounts of cash, trade accounts receivable, other accounts receivable, trade accounts payable, other accounts payable and accrued expenses, as well as short-term debt, approximate their corresponding estimated fair values due to the short-term maturity and revolving nature of these financial assets and liabilities.

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 the derivative 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 and 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 attributable 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, 2018 and 2017, the carrying amounts of financial assets and liabilities and their respective fair values were as follows:

	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets				
Derivative instruments (notes 13.2 and 16.4).....	\$ 297	297	\$ 794	794
Other investments and non-current accounts receivable (note 13.2)..	4,974	4,974	4,964	4,964
	<u>\$ 5,271</u>	<u>5,271</u>	<u>\$ 5,758</u>	<u>5,758</u>
Financial liabilities				
Long-term debt (note 16.1).....	\$ 182,074	179,740	\$ 177,022	184,220
Other financial obligations (note 16.2).....	12,028	11,924	12,859	13,381
Derivative instruments (notes 16.4 and 17)	406	406	402	402
	<u>\$ 194,508</u>	<u>192,070</u>	<u>\$ 190,283</u>	<u>198,003</u>

Fair Value Hierarchy

As of December 31, 2018 and 2017, assets and liabilities carried at fair value in the consolidated statements of financial position are included in the following fair value hierarchy categories:

	2018	Level			Total
		1	2	3	
Assets measured at fair value					
Derivative instruments (notes 13.2 and 16.4).....	\$	6	297	6	297
Investments in strategic equity securities (note 13.2)		217	6	6	217
Other investments at fair value through earnings (note 13.2).....		6	428	6	428
	\$	<u>217</u>	<u>725</u>	<u>6</u>	<u>942</u>
Liabilities measured at fair value					
Derivative instruments (notes 16.4 and 17).....	\$	6	406	6	406
2017					
Assets measured at fair value					
Derivative instruments (notes 13.2 and 16.4).....	\$	6	794	6	794
Investments in strategic equity securities (note 13.2)		275	6	6	275
Other investments at fair value through earnings (note 13.2).....		6	441	6	441
	\$	<u>275</u>	<u>1,231</u>	<u>6</u>	<u>1,510</u>
Liabilities measured at fair value					
Derivative instruments (notes 16.4 and 17).....	\$	6	402	6	402

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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, 2018 and 2017, the notional amounts and fair values of CEMEX's derivative instruments were as follows:

		2018		2017	
		Notional amount	Fair value	Notional amount	Fair value
I. Net investment hedge.....	US\$	1,249	2	1,160	47
II. Foreign exchange forwards related to forecasted transactions.....		6	6	381	3
III. Equity forwards on third party shares.....		111	2	168	7
IV. Interest rate swaps.....		1,126	(8)	137	16
V. Fuel price hedging.....		122	(14)	72	20
VI. 2019 Mandatorily Convertible Securities.....		6	(1)	6	(20)
	US\$	2,608	(19)	1,918	73

The caption "Financial income and other items, net" includes gains and losses related to the recognition of changes in fair values of the derivative instruments during the applicable period and that represented net gains of US\$38 (\$692) in 2018, net gains of US\$9 (\$161) in 2017 and net gains of US\$17 (\$317) in 2016, respectively.

I. Net investment hedge

As of December 31, 2018 and 2017, there are US\$/MXP foreign exchange forward contracts under a program planned to be up to US\$1,250, 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 2018 and 2017, these contracts generated losses of US\$59 (\$1,157) and gains of US\$6 (\$110), respectively.

II. Foreign exchange forwards related to forecasted transactions

As of December 31, 2017, CEMEX held US\$/Euro foreign exchange forward contracts maturing on January 10, 2018, negotiated to maintain the Euro value of a portion of proceeds from debt issuances maintained in U.S. dollars that were used to repurchase debt denominated in euros (note 16.1). In addition, in February 2017 CEMEX settled US\$/MXP foreign exchange forward contracts negotiated to hedge the U.S. dollar value of the proceeds from the expected sale of pumping assets in Mexico (note 4.3). For the years 2018, 2017 and 2016, the aggregate results of these instruments, including the effects resulting from positions entered and settled during the year, generated losses of US\$1 (\$21) in 2018, losses of US\$17 (\$337) in 2017 and gains of US\$10 (\$186) in 2016, recognized within "Financial income and other items, net" in the income statement.

III. Equity forwards on third party shares

As of December 31, 2018 and 2017, CEMEX maintained equity forward contracts with cash settlement in March 2020 and March 2019, respectively, over the price of 20.9 million shares of GCC in 2018 and 31.5 million in 2017, in connection with the sale of CEMEX's remaining GCC shares in September 2017 (note 13.1). During 2018, CEMEX early settled a portion of these contracts for 10.6 million shares. Changes in the fair value of these instruments and early settlement effects generated gains of US\$25 (\$436) in 2018 and losses of US\$24 (\$463) in 2017 recognized within "Financial income and other items, net" in the income statement.

In addition, until October 2016, CEMEX maintained a forward contract over the price of 59.5 million CPOs of Axtel in connection with the Company's investment at fair value through the income statement (note 13.2). Changes in the fair value of this instrument generated a loss of US\$2 (\$30) in 2016 recognized within "Financial income and other items, net" in the income statement.

IV. Interest rate swap contracts

As of December 31, 2018, CEMEX held interest rate swaps for a notional amount of US\$1,000 the fair value of which represented a liability of US\$19 (\$373), 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 recycled through financial expense as interest expense on the related bank loans is accrued. For the year 2018, changes in fair value of these contracts generated losses of US\$19 (\$364) in the income statement.

As of December 31, 2018 and 2017, 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 US\$11 (\$216) and US\$16 (\$314), respectively. 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 US\$6 (\$114) in 2018, US\$6 (\$114) in 2017 and US\$6 (\$112) in 2016, recognized in the income statement for each period.

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Derivative financial instruments – continued

V. Fuel price hedging

As of December 31, 2018 and 2017, CEMEX maintained forward contracts negotiated to hedge the price of certain fuels, including diesel, gas and coal, as solid fuel, in several operations for aggregate notional amounts of US\$122 (\$2,398) and US\$72 (\$1,415), respectively, with an estimated aggregate fair value representing liabilities of US\$14 (\$275) in 2018 and assets of US\$20 (\$394) in 2017. 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 2018, 2017 and 2016, changes in fair value of these contracts recognized in other comprehensive income represented losses of US\$35 (\$697), gains of US\$4 (\$76) and gains of US\$15 (\$311), respectively.

VI. 2019 Mandatorily Convertible Securities and options on the Parent Company's own shares

In connection with the 2019 Mandatorily Convertible Securities (note 16.2); considering that the securities are denominated in pesos and the functional currency of the Parent Company's division that issued the securities is the dollar (note 2.4), CEMEX separated the conversion option embedded in such instruments and recognized it at fair value through the income statement, which as of December 31, 2018 and 2017, resulted in a liability of US\$1 (\$20) and US\$20 (\$393), respectively. Changes in fair value generated a gain of US\$20 (\$391) in 2018, a gain of US\$19 (\$359) in 2017 and a loss of US\$29 (\$545) in 2016.

In addition, on March 15, 2011, the Parent Company entered into a capped calls, considering antidilution adjustments, over 80 million CEMEX's ADSs maturing in March 2018 in connection with the 2018 Convertible Notes, by means of which, at maturity of the notes, originally CEMEX would receive in cash the excess between the market price and the strike price of approximately 8.57 dollars per ADS, with a maximum appreciation per ADS of 5.27 dollars. CEMEX paid aggregate premiums of US\$104. During August 2016, CEMEX amended 58.3% of the total notional amount of the capped calls to lower the exercise price in exchange for reducing the number of underlying options. As a result, CEMEX retained capped calls over 71 million ADSs. Changes in the fair value of these instruments generated gains of US\$37 (\$725) in 2017 and gains of US\$44 (\$818) in 2016, recognized within Financial income and other items, net in the income statement. During 2017, CEMEX unwound and settled all its capped calls receiving in exchange US\$103 in cash.

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, 2018 and 2017, 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, 2018 and 2017, 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 customer's 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.

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Credit risk – continued

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, 2018, 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 \$2,336.

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, 2018 and 2017, approximately 37% and 31%, respectively, of CEMEX's long-term debt was denominated in floating rates at a weighted-average interest rate of LIBOR plus 241 basis points in 2018 and 268 basis points in 2017. As of December 31, 2018 and 2017, if interest rates at that date had been 0.5% higher, with all other variables held constant, CEMEX's net income for 2018 and 2017 would have reduced by US\$19 (\$366) and US\$18 (\$353), 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 2018 and 2017.

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, 2018, approximately 22% of CEMEX's net sales, before eliminations resulting from consolidation, were generated in Mexico, 26% in the United States, 8% in the United Kingdom, 6% in France, 4% in Germany, 2% in Spain, 2% in Poland, 2% in the Rest of Europe region, 4% in Colombia, 2% in Panama, 1% in Costa Rica, 1% Caribbean TCL, 2% in the Rest of South, Central America and the Caribbean region, 2% in Philippines, 1% in Egypt, 1% in the Rest of Asia, Middle East and Africa and 7% in CEMEX's other operations.

Foreign exchange gains and losses occur through 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 exchange fluctuations in related parties' long-term balances denominated in foreign currency that are not expected to be settled in the foreseeable future, which are reported in the statement of other comprehensive income. As of December 31, 2018 and 2017, excluding from the sensitivity analysis the impact of translating the net assets of foreign operations into CEMEX's reporting currency, considering a hypothetical 10% strengthening of the dollar against the Mexican peso, with all other variables held constant, CEMEX's net income for 2018 and 2017 would have decreased by US\$63 (\$1,240) and US\$119 (\$2,343), 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, 2018, approximately 63% of CEMEX's financial debt was Dollar-denominated, 29% was Euro-denominated, 5% was Pound-denominated and 3% 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, 2018, 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, 2018 and 2017, 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.

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Foreign currency risk – continued

As of December 31, 2018 and 2017, CEMEX's consolidated net monetary assets (liabilities) by currency are as follows:

	2018						Total
	Mexico	United States	Europe	South, Central America and the Caribbean	Asia, Middle East and Africa	Others¹	
Monetary assets	8,400	9,961	13,163	6,046	10,216	2,997	50,783
Monetary liabilities	19,798	33,464	40,153	10,841	12,223	200,731	317,210
Net monetary assets (liabilities) ²	<u>(11,398)</u>	<u>(23,503)</u>	<u>(26,990)</u>	<u>(4,795)</u>	<u>(2,007)</u>	<u>(197,734)</u>	<u>(266,427)</u>
Out of which:							
Dollars.....	(560)	(23,507)	153	(947)	22	(117,677)	(142,516)
Pesos.....	(10,838)	4	6	(6)	6	(5,469)	(16,309)
Euros.....	6	6	(10,571)	13	40	(52,942)	(63,460)
Pounds.....	6	6	(18,241)	6	6	(8,609)	(26,850)
Other currencies.....	6	6	1,669	(3,855)	(2,069)	(13,037)	(17,292)
	<u>(11,398)</u>	<u>(23,503)</u>	<u>(26,990)</u>	<u>(4,795)</u>	<u>(2,007)</u>	<u>(197,734)</u>	<u>(266,427)</u>
	2017						
	Mexico	United States	Europe	South, Central America and the Caribbean	Asia, Middle East and Africa	Others¹	Total
Monetary assets	\$ 11,798	9,453	14,182	7,347	9,780	5,163	57,723
Monetary liabilities	17,505	32,158	45,675	12,016	11,522	221,579	340,455
Net monetary assets (liabilities) ²	<u>\$ (5,707)</u>	<u>(22,705)</u>	<u>(31,493)</u>	<u>(4,669)</u>	<u>(1,742)</u>	<u>(216,416)</u>	<u>(282,732)</u>
Out of which:							
Dollars.....	\$ (1,097)	(22,710)	39	(126)	221	(133,530)	(157,203)
Pesos.....	(4,610)	4	24	6	6	(7,745)	(12,327)
Euros.....	6	6	(10,155)	2	6	(58,452)	(68,605)
Pounds.....	6	6	(19,358)	6	6	(9,119)	(28,477)
Other currencies.....	6	1	(2,043)	(4,545)	(1,963)	(7,570)	(16,120)
	<u>\$ (5,707)</u>	<u>(22,705)</u>	<u>(31,493)</u>	<u>(4,669)</u>	<u>(1,742)</u>	<u>(216,416)</u>	<u>(282,732)</u>

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.

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 US\$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, 2018 and 2017, 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 US\$11 (\$210) in 2018 and US\$14 (\$283) in 2017, 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.

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Equity risk – continued

In addition, even though the changes in fair value of CEMEX's embedded conversion option in the Mandatorily Convertible Notes 2019 denominated in a currency other than the functional issuer's currency affect the income statement, this do not imply any risk or variability in cash flows, considering that through their exercise, CEMEX will settle a fixed amount of debt with a fixed number of shares. As of December 31, 2018 and 2017, the potential change in the fair value of the embedded conversion options in the Mandatorily Convertible Notes 2019 that would result from a hypothetical, instantaneous increase of 10% in the market price of CEMEX's CPOs, with all other variables held constant, would have decreased CEMEX's net income by US\$1 (\$16) in 2018 and decreased by US\$9 (\$180) in 2017 as a result of additional negative changes in fair value associated with this option. A 10% hypothetical decrease in the CEMEX CPO price would generate 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 23.5.

As of December 31, 2018, current liabilities, which included \$13,622 of current maturities of debt and other financial obligations, exceed current assets by \$22,891. For the year ended December 31, 2018, CEMEX generated net cash flows provided by operating activities from continuing operations of \$26,545, after payments of interest and income taxes. The Company's management considers that CEMEX will generate sufficient cash flows from operations. In addition, as of December 31, 2018, 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 \$16,211 (US\$825), 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, 2018 and 2017, the potential requirement for additional margin calls under our different commitments is not significant.

17) OTHER CURRENT AND NON-CURRENT LIABILITIES

As of December 31, 2018 and 2017, consolidated other current liabilities were as follows:

	2018	2017
Provisions ¹	\$ 10,509	12,121
Interest payable.....	1,856	2,496
Advances from customers	3,838	3,886
Other accounts payable and accrued expenses ²	5,222	5,123
Contract liabilities with customers (note 3)	775	770
	\$ 22,200	24,396

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 In 2017, includes an account payable in Colombian pesos equivalent to \$491 (US\$25) settled on January 5, 2018 related to a penalty imposed by the Commerce and Industry Superintendence in Colombia in connection with a market investigation (note 24.2).

As of December 31, 2018 and 2017, consolidated other non-current liabilities were as follows:

	2018	2017
Asset retirement obligations ¹	\$ 8,013	7,906
Accruals for legal assessments and other responsibilities ²	879	1,599
Non-current liabilities for valuation of derivative instruments	406	402
Environmental liabilities ³	573	991
Other non-current liabilities and provisions ⁴	5,134	4,751
	\$ 15,005	15,649

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.

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Other non-current liabilities – continued

- 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, 2018 and 2017, includes \$981 and \$1,498, respectively, of the non-current portion of taxes payable in Mexico recognized in connection with the termination of the tax consolidation regime in 2014. As of December 31, 2018 and 2017, \$590 and \$958, respectively, were included within current taxes payable.

Changes in consolidated other current and non-current liabilities for the years ended December 31, 2018 and 2017, were as follows:

	2018						Total	2017
	Asset retirement obligations	Environmental liabilities	Accruals for legal proceedings	Valuation of derivative instruments	Other liabilities and provisions			
Balance at beginning of period	\$ 7,906	991	1,599	421	17,623	28,540	28,937	
Business combinations	ó	ó	ó	ó	ó	ó	345	
Additions or increase in estimates..	1,355	11	136	275	25,379	27,156	41,137	
Releases or decrease in estimates..	(916)	(4)	(807)	ó	(26,841)	(28,568)	(41,700)	
Reclassifications	(22)	(384)	ó	(96)	124	(378)	(1,148)	
Accretion expense.....	(186)	ó	ó	ó	(902)	(1,088)	(1,021)	
Foreign currency translation	(124)	(41)	(49)	78	763	627	1,990	
Balance at end of period.....	\$ 8,013	573	879	678	16,146	26,289	28,540	
Out of which:								
Current provisions.....	\$ 297	ó	ó	272	10,715	11,284	12,891	

18) PENSIONS AND POST-EMPLOYMENT BENEFITS

Defined contribution pension plans

The consolidated costs of defined contribution plans for the years ended December 31, 2018, 2017 and 2016 were \$863, \$922 and \$865, respectively. CEMEX contributes periodically the amounts offered by the pension plan to the employees' 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, 2018, 2017 and 2016, the effects of pension plans and other post-employment benefits are summarized as follows:

	Pensions			Other benefits			Total		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Net period cost (income):									
Recorded in operating costs and expenses									
Service cost	\$ 193	221	151	35	33	25	228	254	176
Past service cost	168	(55)	8	ó	ó	ó	168	(55)	8
	361	166	159	35	33	25	396	199	184
Recorded in other financial expenses									
Net interest cost	691	693	711	84	74	57	775	767	768
Recorded in other comprehensive income									
Actuarial (gains) losses for the period.....	(3,415)	20	3,985	11	(23)	34	(3,404)	(3)	4,019
	\$ (2,363)	879	4,855	130	84	116	(2,233)	963	4,971

For the years 2018, 2017 and 2016, actuarial (gains) losses for the period were generated by the following main factors as follows:

	2018	2017	2016
Actuarial (gains) losses due to experience	\$ (1,110)	121	(511)
Actuarial (gains) losses due to demographic assumptions	(1,104)	(46)	(231)
Actuarial (gains) losses due financial assumptions	(1,190)	(78)	4,761
	\$ (3,404)	(3)	4,019

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Pensions and post-employment benefits – continued

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. In 2017, net actuarial gains due to financial assumptions were mainly driven by an increase in the discount rates applicable to the benefit obligations in Germany and Mexico and by actual returns higher than estimated in the United States, partially offset by a decrease in the discount rate in the United Kingdom. Net actuarial losses due to financial assumptions during 2016 were mainly generated by a significant reduction in the discount rates applicable to the benefit obligations in the United Kingdom, Germany and other European countries, considering macroeconomic and political uncertainty prevailing at that time, partially offset by an increase in the discount rate in Mexico. These actuarial losses originated by the reduction in the discount rates in 2016 were also partially offset by actual returns higher than estimated in some of the plan assets related to CEMEX's defined benefit plans.

As of December 31, 2018 and 2017, the reconciliation of the actuarial benefit obligations and pension plan assets, are presented as follows:

	Pensions		Other benefits		Total	
	2018	2017	2018	2017	2018	2017
Change in benefits obligation:						
Projected benefit obligation at beginning of the period	\$ 54,910	51,055	1,436	1,164	56,346	52,219
Service cost	193	221	35	33	228	254
Interest cost	1,608	1,625	87	76	1,695	1,701
Actuarial (gains) losses	(5,126)	727	8	(24)	(5,118)	703
Additions through business combinations	6	2,801	111	271	111	3,072
Reduction from disposal of assets	(9)	6	6	6	(9)	6
Plan amendments	168	(55)	6	6	168	(55)
Benefits paid	(2,807)	(2,920)	(102)	(81)	(2,909)	(3,001)
Foreign currency translation	(2,226)	1,456	(30)	(3)	(2,256)	1,453
Projected benefit obligation at end of the period.....	46,711	54,910	1,545	1,436	48,256	56,346
Change in plan assets:						
Fair value of plan assets at beginning of the period	32,665	28,828	28	26	32,693	28,854
Return on plan assets	917	932	3	2	920	934
Actuarial (gains) losses	(1,711)	707	(3)	(1)	(1,714)	706
Employer contributions	1,562	1,494	102	81	1,664	1,575
Additions through business combinations	6	2,841	6	6	6	2,841
Reduction for disposal of assets.....	6	(4)	6	6	6	(4)
Benefits paid	(2,807)	(2,920)	(102)	(81)	(2,909)	(3,001)
Foreign currency translation	(1,335)	787	6	1	(1,335)	788
Fair value of plan assets at end of the period	29,291	32,665	28	28	29,319	32,693
Net projected liability in the statement of financial position..	\$ 17,420	22,245	1,517	1,408	18,937	23,653

As of December 31, 2018 and 2017, based on the hierarchy of fair values, plan assets are detailed as follows:

	2018				2017			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash.....	\$ 701	6	6	701	\$ 579	6	6	579
Investments in corporate bonds.....	131	6,720	6	6,851	144	6,067	1	6,212
Investments in government bonds.....	1,649	6,786	6	8,435	1,701	9,407	6	11,108
Total fixed-income securities	2,481	13,506	6	15,987	2,424	15,474	1	17,899
Investment in marketable securities	5,089	1,557	6	6,646	6,212	1,735	6	7,947
Other investments and private funds	973	4,172	1,541	6,686	991	3,279	2,577	6,847
Total variable-income securities.....	6,062	5,729	1,541	13,332	7,203	5,014	2,577	14,794
Total plan assets	\$ 8,543	19,235	1,541	29,319	\$ 9,627	20,488	2,578	32,693

The most significant assumptions used in the determination of the benefit obligation were as follows:

	2018				2017			
	Mexico	United States	United Kingdom	Range of rates in other countries	Mexico	United States	United Kingdom	Rates ranges in other countries
Discount rates.....	10.8%	4.5%	2.9%	1.3% ó 67.5%	9.3%	3.9%	2.4%	1.3% ó 6.3%
Rate of return on plan assets.....	10.8%	4.5%	2.9%	1.3% ó 67.5%	9.3%	3.9%	2.4%	1.3% ó 6.3%
Rate of salary increases	4.0%	6	3.3%	2.3% ó 6.0%	4.0%	6	3.2%	1.5% ó 6.0%

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Pensions and post-employment benefits – continued

As of December 31, 2018, estimated payments for pensions and other post-employment benefits over the next 10 years were as follows:

	2018
2019.....	\$ 2,904
2020.....	2,663
2021.....	2,641
2022.....	2,662
2023 – 2028.....	<u>15,714</u>

As of December 31, 2018 and 2017, the aggregate projected benefit obligation (PBO) for pension plans and other post-employment benefits and the plan assets by country were as follows:

	2018			2017		
	PBO	Assets	Deficit	PBO	Assets	Deficit
Mexico.....	\$ 3,300	582	2,718	\$ 3,213	840	2,373
United States.....	5,619	3,428	2,191	6,378	4,031	2,347
United Kingdom ¹	28,771	20,775	7,996	35,602	23,145	12,457
Germany.....	3,973	195	3,778	4,362	213	4,149
Other countries.....	6,593	4,339	2,254	6,791	4,464	2,327
	<u>\$ 48,256</u>	<u>29,319</u>	<u>18,937</u>	<u>\$ 56,346</u>	<u>32,693</u>	<u>23,653</u>

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 approximately US\$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 US\$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.

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, 2018 and 2017, the projected benefits obligation related to these benefits was \$1,133 and \$1,080, respectively. The medical inflation rates used to determine the projected benefits obligation of these benefits in 2018 and 2017 for Mexico were 7.0% in both years, for Puerto Rico 6.2% and 6.9%, respectively, and for the United Kingdom were 6.8% and 6.7%, respectively. In connection with the acquisition of TCL (note 4.1), CEMEX integrated TCL's consolidated health care benefits into its operations. For 2018 and 2017, the medical inflation rate used to determine the projected benefits obligation was 5.0% in both years.

Significant events related to employees' pension benefits and other post-employment benefits during the reported periods

During 2017, CEMEX in Spain removed certain increases in pension benefits which resulted in an adjustment to past service cost generating gains of \$99 (US\$5) in 2017, recognized in the income statement for the year. In addition, due to the acquisition of TCL (note 4.1), CEMEX integrated its 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 \$271 (US\$14) in 2017 and \$111 (US\$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, 2018, 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, 2018 are shown below:

Assumptions:	Pensions		Other benefits		Total	
	+50 bps	-50 bps	+50 bps	-50 bps	+50 bps	-50 bps
Discount Rate Sensitivity.....	\$ (3,074)	3,303	(71)	83	(3,145)	3,386
Salary Increase Rate Sensitivity.....	205	(177)	46	(37)	251	(214)
Pension Increase Rate Sensitivity.....	1,902	(1,698)	6	6	1,902	(1,698)

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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 2018, 2017 and 2016 are summarized as follows:

	2018	2017	2016
Current income taxes	\$ (1,898)	(3,458)	(3,456)
Deferred income tax revenue (expense)	(2,569)	2,938	331
	<u>\$ (4,467)</u>	<u>(520)</u>	<u>(3,125)</u>

19.2) DEFERRED INCOME TAXES

As of December 31, 2018 and 2017, the main temporary differences that generated the consolidated deferred income tax assets and liabilities are presented below:

	2018	2017
Deferred tax assets:		
Tax loss carryforwards and other tax credits.....	\$ 13,796	15,900
Accounts payable and accrued expenses	6,638	7,083
Intangible assets and deferred charges, net.....	2,794	4,175
Total deferred tax assets, gross	23,228	27,158
Presentation offset regarding same legal entity.....	(11,661)	(12,341)
Total deferred tax assets, net in the statement of financial position	<u>11,567</u>	<u>14,817</u>
Deferred tax liabilities:		
Property, machinery and equipment.....	(25,972)	(27,268)
Investments and other assets.....	(589)	(874)
Total deferred tax liabilities, gross.....	(26,561)	(28,142)
Presentation offset regarding same legal entity.....	11,661	12,341
Total deferred tax liabilities, net in the statement of financial position	<u>(14,900)</u>	<u>(15,801)</u>
Net deferred tax liabilities	<u>\$ (3,333)</u>	<u>(984)</u>
Out of which:		
Net deferred tax asset (liability) in Mexican entities ¹	\$ (4,414)	(3,978)
Net deferred tax asset (liability) in Foreign entities ²	1,081	2,994
Net deferred tax liabilities	<u>\$ (3,333)</u>	<u>(984)</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 are mainly related to tax loss carryforwards recognized in recent years, mainly in the United States, that are expected to be recovered in the future against taxable income.

As of December 31, 2018 and 2017, balances of the deferred tax assets and liabilities included in the statement of financial position are located in the following entities:

	2018			2017		
	Asset	Liability	Net	Asset	Liability	Net
Mexican entities.....	\$ 3,079	(7,493)	(4,414)	\$ 3,212	(7,190)	(3,978)
Foreign entities	8,488	(7,407)	1,081	11,605	(8,611)	2,994
	<u>\$ 11,567</u>	<u>(14,900)</u>	<u>(3,333)</u>	<u>\$ 14,817</u>	<u>(15,801)</u>	<u>(984)</u>

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Deferred income taxes – continued

The breakdown of changes in consolidated deferred income taxes during 2018, 2017 and 2016 was as follows:

	2018	2017	2016
Deferred income tax (charged) credited to the income statement ¹	\$ (2,569)	2,938	331
Deferred income tax (charged) credited to stockholders' equity ²	193	200	514
Reclassification to other captions in the statement of financial position and in the income statement ³	27	(560)	531
Change in deferred income tax during the period.....	\$ (2,349)	2,578	1,376

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 \$154 in connection with the adoption of IFRS 9 on January 1, 2018.

³ In 2018, 2017 and 2016, includes the effects of business combinations (note 4.2).

Current and/or deferred income tax relative to items of other comprehensive income during 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Tax effects relative to foreign exchange fluctuations from debt (note 20.2).....	\$ 0	0	(410)
Tax effects relative to foreign exchange fluctuations from intercompany balances (note 20.2).....	29	32	(12)
Tax effects relative to actuarial (gains) and losses (note 20.2).....	(530)	(1)	788
Foreign currency translation and other effects.....	723	201	(274)
	\$ 222	232	92

As of December 31, 2018, consolidated tax loss and tax credits carryforwards expire as follows:

	Amount of carryforwards	Amount of unrecognized carryforwards	Amount of recognized carryforwards
2019.....	\$ 1,809	1,636	173
2020.....	8,749	8,483	266
2021.....	3,984	3,170	814
2022.....	6,576	6,389	187
2023 and thereafter.....	276,089	222,179	53,910
	\$ 297,207	241,857	55,350

As of December 31, 2018, 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 \$55,350 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, 2018, 2017 and 2016, the effective consolidated income tax rates were as follows:

	2018	2017	2016
Income before income tax.....	\$ 15,511	13,700	17,616
Income tax expense.....	(4,467)	(520)	(3,125)
Effective consolidated income tax rate ¹	(28.8)%	(3.8)%	(17.7)%

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 2018, 2017 and 2016 were as follows:

	2018		2017		2016	
	%	\$	%	\$	%	\$
Mexican statutory tax rate	(30.0)	(4,653)	(30.0)	(4,110)	(30.0)	(5,285)
Non-taxable dividend income	0.8	124	0.1	14	0.2	32
Difference between accounting and tax expenses, net	(15.4)	(2,394)	(20.8)	(2,855)	82.3	14,507
Unrecognized effects during the year related to applicable tax consolidation regimes	(0.7)	(109)	0.9	123	(3.6)	(632)
Non-taxable sale of equity securities and fixed assets	4.6	713	15.0	2,049	3.7	650
Difference between book and tax inflation	(19.5)	(3,024)	(31.1)	(4,261)	(11.0)	(1,932)
Differences in the income tax rates in the countries where CEMEX operates ¹	16.0	2,482	21.8	2,991	11.0	1,932
Changes in deferred tax assets ²	14.7	2,286	39.6	5,433	(69.9)	(12,320)
Changes in provisions for uncertain tax positions	1.8	279	(0.4)	(55)	0.7	123
Others	(1.1)	(171)	1.1	151	(1.1)	(200)
Effective consolidated tax rate	(28.8)	(4,467)	(3.8)	(520)	(17.7)	(3,125)

¹ 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).

² 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, 2018 and 2017:

	2018		2017	
	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	\$ 6	2,676	6	6,092
Derecognition related to tax loss carryforwards recognized in prior years	(1,770)	(56)	(5,221)	(5,221)
Recognition related to unrecognized tax loss carryforwards	98	98	9,694	9,694
Foreign currency translation and other effects	(432)	(432)	(6,087)	(5,132)
Changes in deferred tax assets	\$ (2,104)	2,286	(1,614)	5,433

19.4) UNCERTAIN TAX POSITIONS AND SIGNIFICANT TAX PROCEEDINGS

Uncertain tax positions

As of December 31, 2018 and 2017, as part of short-term and long-term provisions and 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, 2018, 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, 2018, 2017 and 2016, excluding interest and penalties, is as follows:

	2018	2017	2016
Balance of tax positions at beginning of the period	\$ 1,571	1,132	1,190
Additions for tax positions of prior periods	119	663	200
Additions for tax positions of current period	15	16	90
Reductions for tax positions related to prior periods and other items	(44)	(32)	(131)
Settlements and reclassifications	(129)	(119)	(163)
Expiration of the statute of limitations	(624)	(138)	(126)
Foreign currency translation effects	(49)	49	72
Balance of tax positions at end of the period	\$ 859	1,571	1,132

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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 US\$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 US\$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, 2018, the Company's most significant tax proceedings are as follows:

- As part of an audit process, 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 US\$547 (\$10,755). 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, 2018, 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, 2018, 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 approximately US\$38 (\$747) of income tax and US\$38 (\$747) 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 will file a reconsideration request within the next two months. 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, 2018, in this stage of the proceeding, CEMEX believes 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 should not have a material adverse impact on the operating results, liquidity or financial position of CEMEX.
- 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 approximately US\$26 (\$511) of income tax and US\$26 (\$511) of penalty. CEMEX Colombia filed a response to the special requirement on November 30, 2018. 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, 2018, in this stage of the proceeding, CEMEX believes 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 should not 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 US\$28 (\$550) of income tax and US\$28 (\$550) 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, 2018, in this stage of the proceeding, CEMEX believes 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 should not have a material adverse impact on the operating results, liquidity or financial position of CEMEX.

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20) STOCKHOLDERS' EQUITY

As of December 31, 2018 and 2017, stockholders' equity excludes investments in CPOs of the Parent Company held by subsidiaries of \$194 (20,541,277 CPOs) and \$301 (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, 2018 and 2017, the breakdown of common stock and additional paid-in capital was as follows:

	2018	2017
Common stock.....	\$ 4,171	4,171
Additional paid-in capital.....	141,151	140,483
	<u>\$ 145,322</u>	<u>144,654</u>

As of December 31, 2018 and 2017 the common stock of CEMEX, S.A.B. de C.V. was presented as follows:

	2018		2017	
	Series A ²	Series B ²	Series A ²	Series B ²
Subscribed and paid shares.....	30,002,628,318	15,001,314,159	30,214,469,912	15,107,234,956
Unissued shares authorized for executives' stock compensation programs	936,375,524	468,187,762	531,739,616	265,869,808
Repurchased shares ³	307,207,506	153,603,753	ó	ó
Shares that guarantee the issuance of convertible securities ⁴	4,529,603,200	2,264,801,600	4,529,605,020	2,264,802,510
Shares authorized for the issuance of stock or convertible securities ⁵	302,144,720	151,072,360	ó	ó
	<u>36,077,959,268</u>	<u>18,038,979,634</u>	<u>35,275,814,548</u>	<u>17,637,907,274</u>

1 As of December 31, 2018 and 2017, 13,068,000,000 shares correspond to the fixed portion, and 41,048,938,902 shares in 2018 and 39,845,721,822 shares in 2017, correspond to the variable portion.

2 Series A or Mexican shares must represent at least 64% of CEMEX's capital stock; meanwhile, 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 both the outstanding voluntary and mandatorily convertible securities and new securities issues (note 16.2).

5 Shares authorized for issuance in a public offer or private placement and/or by issuance of new convertible securities.

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 US\$500 or its equivalent in pesos for the year ending December 31, 2018 and until the next ordinary 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.

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 common stock of \$5, considering a nominal value of \$0.00833 per CPO, and additional paid-in capital of \$9,459; (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).

On March 31, 2016, 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 1,616 million shares (539 million CPOs), which shares were issued, representing an increase in common stock of \$4, considering a nominal value of \$0.00833 per CPO, and additional paid-in capital of \$6,966; (ii) increase the variable common stock by issuing up to 297 million shares (99 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 2018, 2017 and 2016, CEMEX issued approximately 49.3 million CPOs, 53.2 million CPOs and 53.9 million, respectively, generating an additional paid-in capital of \$706 in 2018, \$817 in 2017 and \$742 in 2016 associated with the fair value of the compensation received by executives.

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20.2) OTHER EQUITY RESERVES

As of December 31, 2018 and 2017 other equity reserves are summarized as follows:

	2018	2017
Cumulative translation effect, net of effects from perpetual debentures and deferred income taxes recognized directly in equity (notes 19.2 and 20.4).....	\$ 17,683	21,288
Cumulative actuarial losses	(7,527)	(10,931)
Treasury shares repurchased under share repurchase program (note 20.1)	(1,520)	6
Effects associated with the Parent Company's convertible securities ¹	3,427	3,427
Treasury shares held by subsidiaries	(194)	(301)
	<u>\$ 11,869</u>	<u>13,483</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, 2018, 2017 and 2016, the translation effects of foreign subsidiaries included in the statements of comprehensive income were as follows:

	2018	2017	2016
Foreign currency translation result ¹	\$ (3,713)	(3,116)	20,648
Foreign exchange fluctuations from debt ²	2,438	(4,160)	1,367
Foreign exchange fluctuations from intercompany balances ³	(425)	(2,243)	(10,385)
	<u>\$ (1,700)</u>	<u>(9,519)</u>	<u>11,630</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).

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, 2018, the legal reserve amounted to \$1,804.

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, 2018 and 2017, non-controlling interest in equity amounted to \$22,154 and \$23,298, respectively. In addition, in 2018, 2017 and 2016, non-controlling interests in consolidated net income were \$789, \$1,417 and \$1,173, 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, 2018 and 2017, there is a non-controlling interest in TCL of approximately 30.2% of its common shares (see note 4.4 for certain relevant condensed financial information).
- In July 2016, CHP, an indirect wholly-owned subsidiary of CEMEX España, S.A., closed its initial offering of 2,337,927,954 new common shares, or 45% of CHP's common shares, at a price of 10.75 Philippine pesos per common share. The net proceeds from the offering of US\$507 (considering an exchange rate of 46.932 Philippine pesos per U.S. dollar on June 30, 2016), after deducting commissions and other offering expenses, were used by CEMEX for general corporate purposes, including the repayment of existing debt. CHP's assets consist primarily of CEMEX's cement manufacturing assets in the Philippines. As of December 31, 2018 and 2017, there is a non-controlling interest in CHP of approximately 45% of its common shares in both years (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, S.A., concluded its initial offering of common shares. CLH's assets include substantially all of CEMEX's assets in Colombia, Panama, Costa Rica, Brazil, Guatemala and El Salvador. The Brazilian Operations were sold in 2018. As of December 31, 2018, there is a non-controlling interest in CLH of approximately 26.75% and 26.72%, respectively, of CLH's outstanding common shares, excluding shares held in treasury (see note 4.4 for certain relevant condensed financial information).

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Perpetual debentures

As of December 31, 2018 and 2017, the balances of the non-controlling interest included US\$444 (\$8,729) and US\$440 (\$7,581), respectively, representing the notional amounts of perpetual debentures, which exclude any perpetual debentures held by subsidiaries.

Interest expense on the perpetual debentures, was included within "Other equity reserves" and amounted to \$553 in 2018, \$482 in 2017 and \$507 in 2016, excluding in all the periods the amount of interest 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, 2018 and 2017, the detail of CEMEX's perpetual debentures, excluding the perpetual debentures held by subsidiaries, was as follows:

Issuer	Issuance date	2018	2017	Repurchase option	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	US\$135	US\$135	Eighth anniversary	LIBOR+4.40%
C5 Capital (SPV) Ltd ¹	December 2006	US\$61	US\$61	Fifth anniversary	LIBOR+4.277%
C10 Capital (SPV) Ltd.....	December 2006	US\$175	US\$175	Tenth anniversary	LIBOR+4.71%

¹ Under the 2017 Credit Agreement, and previously under the 2014 Credit Agreement, CEMEX is not permitted to call these debentures.

21) EXECUTIVE SHARE-BASED COMPENSATION

CEMEX has long-term restricted share-based compensation programs providing for the grant of the Parent Company's CPOs to a group of eligible executives, pursuant to which, new CPOs are issued 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 approximately 49.3 million CPOs in 2018, 53.2 million CPOs in 2017 and 53.9 million CPOs in 2016, that were subscribed and pending for payment in the Parent Company's treasury. As of December 31, 2018, there are approximately 69.5 million CPOs associated with these annual programs that are potentially expected to be issued 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 2018 and 2017, no CPOs of the Parent Company were issued 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 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 2018, 2017 and 2016, CLH physically delivered 258,511 shares, 172,981 shares and 271,461 shares, respectively, corresponding to the vested portion of prior years' grants, which were subscribed and held in CLH's treasury. As of December 31, 2018, there are 1,162,186 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 CPOs and instead started receiving shares of CHP, sharing significantly the same conditions of CEMEX's plan. During 2018, CHP did not issue shares in connection with this program, for this year, CHP purchased 871,189 of its own shares in the market on behalf of 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 2018, 2017 and 2016, was recognized in the operating results against other equity reserves and amounted to \$706, \$817 and \$742, respectively, including in 2018 the cost of the CHP's shares acquired in the market. The weighted-average price per Parent Company CPO granted during the period was approximately 13.61 pesos in 2018, 14.28 pesos in 2017 and 13.79 pesos in 2016. Moreover, the weighted-average price per CLH share granted during the period was 12,347 Colombian pesos in 2018, 13,077 Colombian pesos in 2017 and 13,423 Colombian pesos in 2016. As of December 31, 2018 and 2017, 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 or CLH's shares.

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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 2018, 2017 and 2016 were as follows:

	2018	2017	2016
Denominator (thousands of shares)			
Weighted-average number of shares outstanding ¹	45,569,180	43,107,457	42,211,409
Capitalization of retained earnings ²	6	1,687,295	1,687,295
Effect of dilutive instruments ó mandatorily convertible securities (note 16.2) ³	708,153	708,153	708,153
Weighted-average number of shares ó basic	46,277,333	45,502,905	44,606,857
Effect of dilutive instruments ó share-based compensation (note 21) ³	316,970	237,102	226,972
Effect of potentially dilutive instruments ó optionally convertible securities (note 16.2) ³	1,420,437	2,698,600	3,834,458
Weighted-average number of shares ó diluted	48,014,740	48,438,607	48,668,287
Numerator			
Net income from continuing operations.....	\$ 11,044	13,180	14,491
Less: non-controlling interest net income	789	1,417	1,173
Controlling interest net income from continuing operations	10,255	11,763	13,318
Plus: after tax interest expense on mandatorily convertible securities	61	91	119
Controlling interest net income from continuing operations ó for basic earnings per share calculations	10,316	11,854	13,437
Plus: after tax interest expense on optionally convertible securities	436	903	1,079
Controlling interest net income from continuing operations ó for diluted earnings per share calculations	\$ 10,752	12,757	14,516
Net income from discontinued operations.....	\$ 212	3,461	713
Basic earnings per share			
Controlling interest basic earnings per share	\$ 0.22	0.34	0.32
Controlling interest basic earnings per share from continuing operations.....	0.22	0.26	0.30
Controlling interest basic earnings per share from discontinued operations.....	0.00	0.08	0.02
Controlling interest diluted earnings per share⁴			
Controlling interest diluted earnings per share.....	\$ 0.22	0.34	0.32
Controlling interest diluted earnings per share from continuing operations	0.22	0.26	0.30
Controlling interest diluted earnings per share from discontinued operations	0.00	0.08	0.02

¹ The weighted-average number of shares outstanding in 2017 and 2016 reflects the shares issued as a result of the capitalization of retained earnings declared in March 2017 and March 2016, as applicable (note 20.1).

² According to resolution of the Parent Company's shareholders' meeting on March 30, 2017. There was no capitalization of retained earnings in 2018.

³ 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 option programs is determined under the inverse treasury method.

⁴ For 2018, 2017 and 2016, 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.

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23) COMMITMENTS

23.1) GUARANTEES

As of December 31, 2018 and 2017, CEMEX, S.A.B. de C.V., had guaranteed loans of certain subsidiaries for US\$1,493 (\$29,331) and US\$1,506 (\$29,601), respectively.

23.2) PLEDGED ASSETS

CEMEX transferred to a guarantee trust the shares of its main subsidiaries, including, among others, CEMEX México, S.A. de C.V., New Sunward Holding B.V. and CEMEX España, S.A., and entered into pledge agreements in order to secure payment obligations under the 2017 Credit Agreement (formerly under the 2014 Credit Agreement and the Facilities Agreement) and other debt instruments entered into prior and after the date of these agreements (note 16.1).

As of December 31, 2018 and 2017, there are no liabilities secured by property, machinery and equipment.

23.3) OTHER COMMITMENTS

As of December 31, 2018 and 2017, 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 23.5. 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 US\$25 (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 US\$71 (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 US\$132 (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 OstZement GmbH (COZ), 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 COZ has the option to fix in advance the volume of energy in terms of MW that it will acquire from VEN 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 approximately US\$15 (unaudited) assuming that CEMEX receives all its energy allocation.

23.4) 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, 2018, 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 400 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 US\$62 in 2018, US\$64 in 2017 and US\$69 in 2016.

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23.5) CONTRACTUAL OBLIGATIONS

As of December 31, 2018 and 2017, CEMEX had the following contractual obligations:

Obligations		2018				2017	
		Less than 1 year	1-3 years	3-5 years	More than 5 years	Total	Total
Long-term debt	US\$	7	1,788	2,347	5,197	9,339	9,892
Finance lease obligations ¹		36	87	19	1	143	175
Convertible notes ²		19	514	6	6	533	906
Total debt and other financial obligations ³		62	2,389	2,366	5,198	10,015	10,973
Operating leases ⁴		186	351	231	439	1,207	494
Interest payments on debt ⁵		508	960	777	535	2,780	3,073
Pension plans and other benefits ⁶		148	270	270	664	1,352	1,587
Acquisition of property, plant and equipment ⁷		87	43	6	6	130	6
Purchases of raw materials, fuel and energy ⁸ ...		702	955	1,230	2,270	5,157	4,326
Total contractual obligations	US\$	1,693	4,968	4,874	9,106	20,641	20,453
	\$	33,267	97,621	95,774	178,933	405,595	401,901

- 1 Represent nominal cash flows. As of December 31, 2018, the NPV of future payments under such leases was US\$122 (\$2,396), of which, US\$74 (\$1,450) refers to payments from 1 to 3 years and US\$14 (\$276) refer to payments from 3 to 5 years. Beginning January 1, 2019, IFRS 16 eliminates the classifications of finance and operating leases. This elimination has no effect in the reported amounts of cash flows considering the contracts outstanding as of December 31, 2018 (note 2.20).
- 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.
- 4 The amounts represent nominal cash flows. CEMEX has operating leases, primarily for operating facilities, cement storage and distribution facilities and certain transportation and other equipment, under which annual rental payments are required plus the payment of certain operating expenses. Rental expense was US\$185 (\$3,493) in 2018, US\$115 (\$2,252) in 2017 and US\$121 (\$2,507) in 2016. Beginning January 1, 2019, IFRS 16 eliminates the classifications of finance and operating leases. This elimination has no effect in the reported amounts of cash flows considering the contracts outstanding as of December 31, 2018 (note 2.20).
- 5 Estimated cash flows on floating rate denominated debt were determined using the floating interest rates in effect as of December 31, 2018 and 2017.
- 6 Represents estimated annual payments under these benefits for the next 10 years (note 18), including the estimate of new retirees during such future years.
- 7 Refers mainly to the expansion of a cement-production line in the Philippines.
- 8 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.

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 or losses have been recognized in the financial statements, representing the best estimate of the amounts payable or the amount of impaired assets. Therefore, CEMEX believes that it will not make significant expenditure or incur significant losses in excess of the amounts recorded. As of December 31, 2018, the details of the most significant events giving effect to provisions or losses are as follows:

- In connection with the construction of the cement plant in the municipality of Maceo in Colombia (note 13), in August, 2012, CEMEX Colombia signed a memorandum of understanding (MOU) with the representative of CI Calizas y Minerales S.A. (CI Calizas), for the acquisition of assets consisting of land, the mining concession and environmental permit, the shares of Zona Franca Especial Cementera del Magdalena Medio S.A.S. (Zomam) (holder of the free trade zone concession) and the rights to develop the cement plant. After the signing of the MOU, 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 Colombia's Attorney General (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 and fully cooperates with the Attorney General. As of December 31, 2018, it is estimated that it may take between five and ten years for a final resolution to be issued on the aforementioned process, which is in the investigatory stage, waiting for the legal counsels of the defendants appointed by the Attorney General to assume functions, which opens the evidentiary stage.

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In July 2013, CEMEX Colombia signed with the provisional depository appointed by the Drugs National Department (*Dirección Nacional de Estupefacientes* or the *δDNEö*) (then depository of the affected assets), which functions after its liquidation were assumed by the Administration of Special Assets (*Sociedad de Activos Especiales S.A.S.* or the *δSAEö*), 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 *δLease Contractö*). Moreover, in 2014, the provisional depository granted a mandate to CEMEX Colombia for the same purposes.

On July 15, 2018, the initial term of the Lease Contract signed by CEMEX Colombia with the DNE expired. Notwithstanding the expiry, CEMEX Colombia is entitled to continue to build and use the plant pursuant to the terms of an accompanying mandate until the conclusion of the expiration of property proceeding. As of December 31, 2018, CEMEX Colombia maintains negotiations with the SAE in order to enter into a new long term lease contract that would replace precedent agreements and would allow CEMEX Colombia to continue the construction and operation of the plant during a term of 21 years from the signing date with a potential extension of 10 additional years.

In addition, in 2012, CEMEX Colombia also engaged the same representative of CI Calizas to represent in the name and on behalf of CEMEX Colombia in the acquisition of land adjacent to the plant, signing a new memorandum of understanding (the *δLand MOUö*).

During 2016, through an investigation and internal audit in accordance with the corporate governance policies and code of ethics of CEMEX and CLH considering reports of deficiencies in the purchasing process received in CEMEX's anonymous reporting line, and after confirming the irregularities, in September, 2016, CLH and CEMEX Colombia terminated the employment relationship with the Vice President of Planning of CLH and CEMEX Colombia; with the Vice President of Legal Counsel of CLH and CEMEX Colombia; and accepted the resignation of the Chief Executive Officer of CLH and President of CEMEX Colombia. In order to strengthen the levels of leadership, management and best practices of corporate governance, in October 2016, the Parent Company's Board of Directors separated the roles of Chairman of the Board of Directors, Chief Executive Officer of CLH and President of CEMEX Colombia, and made the corresponding appointments. Moreover, the Parent Company's Audit Committee and CLH's Audit Commission performed an independent investigation of the Maceo project through experts in forensic audit. Additionally, the management of CEMEX Colombia and CLH engaged legal advisors for the required collaboration with the Attorney General and other purposes.

The investigation and internal audit initiated during 2016 found that under the MDE and the Land MDE, CEMEX Colombia made deposits in the representative's bank account for advances and paid interests, settled in kind following its instructions, for amounts in Colombian pesos equivalent to approximately US\$13.4 and US\$1.2, respectively, considering the exchange rate as of December 31, 2016. These payments were made in breach of CEMEX's and CLH's policies. As a result, both, CLH and CEMEX Colombia reported these facts to the Attorney General, providing the findings on hand. In December 2016, CEMEX Colombia filed a claim in the civil courts aiming that all property rights of the land acquired under de Land MOU, some of which were assigned to the representative, would be transferred to CEMEX Colombia. As of September 30, 2018, due to the process of expiration of property of the assets under the MDE and the deficient formalization of the acquisitions under the Land MDE, CEMEX Colombia is not the rightful owner of the aforementioned assets.

As a result, considering the legal opinions available and low probability of recovering such advances, in December 2016, the Company reduced investments in process for a net amount in Colombian pesos equivalent to approximately US\$14.1 (\$264), which included: a) a reduction of US\$14.3 (\$295) for impairment of assets against *δOther expenses, net,ö* including approximately US\$2.3 (\$43) of impairment losses not related with the MOU or the Land MOU; b) a reduction of US\$9.1 (\$188) against "Other accounts payable" for the cancellation of the remaining account payable to CI Calizas under the MOU; and c) an increase in investments in process for US\$9.2 (\$191) recognized against VAT accounts payable related with certain purchases of equipment installed outside the polygon of the free zone that were not exempted from this tax. All these amounts considering the exchange rate as of December 31, 2016. During 2017, CEMEX Colombia further determined an adjustment and payment of additional VAT in the free zone for approximately US\$5.

Moreover, there is an ongoing criminal investigation by the Attorney General which is in its second investigatory stage. The hearing for indictments was held between June 12 and 29, 2018, whereas charges were brought against two of the former executives of CEMEX Colombia and the representative of CI Calizas, and pretrial detention of the defendants was determined. CEMEX cannot predict the actions that the General Attorney could implement or the possibility and degree in which any of these actions could have a material adverse effect on CEMEX's results of operation, liquidity or financial position. Under the presumption that CEMEX Colombia acted in good faith, CEMEX considers that it will retain ownership of the plant (note 14) 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 paying 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 the project in Maceo. At this respect, in the event that the expiration of property over the assets subject to the MOU is ordered in favor of the State, the SAE may decide not to sell the assets to CEMEX Colombia, or, the SAE may elect to maintain ownership of the assets and not extend the Lease Contract. In both cases, under Colombian law, CEMEX Colombia would be entitled to an indemnity for the amount of its incurred investments. Nonetheless, although as of December 31, 2018, CEMEX Latam cannot estimate if the expiration of property of the assets subject to the MDE would be declared in favor of the State, or as the case may be, if the SAE would determine to sell or not those assets to CEMEX Colombia or if a new Lease Contract would be negotiated or not, CEMEX Colombia does not consider probable that any of these adverse results may occur, but would any of these adverse results occur upon which an adverse resolution is received, such adverse resolution could have a material adverse effect on CEMEX's results of operations, liquidity or financial condition.

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As of December 31, 2018, the start-up of the Maceo plant and the construction of the access road remain suspended, mainly considering certain permits required to finalize the access road, as well as ongoing requests and procedures with the relevant authorities oriented to: a) resolve any overlap of the project with an Integrated Management District ("IMD"), b) modify the land use where the project is located to harmonize it with industrial and mining use, c) modify the environmental license to increase the permitted production up to 950 thousand tons per year, d) obtain the extension of the free zone to cover the entire plant, and e) resolve the ownership of the environmental license and the mining title which transfer to a subsidiary of CEMEX Colombia was revoked by the regional environmental authority; until progress is achieved in these processes. CEMEX Colombia continues working to address these issues as soon as possible. In October 2017, CEMEX Colombia presented the initial request for the partial subtraction of the Maceo project from the IMD to test the feasibility of achieving the proposed expansion of the activity in the project and comments were received in May 2018. In this regard, on October 11, 2018, CEMEX Colombia submitted a response to the latest request for information in connection with such subtraction process. This process of partial subtraction of the Maceo project, would allow the removal of the cement operation productive area from the DMI. This request requires evidence of the viability to develop the proposed activity of the cement project in said area. Meanwhile, CEMEX Colombia will limit its activities to those on which it has the relevant authorizations.

- 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 Superintendencia of Industry and Commerce (*Superintendencia de Industria y Comercio* or the "SIC") imposed a final fine to CEMEX Colombia for an amount equivalent to US\$25 (\$491). 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 an annulment and reestablishment of right claim 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, 2018, 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. The original fine imposed on CEMEX Polska was for an amount in Polish Zloty equivalent to US\$31 (\$609). After a resolution of December 2013 to an appeal filed against the Protection Office's fine before the Polish Court of Competition and Consumer Protection (the "First Instance Court") that reduced the fine and a resolution of March 2018 to an appeal of CEMEX Polska filed before the Appeals Courts in Warsaw against the resolution of the First Instance Court, the fine was further reduced to a final amount in Polish Zloty equivalent to US\$18 (\$354). This final amount was paid in 2018. On November 19, 2018, CEMEX Polska filed before the Polish Supreme Court an appeal against the Appeal Court's judgment seeking the reduction of the imposed fine. As of December 31, 2018, CEMEX Polska expects that, during the first half of 2019, the Polish Supreme Court will issue a decision regarding acceptance of the cassation appeal for its study.
- As of December 31, 2018, CEMEX had accrued environmental remediation liabilities 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 US\$167 (\$3,282). Expenditure was assessed and quantified over the period in which the sites have the potential to cause environmental harm, which was accepted 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, 2018, CEMEX had accrued environmental remediation liabilities in the United States for US\$33 (\$648), 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.

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24.2) OTHER 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 or remote. In certain cases, a negative resolution may represent a decrease in future revenues, an increase in operating costs or a loss. 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, 2018, 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:

- 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 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 US\$82 (\$1,611), (b) the establishment of a rehabilitation fund for an amount in Philippine Pesos equivalent to US\$10 (\$197), 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. As of December 31, 2018, 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 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, 2018, CEMEX is not able to assess the likelihood of an adverse result to this lawsuit; and, because of its current status and its preliminary nature, 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 administrative investigation against CEMEX and other competitors for the alleged commission of monopolistic practices in relation to the gray cement and the ready-mix concrete markets. From the administrative investigation, the Panama Authority considered there were elements that serve as a basis to consider 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. On October 16, 2018, the Panama Authority notified CEMEX of a new information request in order to continue their investigation. The Panama Authority is gathering facts necessary to make an informed decision about whether violations of Panamanian law have occurred. CEMEX is cooperating with the Panama Authority. As of December 31, 2018, 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.
- 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, 2018, 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 CEMEX and one of its members of the board of directors (CEO) and certain of its 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 CEMEX between August 14, 2014 to March 13, 2018, inclusive. The complaint alleges that CEMEX purportedly issued 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, CEMEX filed a motion to dismiss this lawsuit. During the fourth quarter of 2018, plaintiffs filed an opposition brief to this motion to dismiss. CEMEX denies liability and intends to vigorously defend the case. As of December 31, 2018, given the status of the lawsuit, CEMEX is not able to assess the likelihood of an adverse result to this lawsuit, and for the same reasons, CEMEX is not 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.
- In December 2016, the Parent Company received subpoenas from the United States Securities and Exchange Commission ("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, 2018, 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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- In September 2016, CEMEX España Operaciones, S.L.U. (öCEMEX España Operacionesö), a subsidiary of CEMEX in Spain, in the context of a market investigation initiated in 2014 for alleged anticompetitive practices in 2009 for the cement market and the years 2008, 2009, 2012, 2013 and 2014 for the ready-mix market, was notified of a resolution by the National Markets and Competition Commission (*Comisión Nacional de los Mercados y la Competencia* or the öCNMCö) requiring the payment of a fine for p6 (US\$7 or \$138). CEMEX España Operaciones appealed the fine and requested the suspension of payment before the National Court (*Audiencia Nacional*), which granted the requested suspension; subject to issuance of a bank guarantee for the principal amount of the sanction. The CNMC was notified. As of December 31, 2018, CEMEX do not expect that an adverse resolution to this matter would have a material adverse impact on our results of operations, liquidity and financial condition.
- In February 2014, the Egyptian Tax Authority requested Assiut Cement Company (öACCö), a subsidiary of CEMEX in Egypt, the payment of a development levy on clay used in the Egyptian cement industry in amounts equivalent as of December 31, 2018 to US\$18 (\$354) for the period from May 5, 2008 to November 30, 2011. In March 2014, ACC appealed the levy and 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 February 4, 2019 for submission of documents by the attorney for the State pertaining to this dispute. CEMEX does not expect that such referral will prejudice ACC’s favorable legal position in this dispute. As of December 31, 2018, 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 öSPAö) pursuant to which CEMEX acquired in 1999 a controlling interest in Assiut Cement Company (öACCö). 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, 2018, 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 2012, in connection with a contract entered into in 1990 (the öQuarry Contractö) by CEMEX Granulats Rhône Méditerranée (öCEMEX GRMö), one of CEMEX’s subsidiaries in France, with SCI La Quinière (öSCIö) pursuant to which CEMEX GRM has drilling rights in order 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 US\$77 (\$1,513), 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. CEMEX GRM appealed this resolution with the court of cassation, which will advance in parallel to the judicial expert’s process. As of December 31, 2018, as the likelihood of an adverse final resolution cannot be assured with certainty, CEMEX believes that an adverse resolution upon conclusion of all defense instances is not probable. However, in case of an adverse resolution, CEMEX considers that it should not have a material adverse impact on CEMEX’s results of operations, liquidity and financial condition.
- In June 2012, one of CEMEX’s subsidiaries in Israel and three other companies were notified about a class action suit filed by a homeowner who built his house with concrete supplied by the defendants in October 2010. The class action argues that the concrete supplied to him did not meet with the Israeli ready-mix strength standard requirements and that as a result CEMEX acted unlawfully toward all of its customers who received concrete that did not comply with such standard requirements, causing financial and non-financial damages to those customers, including the plaintiff. CEMEX presumes that the class action would represent the claim of all the clients who purchased the alleged non-conforming concrete from its subsidiary in Israel during the past 7 years, the limitation period according to applicable laws in Israel. The damages that could be sought are equivalent to US\$74 (\$1,454). After several hearings to present evidence from all parties over the years and the resolution of the court to join together all claims against all four companies in order to simplify and shorten court proceedings. An abandonment of action has been submitted to the court with regards to two of the four defendant companies, but CEMEX’s subsidiary and another company remain as defendants. All parties have finished presenting their positions. There are pending resolutions regarding the class action and the abandonment of action of the two defendants. As of December 31, 2018, CEMEX’s subsidiary in Israel is not able to assess the likelihood of the class action application being approved or, if approved, of an adverse result, such as an award for damages in the full amount that could be sought, but if adversely resolved CEMEX considers that an adverse resolution on this matter would not have a material adverse impact on its results of operations, liquidity or financial condition.

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Other contingencies from legal proceedings – continued

- In June 2010, the District of Bogotá's Environmental Secretary (the "District Secretary"), ordered the suspension of CEMEX Colombia's mining activities at El Tunjuelo quarry, located in Bogotá, sealed off the mine to machinery and prohibited the removal of aggregates inventory, as well as those of other aggregates producers in the same area. The Environmental Secretary alleged that during the past 60 years at that time, CEMEX Colombia and the other companies illegally changed the course of the Tunjuelo River, have used the percolating waters without permission and improperly used the edge of the river for mining activities. CEMEX Colombia requested from the beginning the revocation of the order considering that its mining activities at El Tunjuelo quarry were supported by the authorizations required by the applicable environmental laws and that its environmental impact studies were reviewed and authorized by the Ministry of Environment and Sustainable Development. Since June 2010 the local authorities closed the quarry and prohibited the removal of aggregates inventory. On July 11, 2018, considering that CEMEX Colombia incurred in risk of having provoked affectation or harm in the use of the underground waters in the Tunjuelo river's middle basin without the corresponding permit issued by the environmental authority, the District Secretary imposed a penalty for an amount in Colombian pesos equivalent to US\$0.4 as of August 1, 2018, the date it was settled. CEMEX Colombia was exonerated of incurring negligent or willful misconduct. With this penalty, all procedures and possible claims against CEMEX Colombia related to this matter were finalized.

In connection with the legal proceedings presented in notes 24.1 and 24.2, the exchange rates as of December 31, 2018 used by CEMEX to convert the amounts in local currency to their equivalents in dollars were the official closing exchange rates of 3.75 Polish zloty per dollar, 0.87 Euro per dollar, 0.78 British pounds sterling per dollar, 3,250 Colombian pesos per dollar and 3.75 Israelite shekel per dollar.

In addition to the legal proceedings described above in notes 24.1 and 24.2, as of December 31, 2018, 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.

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, 2018, 2017 and 2016, 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 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, 2018, 2017 and 2016, 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 US\$38 (\$732), US\$47 (\$887) and US\$43 (\$802), respectively. Of these amounts, US\$29 (\$559) in 2018, US\$35 (\$661) in 2017, US\$32 (\$595) in 2016, was paid as base compensation plus performance bonuses, including pension and post-employment benefits. In addition, US\$9 (\$173) in 2018, US\$12 (\$227) in 2017 and US\$11 (\$207) in 2016 of the aggregate amounts in each year, corresponded to allocations of Parent Company CPOs under CEMEX's executive share-based compensation programs.

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26) MAIN SUBSIDIARIES

As mentioned in note 4.4 and 20.4, as of December 31, 2018 and 2017, 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, 2018 and 2017, which ownership interest is presented according to the interest maintained by their direct holding company, were as follows:

Subsidiary	Country	% Interest	
		2018	2017
CEMEX México, S. A. de C.V. ¹	Mexico	100.0	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	99.1	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	99.9	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	55.0	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	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 CEMEX México, S.A. de C.V. is the indirect holding company of CEMEX España, S.A. and subsidiaries.

² CEMEX España, S.A 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, entity 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, El Salvador and Brazil (note 20.4).

⁴ Represents our 99.7% and 98.9% interest in ordinary and preferred shares, respectively.

⁵ Includes a 0.515% interest held in Cemento Bayano's treasury.

⁶ The aggregate ownership interest of CEMEX in this entity of 79.04% includes TCL's direct and indirect 74.08% interest and the Parent Company's indirect 4.96% 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.

Independent auditors' report

To the Board of Directors and Stockholders

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

Opinion

We have audited the consolidated financial statements of CEMEX, S.A.B. de C.V. and subsidiaries ("the Group"), which comprise the consolidated statement of financial position as at December 31, 2018 and 2017, the consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for the years ended December 31, 2018, 2017 and 2016, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at December 31, 2018 and 2017, and of its consolidated financial performance and its consolidated cash flows for the years ended December 31, 2018, 2017 and 2016 in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Mexico and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.



Evaluation of goodwill impairment	
See Note 15.2 to the consolidated financial statements	
The key audit matter	How the matter was addressed in our audit
<p>The Group's balance sheet includes a significant amount of goodwill arising mainly from historic acquisitions which requires conducting an annual evaluation of its recoverability.</p> <p>We consider this a key audit matter because of the materiality of the goodwill balance and because it involves significant judgments by the Group regarding long-term sales growth rates, costs and projected operating margins in the different countries where the Group operates, discount rates used to discount future cash flows, as well as comparisons to publicly-available information such as multiples of EBITDA in recent market transactions.</p>	<p>Our audit procedures included considering the consistency and appropriateness of the allocation of goodwill to groups of CGUs, as well as testing the Group's methodology and assumptions used in preparing discounted cash flow models through the involvement of our valuation specialists.</p> <p>We compared the Group's assumptions to data obtained from external sources in relation to key inputs such as discount rates and projected economic growth and compared the latter with reference to historical forecasting accuracy, considering the potential risk of management bias.</p> <p>We compared the sum of the discounted cash flows to the Group's market capitalization to assess the reasonableness of those cash flows. In addition we performed sensitivity analysis using multiples of EBITDA.</p> <p>We challenged the overall results of the calculations and performed our own sensitivity analysis, including a reasonably probable reduction in assumed growth rates and cash flows.</p> <p>We also assessed whether the group's disclosures about the sensitivity of the outcome of the impairment assessment to changes in key assumptions such as discount rates and growth rates reflected the risks inherent in the valuation of goodwill.</p>
Recoverability of deferred tax assets related to tax loss carry forwards	
See Note 19.2 and 19.4 to the consolidated financial statements	
The key audit matter	How the matter was addressed in our audit
<p>The group has significant deferred tax assets in respect of tax losses mainly in Mexico.</p>	<p>Our audit procedures included considering historical levels of taxable profits and comparing the assumptions used in respect of future taxable profit forecasts to those used in the Group's long-term</p>



<p>There is inherent uncertainty involved in forecasting future taxable profits, which determines the extent to which deferred tax assets are or are not recognized.</p> <p>The periods over which the deferred tax assets are expected to be recovered can be extensive.</p> <p>As a result of the above, we consider this to be a key audit matter.</p>	<p>forecasts, such as the forecasts prepared in relation to goodwill impairment evaluations.</p> <p>With the assistance of our tax specialists we evaluated the reasonableness of key tax assumptions, timing of reversal of temporary differences and expiration of tax loss carry forwards, as well as the reasonableness of any tax strategies proposed by the Group based on our knowledge of the tax, legal and operating environments in which the Group operates.</p> <p>We also assessed the adequacy of the Group's disclosures setting out the basis of the deferred tax asset balances and the level of estimation involved.</p>
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Tax and legal contingencies	
See Notes 19.4 and 24 to the consolidated financial statements	
The key audit matter	How the matter was addressed in our audit
<p>The Group is involved in certain significant tax and legal proceedings.</p> <p>Compliance with tax regulations is a complex matter within the Group because of the different tax laws in the jurisdictions where the Group operates, the application of which requires the use of significant expertise and judgment, making this area a key audit matter. Also, because of the diversity and complexity of the different laws and regulations applicable to the Group's operations, exposure to legal claims, is a risk that requires management's attention.</p> <p>Resolution of tax and legal proceedings may span multiple years, and may involve negotiation or litigation and therefore, making judgments of potential outcomes is a complex issue in the Group.</p> <p>Management applies judgment in estimating the likelihood of the future outcome in each case and records a provision for uncertain tax positions or settlement of legal claims where applicable. We focused on this area due to the inherent complexity and judgment in estimating the amount of provision required.</p>	<p>Our audit procedures included assessment of the adequacy of the level of provision established, or lack thereof, in relation to significant uncertain tax positions and legal contingencies, primarily in respect of cases in Mexico (Corporate), Spain, France, Egypt, and Colombia.</p> <p>We discussed the status of each significant case with management, including in-house counsel, and critically assessed their responses. We read the latest correspondence between the Group and the various tax authorities or plaintiffs and attorneys where applicable. We also obtained written responses from the Group's legal advisors where those have been appointed, containing their views on material exposures and any related litigation.</p> <p>In relation to tax matters, we also met with the Group's tax officers to assess their judgments on significant cases, their views and strategies, as well as the related technical grounds to their position based on applicable tax laws by involving our tax specialists.</p>



We assessed whether the Group's disclosures about legal and tax contingencies provided sufficient information to readers of the financial statements in light of the significance of these cases.

Other Information

Management is responsible for the other information. The other information comprises the information included in the Group's annual report for the year ended December 31, 2018, to be filed with the National Banking and Securities Commission (Mexico) (Comisión Nacional Bancaria y de Valores) and the Mexican Stock Exchange (Bolsa Mexicana de Valores) ("the Annual Report") but does not include the consolidated financial statements and our auditors' report thereon. The Annual Report is expected to be made available to us after the date of this auditors' report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read the Annual Report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.



Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.



We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

A handwritten signature in black ink, appearing to read 'Joaquín Alejandro Aguilera Dávila', written over a faint, illegible stamp or watermark.

C.P.C. Joaquín Alejandro Aguilera Dávila

KPMG Cárdenas Dosal, S.C.

Monterrey, N.L.,

January 30, 2019