Petróleos Mexicanos,
Productive State-Owned Subsidiaries
And Subsidiary Companies

Consolidated financial statements

December 31, 2018, 2017 and 2016

(With the Report of Independent Registered Public Accounting Firm)

Petróleos Mexicanos, Productive State-Owned Subsidiaries and subsidiary companies

Consolidated financial statements

December 31, 2018, 2017 and 2016

Index

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Report of Independent Registered Public Accounting Firm

To the Board of Directors of
Petróleos Mexicanos, Productive State-Owned Company:

(Figures stated in thousands of pesos)

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statement of financial position of Petróleos Mexicanos, Productive State-Owned Subsidiaries and Subsidiary Companies (PEMEX) as of December 31, 2018, the related consolidated statements of comprehensive income, changes in equity (deficit), and cash flows for the year ended December 31, 2018, and the related notes collectively, the consolidated financial statements. In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of PEMEX as of December 31, 2018, and the results of its operations and its cash flows for the year ended December 31, 2018, in conformity with International Financial Reporting Standard as issued by the International Accounting Standards Board.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that PEMEX will continue as a going concern. As discussed in Note 24 e) to the consolidated financial statements, PEMEX has suffered recurring losses from operations, has a net capital deficiency and net equity deficit. These issues, together with its fiscal regime, the significant increase in its indebtedness and the reduction of its working capital raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 24 e). The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Change in Accounting Principle

As discussed in note 15 to the consolidated financial statements, in 2018 PEMEX has elected to change its method of computing the discount rate applied to cash flows derived from its oil and gas production activities for the impairment calculation of long lived assets, related to exploration and production cash generating units.

Illicit fuel market Non-operating losses

As discussed in note 25 to the consolidated financial statements, transportation of hydrocarbons and other products through the pipeline network is affected by unauthorized subtractions resulting in an illicit fuel market risk. These non-operating losses significantly increased 71.8% during 2018, representing a total cost of $39,439,107 at December 31, 2018.

(Continued)

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. PEMEX is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

KPMG CARDENAS DOSAL, S. C.

We have served as PEMEX's auditor since 2018

Mexico City, April 30, 2019

Petróleos Mexicanos,
Productive State-Owned Subsidiaries and Subsidiary Companies

Consolidated statements of financial position

As of december 31, 2018 and 2017

(Figures stated in thousands, except as noted)

Assets	**Note**	**December 31, 2018** (Unaudited; U.S. dollars)	**December 31, 2018**	**December 31, 2017**
Current assets:				
Cash and cash equivalents	8,9	$ 4,161,603	81,912,409	97,851,754
Accounts receivable, net	8,10	8,491,624	167,139,778	168,123,028
Inventories	11	4,167,199	82,022,568	63,858,930
Current portion of notes receivable	8,17-a	1,938,426	38,153,851	2,522,206
Held—for—sale non—financial assets	13	63,692	245,440	1,056,918
Equity instruments	12	12,470	1,253,638	-
Derivative financial instruments	8,19	1,137,143	22,382,277	30,113,454
Total current assets		19,972,157	393,109,961	363,526,290
Non-current assets:				
Investments in joint ventures and associates	14	855,643	16,841,545	16,707,364
Wells, pipelines, properties, plant and equipment, net	15	71,254,037	1,402,486,084	1,436,509,326
Long-term notes receivable, net of current portion	8,17-a	6,087,954	119,828,598	148,492,909
Deferred income taxes and duties	23	6,238,142	122,784,730	146,192,485
Intangible assets, net	16	697,079	13,720,540	14,678,640
Other assets	17-b	326,467	6,425,810	5,895,100
Total non-current assets		85,459,322	1,682,087,307	1,768,475,824
Total assets		$ 105,431,479	2,075,197,268	2,132,002,114

Liabilities	**Note**	**December 31, 2018** (Unaudited; U.S. dollars)	**December 31, 2018**	**December 31, 2017**
Short-term debt and current portion of long - term debt	8,18	$ 9,744,281	191,795,709	157,209,467
Suppliers		7,612,837	149,842,712	139,955,378
Taxes and duties payable	23	3,318,869	65,324,959	51,004,960
Accounts and accrued expenses payable	8	1,265,955	24,917,669	23,211,401
Derivative financial instruments	8,19	807,566	15,895,245	17,745,979
Total current liabilities		22,749,508	447,776,294	389,127,185
Long-term liabilities:				
Long-term debt, net of current portion	8,18	96,047,351	1,890,490,407	1,880,665,604
Employee benefits	20	54,897,502	1,080,542,046	1,258,436,122
Provisions for sundry creditors	21	5,169,627	101,753,256	87,677,423
Other liabilities		484,095	9,528,385	14,194,237
Deferred taxes	23	229,250	4,512,312	4,253,928
Total long-term liabilities		156,827,825	3,086,826,406	3,245,227,314
Total liabilities		179,577,333	3,534,602,700	3,634,354,499
Equity (deficit)				
Controlling interest:				
Certificates of Contribution "A"		18 114 427	356,544,447	356,544,447
Mexican Government contributions		2,221,755	43,730,591	43,730,591
Legal reserve		50,914	1,002,130	1,002,130
Accumulated other comprehensive result		3,655,308	71,947,067	(151,887,182)
Accumulated deficit:				
From prior years		(89,048,485)	(1,752,732,435)	(1,471,862,579)
Net loss for the year		(9,164,013)	(180,374,350)	(280,844,899)
Total controlling interest		(74,170,094)	(1,459,882,550)	(1,503,317,492)
Total non-controlling interest		24,240	477,118	965,107
Total equity (deficit)		(74,145,854)	(1,459,405,432)	(1,502,352,385)
Total liabilities and equity (deficit)		$ 105,431,479	2,075,197,268	2,132,002,114

The accompanying notes are an integral part of these consolidated financial statements

Petróleos Mexicanos,
Productive State-Owned Subsidiaries and Subsidiary Companies

Consolidated statements of comprehensive income

For the years ended december 31, 2018, 2017 and 2016

(Figures stated in thousands, except as noted)

	Nota	2018 (Unaudited; U.S. dollars)	2018	2017	2016
Net sales					
Domestic	7	$ 49,817,839	980,559,538	877,360,038	670,000,473
Export	7	35,151,660	691,886,610	508,539,112	395,118,117
Services income	7	440,636	8,673,002	11,130,569	8,974,642
Total of sales		85,410,135	1,681,119,150	1,397,029,719	1,074,093,232
(Reversal) impairment of wells, pipelines, properties, plant and equipment, net	15 e)	(1,088,203)	(21,418,997)	151,444,560	(331,314,343)
Cost of sales	25	60,941,810	1,199,511,561	1,004,204,880	865,822,221
Gross income		25,556,528	503,026,586	241,380,279	539,585,354
Other revenues, net	26	1,171,195	23,052,511	5,174,076	22,649,606
General expenses:					
Distribution, transportation and sale expenses	25	1,207,868	23,774,354	21,889,670	25,231,240
Administrative expenses	25	6,824,273	134,321,481	119,939,454	112,653,533
Impairment of accounts receivables	10	29,613	582,855	-	-
Operating income		18,665,969	367,400,407	104,725,231	424,350,187
Financing cost 1		1,603,276	31,557,122	16,165,853	13,749,255
Financing cost 2		(6,133,599)	(120,727,022)	(117,644,548)	(98,844,464)
Derivative financial instruments (cost) income, net		(1,130,860)	(22,258,613)	25,338,324	(14,000,987)
Foreign exchange gain (loss), net		1,202,032	23,659,480	23,184,122	(254,012,743)
		(4,459,151)	(87,769,033)	(52,956,249)	(353,108,939)
Profit sharing in joint ventures and associates	14	77,581	1,527,012	360,440	2,135,845
Income before duties, taxes and other		14,284,399	281,158,386	52,129,422	73,377,093
Profit sharing duty, net	23	23,875,221	469,933,595	338,044,209	277,161,804
Income tax benefit	23	(424,499)	(8,355,372)	(5,064,168)	(12,640,369)
Total duties, taxes and other		23,450,722	461,578,223	332,980,041	264,521,435
Net loss		$ (9,166,323)	(180,419,837)	(280,850,619)	(191,144,342)
Other comprehensive results:					
Items that will be reclassified subsequently:					
Currency translation effect		42,991	846,191	(6,096,459)	21,386,903
Available-for-sale financial assets		-	-	5,564,130	207,817
Items that will not be reclassified Items that will not be reclassified					
Actuarial gains - employee benefits		11,306,543	222,545,556	12,038,710	106,277,761
Total other comprehensive results		11,349,534	223,391,747	11,506,381	127,872,481
Total comprehensive loss		$ 2,183,211	42,971,910	(269,344,238)	(63,271,861)
Net loss attributable to:					
Controlling interest		$ (9,164,013)	(180,374,350)	(280,844,899)	(191,645,606)
Non-controlling interest		(2,310)	(45,487)	(5,720)	501,264
Net loss		$ (9,166,323)	(180,419,837)	(280,850,619)	(191,144,342)
Other comprehensive results attributable to:					
Controlling interest		$ 11,372,016	223,834,249	11,512,259	127,650,318
Non-controlling interest		(22,482)	(442,502)	(5,878)	222,163
Total other comprehensive results		$ 11,349,534	223,391,747	11,506,381	127,872,481
Comprehensive (loss) income:					
Controlling interest		$ 2,208,003	43,459,899	(269,332,640)	(63,995,288)
Non-controlling interest		(24,792)	(487,989)	(11,598)	723,427
Total comprehensive loss		$ 2,183,211	42,971,910	(269,344,238)	(63,271,861)

The accompanying notes are an integral part of these consolidated financial statements.

[1] Includes financing income from investments and gain on discount rate of plugging of wells in 2018, 2017 and 2016.
[1] Mainly interest on debt.

Petróleos Mexicanos,
Productive State-Owned Subsidiaries and Subsidiary Companies

Consolidated statements of changes in equity (deficit)

For the years ended december 31, 2018, 2017 and 2016

(Figures stated in thousands, except as noted)

(See Note 24)

	Controlling interest										
				Accumulated other comprehensive income (loss)			Accumulated deficit				
	Certificates of Contribution "A"	Mexican Government contributions	Legal reserve	Available-for sale financial assets	Cumulative currency translation effect	Actuarial (losses) gains on employee benefits effect	For the year	From prior years	Total	Non controlling interest	Total Equity (deficit), net
Balances as of January 1, 2016	$ 194,604,835	43,730,591	1,002,130	(5,771,947)	29,550,360	(329,801,386)	(712,434,997)	(552,808,762)	(1,331,929,176)	253,278	(1,331,675,898)
Transfer to accumulated deficit	-	-	-	-	-	-	712,434,997	(712,434,997)	-	-	-
Increase in Certificates of Contribution "A"	161,939,612	-	-	-	-	-	-	-	161,939,612	-	161,939,612
Reclassification of other comprehensive income	-	-	-	-	-	14,973,214	-	(14,973,214)	-	-	-
Total comprehensive income (loss)	-	-	-	207,817	21,169,662	106,272,839	(191,645,606)	-	(63,995,288)	723,427	(63,271,861)
Balances as of December 31, 2016	356,544,447	43,730,591	1,002,130	(5,564,130)	50,720,022	(208,555,333)	(191,645,606)	(1,280,216,973)	(1,233,984,852)	976,705	(1,233,008,147)
Transfer to accumulated deficit	-	-	-	-	-	-	191,645,606	(191,645,606)	-	-	-
Total comprehensive income (loss)	-	-	-	5,564,130	(6,087,010)	12,035,139	(280,844,899)	-	(269,332,640)	(11,598)	(269,344,238)
Balances as of December 31, 2017	356,544,447	43,730,591	1,002,130	-	44,633,012	(196,520,194)	(280,844,899)	(1,471,862,579)	(1,503,317,492)	965,107	(1,502,352,385)
Initial effect by the adoption of IFRS 9 (Note 4-b)	-	-	-	-	-	-	-	(24,957)	(24,957)	-	(24,957)
Balances adjusted as of January 1, 2018	356,544,447	43,730,591	1,002,130	-	44,633,012	(196,520,194)	(280,844,899)	(1,471,887,536)	(1,503,342,449)	965,107	(1,502,377,342)
Transfer to accumulated deficit	-	-	-	-	-	-	280,844,899	(280,844,899)	-	-	-
Total comprehensive income (loss)	-	-	-	-	1,287,215	222,547,034	(180,374,350)	-	43,459,899	(487,989)	42,971,910
Balances as of December 31, 2018	$ 356,544,447	43,730,591	1,002,130	-	45,920,227	26,026,840	(180,374,350)	(1,752,732,435)	(1,459,882,550)	477,118	(1,459,405,432)
Balances as of December 31, 2018 (Unaudited U.S. dollars)	$ 18,114,427	2,221,755	50,914	-	2,333,001	1,322,307	(9,164,013)	(89,048,485)	(74,170,094)	24,240	(74,145,854)

The accompanying notes are an integral part of these consolidated financial statements.

Petróleos Mexicanos,
Productive State-Owned Subsidiaries and Subsidiary Companies

Consolidated statements of cash flows

For the years ended december 31, 2018, 2017 and 2016

(Figures stated in thousands, except as noted)

		2018 (Unaudited; U.S. dollars)	2018	2017	2016
Operating activities:					
Net loss	$	(9,166,323)	(180,419,837)	(280,850,619)	(191,144,342)
Items related to investment activities:					
Depreciation and amortization		7,792,655	153,382,040	156,704,513	150,439,491
Amortization of intangible assets		134,296	2,643,326	-	-
(Reversal) impairment of wells, pipelines, properties, plant and equipment		(1,088,203)	(21,418,997)	151,444,560	(331,314,343)
Unsuccessful wells		784,594	15,443,086	6,164,624	29,106,084
Exploration costs		(110,310)	(2,171,218)	(1,447,761)	(2,022,826)
Loss from derecognition of disposal of wells, pipelines, properties, plant and equipment		857,865	16,885,264	17,063,671	3,771,287
Disposal of held—for—sale current non—financial assets		-	-	2,808,360	-
Loss in sale of fixed assets		-	-	-	27,882,480
Net loss on available-for-sale financial assets		-	-	3,523,748	-
Decrease on available–for-sale financial assets		-	-	1,360,205	-
(Gain) on sale of share in joint ventures and associates		(35,623)	(701,171)	(3,139,103)	(15,211,039)
Impairment of goodwill		-	-	-	4,007,018
Effects of net present value of reserve for well abandonment		(353,261)	(6,953,200)	7,774,000	11,968,966
Profit sharing in joint ventures and associates		(77,581)	(1,527,012)	(360,440)	(2,135,845)
Dividends		-	-	(180,675)	(293,397)
Items related to financing activities					
Unrealized foreign exchange (income) loss		(1,004,029)	(19,762,208)	(16,685,439)	243,182,764
Interest expense		6,133,599	120,727,022	117,644,548	98,844,464
Interest income		(483,717)	(9,520,962)	-	-
Funds used in operating activities		3,383,962	66,606,133	161,824,192	27,080,762
Profit sharing duty and income tax		22,690,377	446,612,429	375,258,833	311,015,217
Taxes and duties paid		(22,546,741)	(443,785,240)	(372,240,560)	(303,593,175)
Derivative financial instruments		298,759	5,880,442	(38,377,961)	310,905
Accounts receivable		(14,556)	(286,509)	(27,124,228)	(55,104,439)
Long-term accounts receivable		-	-	114,693	(3,277,724)
Intangible assets		-	-	(5,166,184)	(19,745,821)
Inventories		(922,813)	(18,163,638)	(17,966,870)	(1,358,878)
Other assets		(26,963)	(530,711)	(1,972,532)	(2,104,985)
Accounts payable and accrued expenses		86,688	1,706,268	4,544,794	3,097,660
Suppliers		502,331	9,887,334	(11,694,162)	(15,664,703)
Provisions for sundry creditors		(302,311)	(5,950,348)	(7,266,629)	15,585,374
Employee benefits		2,723,424	53,604,884	50,065,396	47,293,069
Other taxes and duties		1,331,386	26,205,546	(46,601,312)	(45,431,344)
Net cash flows from (used in) operating activities		7,203,544	141,786,590	63,397,470	(41,898,082)
Investing activities:					
Long-term receivables from the Mexican Government		120,107	2,364,053	-	-
Resources from the sale of available-for-sale financial assets		-	-	8,026,836	-
Interest received for long-term receivable from the Mexican Government		9,532	187,615	-	-
Other notes receivable		63,342	1,246,763	-	-
Proceeds from the sale of associates		207,202	4,078,344	3,141,710	22,684,736
Proceeds from the sale of fixed assets		-	-	-	560,665
Business acquisition		-	-	-	(4,329,769)
Acquisition of wells, pipelines, properties, plant and equipment		(4,775,902)	(94,003,596)	(91,859,465)	(151,408,481)
Intangible assets		(759,903)	(14,957,093)	-	-
Net cash flows used in investing activities		(5,135,622)	(101,083,914)	(80,690,919)	(132,492,849)
Excess cash to apply in financing activities		2,067,922	40,702,676	(17,293,449)	(174,390,931)
Financing activities:					
Increase in equity due to Certificates of Contribution "A"		-	-	-	73,500,000
Loans obtained from financial institutions		45,713,234	899,769,012	704,715,468	841,991,767
Debt payments, principal only		(42,729,140)	(841,033,392)	(642,059,819)	(614,987,329)
Interest paid		(5,857,338)	(115,289,389)	(108,910,417)	(88,754,141)
Net cash flows from financing activities		(2,873,244)	(56,553,769)	(46,254,768)	211,750,297
Net (decrease)increase in cash and cash equivalents		(805,322)	(15,851,093)	(63,548,217)	37,359,366
Effects of foreign exchange on cash balances		(4,484)	(88,252)	(2,132,542)	16,804,267
Cash and cash equivalents at the beginning of the period		4,971,409	97,851,754	163,532,513	109,368,880
Cash and cash equivalents at the end of the period (Note 9)	$	4,161,603	81,912,409	97,851,754	163,532,513

The accompanying notes are an integral part of these consolidated financial statements.

NOTE 1. STRUCTURE AND BUSINESS OPERATIONS OF PETRÓLEOS MEXICANOS, SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES

Petróleos Mexicanos was created by a decree issued by the Mexican Congress on June 7, 1938. The decree was published in the Diario Oficial de la Federación ("Official Gazette of the Federation") on July 20, 1938 and came into effect on that date. On December 20, 2013, the Decreto por el que se reforman y adicionan diversas disposiciones de la Constitución Política de los Estados Unidos Mexicanos, en Materia de Energía (Decree that amends and supplements various provisions of the Mexican Constitution relating to energy matters), was published in the Official Gazette of the Federation, came into effect on December 21, 2013 and included transitional articles setting forth the general framework for implementing legislation relating to the energy sector.

As part of this legal framework, on August 11, 2014, the Ley de Petróleos Mexicanos (the "Petróleos Mexicanos Law") was published in the Official Gazette of the Federation. The Petróleos Mexicanos Law became effective on October 7, 2014, except for certain provisions. On December 2, 2014, the Secretaría de Energía ("Ministry of Energy") published in the Official Gazette of the Federation the declaration pursuant to which the special regime governing Petróleos Mexicanos' activities relating to productive state-owned subsidiaries, affiliates, compensation, assets, administrative liabilities, state dividend, budget and debt came into effect. On June 10, 2015 the Disposiciones Generales de Contratación para Petróleos Mexicanos y sus Empresas Productivas Subsidiarias (General Contracting Provisions for Petróleos Mexicanos and its productive state-owned subsidiaries) was published in the Official Gazette of the Federation and the following day the special regime for acquisitions, leases, services and public works matters came into effect.

Once the Petróleos Mexicanos Law came into effect, Petróleos Mexicanos was transformed from a decentralized public entity to a productive state-owned company. Petróleos Mexicanos is a legal entity empowered to own property and carry on business in its own name with the purpose of carrying out exploration and extraction of crude oil and other hydrocarbons in Mexico. In addition, Petróleos Mexicanos performs activities related to refining, gas processing and engineering and research projects to create economic value and to increase the income of the Mexican Government, as its owner, while adhering to principles of equity and social and environmental responsibility.

The Subsidiary Entities, Pemex Exploración y Producción (Pemex Exploration and Production), Pemex Transformación Industrial (Pemex Industrial Transformation), Pemex Perforación y Servicios (Pemex Drilling and Services), Pemex Logística (Pemex Logistics), Pemex Fertilizantes (Pemex Fertilizers) and Pemex Etileno (Pemex Ethylene), are productive state-owned subsidiaries empowered to own property and carry on business in their own name, subject to the direction and coordination of Petróleos Mexicanos (the "Subsidiary Entities").

The Subsidiary Entities of Petróleos Mexicanos prior to the Corporate Reorganization (defined below) were Pemex-Exploración y Producción, Pemex-Refinación (Pemex-Refining), Pemex-Gas and Petroquímica Básica (Pemex-Gas and Basic Petrochemicals) and Pemex-Petroquímica (Pemex-Petrochemicals), which were decentralized public entities with a technical, industrial and commercial nature with their own corporate identity and equity, with the legal authority to own property and conduct business in their own names, and were 100% owned by Petróleos Mexicanos and controlled by the Mexican Government; they had been consolidated into and had the characteristics of subsidiaries of Petróleos Mexicanos.

(Continued)

The Board of Directors of Petróleos Mexicanos, in its meeting held on November 18, 2014, approved the Corporate Reorganization proposed by the Director General of Petróleos Mexicanos. Pursuant to the corporate reorganization, the existing four Subsidiary Entities were transformed into two new productive state-owned subsidiaries, which have assumed all of the rights and obligations of the existing Subsidiary Entities. Pemex-Exploration and Production was transformed into Pemex Exploration and Production, a productive state-owned subsidiary, and Pemex-Refining, Pemex-Gas and Basic Petrochemicals and Pemex-Petrochemicals were transformed into the productive state-owned subsidiary Pemex Industrial Transformation.

The Board of Directors of Petróleos Mexicanos also approved the creation of the following Subsidiary Entities: Pemex Drilling and Services, Pemex Logistics, Pemex Cogeneración y Servicios (Pemex Cogeneration and Services), Pemex Fertilizers and Pemex Ethylene (the "Corporate Reorganization"). Each of these productive state-owned subsidiaries may be transformed into an affiliate of Petróleos Mexicanos if certain conditions set forth in the Petróleos Mexicanos Law are met.

On March 27, 2015, the Board of Directors of Petróleos Mexicanos approved the acuerdos de creación (creation resolutions) of each productive state-owned subsidiary.

On April 28, 2015 the creation resolutions of the seven productive state-owned subsidiaries were published in the Official Gazette of the Federation.

On May 29, 2015 the statements related to the creation resolution of the productive state-owned subsidiary Pemex Exploration and Production and the productive state-owned subsidiary Pemex Cogeneration and Services issued by the Board of Directors of Petróleos Mexicanos were published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on June 1, 2015.

On December 29, 2015 and May 12, 2016, modifications to the creation resolution of the productive state-owned subsidiary Pemex Exploration and Production were published in the Official Gazette of the Federation and became effective that same date, respectively.

On July 31, 2015, the statements related to the creation resolution of the productive state-owned subsidiary Pemex Drilling and Services, the productive state-owned subsidiary Pemex Fertilizers and the productive state-owned subsidiary Pemex Ethylene issued by the Board of Directors of Petróleos Mexicanos were published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on August 1, 2015.

On October 1, 2015, the statement related to the creation resolution of the productive state-owned subsidiary Pemex Logistics issued by the Board of Directors of Petróleos Mexicanos was published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on October 1, 2015.

On October 6, 2015, the statement related to the creation resolution of the productive state-owned subsidiary Pemex Industrial Transformation issued by the Board of Directors of Petróleos Mexicanos was published in the Official Gazette of the Federation and, accordingly, these creation resolutions came into effect on November 1, 2015.

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On July 13, 2018, the Board of Directors of Petróleos Mexicanos issued the Declaration of Liquidation and Extinction of Pemex Cogeneration and Services, which was published in the Official Gazette of the Federation and became effective on July 27, 2018. As of July 27, 2018, Pemex Industrial Transformation assumed all of the assets, liabilities, rights and obligations, and became, as a matter of Mexican law, the successor to Pemex Cogeneration and Services.

The Subsidiary Entities, and their primary purposes, are as follows:

- Pemex Exploration and Production: This entity is in charge of exploration and extraction of crude oil and solid, liquid or gaseous hydrocarbons in Mexico, in the exclusive economic zone of Mexico and abroad.

- Pemex Industrial Transformation: This entity performs activities related to refining, processing, importing, exporting, trading and the sale of hydrocarbons.

- Pemex Drilling and Services: This entity performs drilling services and repair and services of wells.

- Pemex Logistics: This entity provides transportation, storage and related services for crude oil, petroleum products and petrochemicals to PEMEX (as defined below) and other companies, through pipelines and maritime and terrestrial means, and provides guard and management services.

- Pemex Fertilizers: This entity produces, distributes and commercializes ammonia, fertilizers and its derivatives, as well as provides related services.

- Pemex Ethylene: This entity commercializes, distributes and trades methane, ethane and propylene, directly or through others.

The principal distinction between the Subsidiary Entities and the Subsidiary Companies (as defined below) is that the Subsidiary Entities are productive state-owned entities, whereas the Subsidiary Companies are affiliate companies that were formed in accordance with the applicable laws of each of the respective jurisdictions in which they were incorporated.

The "Subsidiary Companies" are defined as those companies which are controlled, directly or indirectly, by Petróleos Mexicanos (see Note 3-A).

"Associates," as used herein, means those companies in which Petróleos Mexicanos has significant influence but not control or joint control over its financial and operating policies (see Note 3-A). Petróleos Mexicanos, the Subsidiary Entities and the Subsidiary Companies are referred to collectively herein as "PEMEX."

PEMEX's address and its principal place of business is: Av. Marina Nacional No. 329, Col. Verónica Anzures, Alcaldía Miguel Hidalgo, 11300 Ciudad de México, México.

(Figures stated in thousands, except as noted)

NOTE 2. AUTHORIZATION AND BASIS OF PREPARATION

Authorization

On April 30, 2019, these consolidated financial statements under IFRS and the notes hereto were authorized for issuance by the following officers: Mr. Octavio Romero Oropeza, Chief Executive Officer, Mr. Alberto Velázquez García, Chief Financial Officer, Mr. Manuel Salvador Cruz Flores, Deputy Director of Accounting and Tax Matters, and Mr. Oscar René Orozco Piliado, Associate Managing Director of Accounting.

These consolidated financial statements and the notes hereto as of December 31, 2018 were approved by the Board of Petróleos Mexicanos on April 23, 2019, pursuant to the terms of Article 13 Fraction VI of the Petróleos Mexicanos Law, Article 104 Fraction III, paragraph a, of the Ley del Mercado de Valores (Securities Market Law), and of Article 33 Fraction I, paragraph a, section 3 and Article 78 of the Disposiciones de carácter general aplicables a las emisoras de valores y a otros participantes del mercado de valores ("General provisions applicable to securities´ issuers and other participants of the securities market").
Audit appraisal matters are reported to the Audit Committee. The entire Board of Directors of Petróleos Mexicanos is currently acting as the Audit Committee.

These consolidated financial statements are PEMEX's first annual consolidated financial statements in which *IFRS 15, Revenue from Contract with Customers* ("IFRS 15") and *IFRS 9, Financial Instruments* ("IFRS 9") have been applied. Changes to significant accounting policies are described in Note 4.

Basis of accounting

A. Statement of compliance

PEMEX prepared its consolidated financial statements as of December 31, 2018 and 2017, and for the years ended December 31, 2018, 2017 and 2016, in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

B. Basis of measurement

These consolidated financial statements have been prepared using the historical cost basis method, with the exception of the following items, which have been measured using an alternative basis.

Item	Basis of measurement
Derivative Financial Instruments ("DFIs")	Fair Value
Debt	Amortized Cost
Employee Benefits	Fair Value of plan assets less present value of the obligation
Wells, pipelines, properties, plant and equipment	Some components at value in use

C. Going concern

The consolidated financial statements have been prepared on a going concern basis, which assumes that PEMEX can meet its payment obligations. (See Note 24-E)

D. Functional and reporting currency

These consolidated financial statements are presented in Mexican pesos, which is both PEMEX's functional currency and reporting currency, due to the following:

i. The economic environment in which PEMEX operates is Mexico, where the legal currency is the Mexican peso;
ii. Petróleos Mexicanos and its Subsidiary Entities have budgetary autonomy, subject only to maintaining the financial balance (the difference between income and total net spending, including the financial cost of the public debt of the Mexican Government and the entities directly controlled by the Mexican Government) and the spending cap of personnel services proposed by SHCP and approved by the Mexican Congress, in Mexican pesos.
iii. Employee benefits provision was approximately 31% and 35% of PEMEX's total liabilities as of December 31, 2018 and 2017, respectively. This provision is computed, denominated and payable in Mexican pesos; and
iv. Cash flows for payment of general expenses, taxes and duties are realized in Mexican pesos.

Although the sales prices of several products are based on international U.S. dollar-indices, final domestic selling prices are governed by the economic and financial policies established by the Mexican Government. Accordingly, cash flows from domestic sales are generated and received in Mexican pesos.

Mexico's monetary policy regulator, the Banco de México, requires that Mexican Government entities other than financial entities sell their foreign currency to the Banco de México in accordance with its terms, receiving Mexican pesos in exchange, which is the currency of legal tender in Mexico.

Terms definition

References in these consolidated financial statements and the related notes to "pesos" or "Ps." refers to Mexican pesos, "U.S. dollars" or "US$" refers to dollars of the United States of America, "yen" or "¥" refers to Japanese yen, "euro" or "€" refers to the legal currency of the European Economic and Monetary Union, "Pounds sterling" or "£" refers to the legal currency of the United Kingdom and "Swiss francs" or "CHF" refers to the legal currency of the Swiss Confederation. Figures in all currencies are presented in thousands of the relevant currency unit, except exchange rates and product and share prices.

E. Use of judgments and estimates

The preparation of the consolidated financial statements in accordance with IFRS requires the use of estimates and assumptions made by PEMEX's management that affect the recorded amounts of assets and liabilities and the disclosures of contingent assets and liabilities as of the date of these consolidated financial statements, as well as the recorded amounts of income, costs and expenses during the year. Actual results may differ from these estimates.

(Continued)

Significant estimates and underlying assumptions are reviewed, and the effects of such revisions are recognized in the years in which any estimates are revised and in any future periods affected by such revision.

Information about estimates, assumptions and critical accounting policies that have the most significant effects on the amounts recognized in the consolidated financial statements are described in the following notes:

- Note 3-C Financial instruments – Fair Value and expected credit losses
- Note 3-E Wells, pipelines, properties, plant and equipment – Value in use
- Note 3-F Intangible assets and oil and natural gas exploration and license, appraisal and development expenditure; successful efforts method
- Note 3-H Impairment of non-financial assets –cash flow estimates and discount rates determination
- Note 3-K Provisions - Environmental liabilities and retirement of assets
- Note 3-L Employee benefits – actuarial assumptions
- Note 3-M Income taxes, duties and royalties – recoverably assesment of deferred tax assets
- Note 3-N Contingencies – probalility assessment

Measurement of fair values

Some of PEMEX's accounting policies and disclosures require the measurement of the fair values of financial assets and liabilities, as well as non-financial assets and liabilities.

PEMEX has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements, including Level 3 fair values.

The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of IFRS, including the level in the fair value hierarchy in which the valuations should be classified.

When measuring the fair value of an asset or a liability, PEMEX uses market observable data as far as possible. Fair values are categorized into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

If the inputs used to measure the fair value of an asset or a liability might be categorized in different levels of the fair value hierarchy, then the fair value measurement is categorized in its entirety in the same level of the fair value hierarchy as the lowest level input that is significant to the entire measurement.

PEMEX recognizes transfers between levels of the fair value hierarchy at the end of the reporting period

(Continued)

during which the change has occurred.

NOTE 3. SIGNIFICANT ACCOUNTING POLICIES

PEMEX has consistently applied the following accounting policies to each of the periods presented in the preparation of its consolidated financial statements, except for what is mentioned in Note 4, Accounting changes.

Below is a summary of the principal accounting policies:

A. Basis of consolidation

The consolidated financial statements include the financial statements of Petróleos Mexicanos and those of its subsidiaries over which it has control.

i. Subsidiaries

Subsidiaries are entities controlled by PEMEX. PEMEX "controls" an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases.

For more information about the Subsidiary Companies, see Note 5.

ii. Non-controlling interests (NCI)

NCI are measured initially at their proportionate share of the acquiree's identifiable net assets at the date of acquisition.

Changes in the ownership interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

iii. Loss of control

When PEMEX loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any resulting gain or loss is recognized in profit or loss. Any interest retained in the former subsidiary is measured at fair value when control is lost.

iv. Interests in equity-accounted investees

PEMEX's interests in equity-accounted investees comprise interests in associates and a joint venture.

Associates are those entities in which PEMEX has significant influence, but not control or joint control, over the financial and operating policies. A joint venture is an arrangement in which PEMEX has joint control, whereby PEMEX has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities (joint operation).

Interests in associates and the joint venture are accounted for using the equity method. They are initially recognized at cost, which includes transaction costs. Subsequent to initial recognition, the consolidated financial statements include PEMEX's share of the profit or loss and other comprehensive income (OCI) of equity accounted investees, until the date on which significant influence or joint control ceases.

When the value of the share of losses exceeds the value of PEMEX's investment in an associate or joint venture, the carrying value of the investment, including any long-term investment, is reduced to zero and PEMEX ceases to recognize additional losses, except in cases where PEMEX is liable for obligations incurred by those associates and joint ventures.

For more information about associates and joint ventures, see Note 14.

v. Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated. Unrealized gains arising from transactions with equity-accounted investees are eliminated against the investment to the extent of the PEMEX interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

B. Foreign currency

i. Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of PEMEX companies at the exchange rates at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the exchange rate at the reporting date. Non-monetary assets and liabilities that are measured at fair value in a foreign currency are translated into the functional currency at the exchange rate when the fair value was determined. Non-monetary items that are measured based on historical cost in a foreign currency are translated at the exchange rate at the date of the transaction. Foreign currency differences are generally recognized in consolidated statements of comprehensive income and presented within foreign exchange.

Foreign currency differences arising from the translation of investment in equity are designated at fair value in OCI. For 2017, available-for-sale equity investments are recognized in OCI (except for impairment, in which case foreign currency differences that have been recognized in OCI are reclassified to profit or loss).

ii. Foreign operation

The financial statements of foreign subsidiaries and associates are translated into the reporting currency by first identifying if the functional currency is different from the currency for recording the foreign operations, and, if so, the recording currency is translated into the functional currency and then into the reporting currency using the year-end exchange rate of each period for assets and liabilities reported in the consolidated statements of financial position; the historical exchange rate at the date of the transaction for equity items; and the weighted average exchange rate of the year for income and expenses reported in the consolidated statement of comprehensive income.

Foreign currency differences are recognized in OCI and accumulated in the currency translation effect, except to the extent that the translation difference is allocated to NCI.

When a foreign operation is disposed of in its entirety or partially such that control, significant influence or joint control is lost, the cumulative amount in the translation reserve related to that foreign operation is reclassified to the consolidated statement of comprehensive income as part of the gain or loss on disposal. If PEMEX disposes of part of its interest in a subsidiary but retains control, the relevant portion of the cumulative amounts is reclassified to the consolidated statement of comprehensive income.

C. Financial instruments

i. Recognition and initial measurement

Financial assets and liabilities, including accounts receivable and payable, are initially recognized when these assets are contractually originated or acquired, or when these liabilities are contractually issued or assumed.

Financial assets and financial liabilities (unless it is an account receivable or account payable without a significant financing component) are measured and initially recognized at fair value, in the case of financial assets or liabilities not measured at fair value with changes through OCI, plus the transaction costs directly attributable to acquisition or issuance, when subsequently measured at amortized cost. An account receivable or account payable without a significant financing component is initially measured at the transaction price.

ii. Classification and subsequent measurement

Financial Assets- Applicable policy beginning January 1, 2018

On initial recognition, a financial asset is classified as measured at: Amortized Cost; Fair Value Through Other Comprehensive Income ("FVTOCI")-debt investment; FVTOCI–equity investment; or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition unless PEMEX changes its business model for managing financial assets, in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

FINANCIAL ASSETS:	MEASUREMENT:
Amortized Cost	A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL: • it is held within a business model that has the objective of holding assets to collect contractual cash flows; and • its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.
Debt investment	A debt instrument is measured at FVTOCI only if it meets both of the following conditions and is not designated as at FVTPL: • it is held within a business model that has the objective of both collecting contractual cash flows and selling financial assets; and • its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.
Equity investment	On initial recognition of an equity investment that is not held for trading, PEMEX may irrevocably elect to present subsequent changes in fair value in OCI. This election is made on an investment-by-investment basis.

All financial assets not classified as measured at amortized cost or FVTOCI (as described above) are measured at FVTPL. This includes all derivative financial assets (see Note 19). On initial recognition, PEMEX may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as FVTPL, if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets - Business model assessment: Applicable policy beginning January 1, 2018

PEMEX makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice, which include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realizing cash flows through the sale of the assets;
- how the performance of the portfolio is evaluated and reported to PEMEX management;
- the risk that affects the performance of the business model (and the financial assets held within that business model) and how those risks are managed;
- how managers of the business are compensated (e.g., whether compensation is based on the fair value of the assets managed or the contractual cash flows collected); and
- the frequency, volume and timing of sales in prior periods, the reasons for such sales and expectations about future sales activity.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales for this purpose, consistent with PEMEX's continuing recognition of the assets.

Financial assets that are held for trading or managed and the performance of which is evaluated on a fair value basis are measured at FVTPL.

Financial Asset - Assessment whether contractual cash flows are solely payments of principal and interest: Applicable policy beginning January 1, 2018

For the purposes of this assessment, principal is defined as the fair value of the financial assets on initial recognition.

Interest is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during the relevant period of time and for the basic lending risks and costs (e.g., liquidity risk and administrative costs), as well as profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, PEMEX considers the contractual terms of the instrument, which includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, PEMEX considers:

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable rate features;
- prepayment and extension features; and
- terms that limit PEMEX's claim to cash flows from specified assets (for example, non-recourse features).

A prepayment feature is consistent solely with the payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a significant discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

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Financial assets – Subsequent measurement and gain and losses: Applicable policy beginning January 1, 2018

Financial assets at FVTPL	Financial assets at FVTPL are measured at fair value and changes therein, including any interest or dividend income, are recognized in profit or loss.
Financial assets at amortized cost	These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on derecognition is recognized in profit or loss.
Debt investments at FVOCI	These assets are subsequently measured at fair value. Interest income calculated using the effective interest method, foreign exchange gains and losses and impairment are recognized in profit or loss. Other net gains and losses are recognized in OCI. On derecognition, gains and losses accumulated in OCI are reclassified to profit or loss.
Equity investments at FVOCI	These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

Financial assets - Applicable policy before January 1, 2018

Financial instruments are classified as: (i) financial instruments measured at fair value through profit or loss; (ii) financial instruments held to maturity; (iii) available-for-sale financial assets; (iv) investments in equity instruments; (v) loans and receivables; and (vi) DFIs. PEMEX determines the classification of its financial instruments at the time of initial recognition.

The following are the policies applicable before January 1, 2018 of the financial instruments operated by PEMEX on that date:

Financial instruments measured at fair value through profit or loss

A financial instrument is measured at fair value through profit or loss if it is classified as held for trading or designated as such upon initial recognition. Financial assets are designated at fair value through profit or loss if PEMEX manages such investments and makes purchase and sale decisions based on their fair value in accordance with PEMEX's documented risk management or investment strategy. In addition, directly attributable transaction costs are recognized in the consolidated statements of comprehensive income for the year. These financial instruments are recognized at fair value and corresponding changes relating to dividend income are recognized in the consolidated statements of comprehensive income.

Available-for-sale financial assets

Until January 1, 2018, available-for-sale financial assets were non-DFIs that were designated as available-for-sale or were not classified in any of the previous categories. PEMEX's investments in certain equity securities and debt securities were classified as available-for-sale financial assets. Available-for-sale financial assets were recognized initially at fair value plus any directly attributable transaction costs.

Subsequent to initial recognition, available-for-sale financial assets are measured at fair value. In addition, any gains or losses associated with such instruments, as well as foreign exchange differences are recognized in other comprehensive results and presented in the fair value reserve in equity. When an investment is derecognized, any gains or losses accumulated in the equity are reclassified to profit or loss.

Sales and purchases of financial assets that require the delivery of such assets within a period of time established by market practice are recognized as of the negotiation date (the date on which PEMEX commits to purchase or sell the asset).

Loans and receivables

Loans and receivables are initially recognized at fair value. After initial recognition, loans and debt securities that bear interest are measured at amortized cost using the effective interest rate ("EIR") method, less impairment losses.

The amortized cost is calculated based on any discount or premium on acquisition and fees and costs that are an integral part of the EIR method. Amortization of costs is included under the heading of financing cost in the consolidated statements of comprehensive income.

Derivative financial instruments

The DFIs presented in the consolidated statement of financial position are valued at fair value. In the case of derivatives for trading purposes, changes in fair value are taken directly to profit or loss for the period. In the case of derivatives formally designated and classified as DFIs for hedging purposes, they are accounted for following the fair value or cash flow hedge accounting model.

Embedded derivatives

PEMEX evaluates the potential existence of embedded derivatives, which may be found in the terms of its contracts, or combined with other host contracts, which could be structured financial instruments (debt or equity instruments with embedded derivatives). Embedded derivatives have terms that implicitly or explicitly meet the characteristics of a DFI. In some instances, these embedded derivatives must be segregated from the underlying contracts and measured, recognized, presented and disclosed as DFIs, such as when the economic risks and terms of the embedded derivative are not clearly and closely related to the underlying contract.

Financial liabilities: Classification, subsequent measurement and gains and losses

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss. Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

iii. *Derecognition*

Financial assets

PEMEX derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which PEMEX neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset.

PEMEX enters into transactions whereby it transfers assets recognized in its statement of financial position but retains either all or substantially all of the risks and rewards of the transferred assets. In these cases, the transferred assets are not derecognized.

Financial liabilities

PEMEX derecognizes a financial liability when its contractual obligations are discharged, cancelled or expired. PEMEX also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

iv. *Offsetting*

Financial assets and financial liabilities are offset, and the net amount is presented in the statement of financial position when, and only when, PEMEX has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

v. *Derivative financial instruments and hedge accounting*

PEMEX uses DFIs to hedge the risk exposure in foreign currency, interest rate and the price of commodities related to its products. Embedded derivatives are separated from the host contract and accounted for separately if the host contract is not a financial asset and certain criteria are met.

DFIs are initially measured at fair value. Subsequent to initial recognition, DFIs are measured at fair value, and changes therein are generally recognized in profit or loss.

However, these contracts are not accounted as designated hedging instruments. DFIs are initially recognized at fair value on the date on which a derivative contract is entered into and after initial recognition are measured again at fair value. DFIs are accounted for as financial assets when the fair value is positive and as a financial liability when the fair value is negative. Any gain or loss arising from changes in the fair value of the DFIs is recognized directly in the income statement.

vi. Impairment - Applicable policy beginning January 1, 2018

Financial instruments and contract assets

PEMEX recognizes loss allowances for Estimated Credit Losses ("ECLs") on:

- financial assets measured at amortized cost;
- debt investments measured at FVOCI; and
- contract assets.

PEMEX measures loss allowances at an amount equal to lifetime ECL, except for the following, which are measured as 12-month ECLs:

- debt securities that are determined to have low credit risk at the reporting date; and
- other debt securities and bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition.

Loss allowances for trade receivables and contract assets are always measured at an amount equal to lifetime ECL.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, PEMEX considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on PEMEX's historical experience and informed credit assessment which includes forward-looking information.

PEMEX assumes that the credit risk on a financial asset has increased significantly if it does not comply with the terms established in the contract.

PEMEX considers a financial asset to be in default when the borrower is unlikely to pay its credit obligations to PEMEX in full, without recourse by PEMEX to actions such as realizing security (if any is held).

PEMEX considers that a debt instrument has a low credit risk, when its credit rating is classified as "investment grade". The investment grade classification is based on minimum credit ratings of Baa3 (Moody's) and BBB- (S & P and Fitch), as well as its equivalent in other rating agencies

Lifetime ECLs are the credit losses that result from all possible default events over the expected life of a financial instrument.

12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

(Continued)

The maximum period considered when estimating ECLs is the maximum contractual period over which PEMEX is exposed to credit risk.

Measurement of ECLs

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (for example, the difference between the cash flows due to the entity in accordance with the contract and the cash flows that PEMEX expects to receive).

ECLs are discounted at the effective interest rate of the financial asset.

Credit-impaired financial assets

At each reporting date, PEMEX assesses whether financial assets carried at amortized cost and debt securities at FVOCI are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the borrower or issuer;
- a breach of contract such as a default or being more than 90 days past due;
- the restructuring of a loan or advance by PEMEX on terms that it would not consider otherwise;
- it is probable that the borrower will enter bankruptcy or other financial reorganization; or
- the disappearance of an active market for a security because of financial difficulties.

Presentation of allowance for ECL in the statement of financial position

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

For debt securities at FVOCI, the loss allowance is charged to profit or loss and is reclassified from OCI.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when PEMEX determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with PEMEX's procedures for recovery of amounts due.

(Continued)

Impairment of financial assets - Policy applicable before January 1, 2018

At each reporting date, PEMEX evaluates whether there is objective evidence that a financial asset or group of financial assets is impaired, in which case the value of the recoverable amount of the asset is calculated. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset, and that the loss event had a negative effect on the estimated future cash flows of the financial asset.

Objective evidence that a financial asset or group of assets is impaired includes significant financial difficulty of the issuer or obligor, a breach of contract, such as a default or delinquency in interest or principal payments; the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting the borrower a concession that the lender would not otherwise consider; it becoming probable that the borrower will enter bankruptcy or other financial reorganization; the disappearance of an active market for that financial asset because of financial difficulties; or observable data indicating that there is a measurable decrease in the estimated future cash flows. Impairments by asset are:

- Impairment of financial assets carried at amortized cost

The impairment of financial assets carried at amortized cost is measured as the difference between the assets' carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The amount of the loss shall be recognized in profit or loss.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the impairment loss previously recognized shall be reversed in profit or loss.

- Impairment in available–for–sale financial assets

In addition, a significant or prolonged decline in the fair value of an investment in an available–for–sale equity instrument is also objective evidence of impairment.

When there is objective evidence of the impairment of an asset, the accumulated loss recognized in OCI shall be reclassified from equity to profit or loss even though the financial asset has not been derecognized.

If, in a subsequent period, the impairment loss decreases, the reversal shall be reflected as a reversal in OCI.

D. Inventories and cost of sales

Inventories are valued at the lower of cost or net realizable value. Cost is determined based on the cost of production or acquisition of inventory and other costs incurred in transporting such inventory to its present location and in its present condition, using the average cost formula. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated selling costs. The estimate takes into consideration, among other things, the decrease in the value of inventories due to obsolescence.

(Continued)

Cost of sales represents the cost of production or acquisition of inventories at the time of sale, increased, where appropriate, by declines in net realizable value of inventories during the year.

Advance payment to suppliers for inventory purchases are recognized as part of inventory when the risks and benefits of the ownership of the inventory have been transferred to PEMEX.

E. Wells, pipelines, properties, plant and equipment

i. Recognition and measurement

Items of wells, pipelines, properties, plant and equipment are recorded at acquisition or construction cost, which includes capitalized borrowing cost, less accumulated depreciation and accumulated impairment losses.

Initial costs of wells, pipelines, properties, plant and equipment are initially recorded at cost, which includes their original purchase price or construction cost, any costs attributable to bringing the assets to a working condition for their intended use and the costs of dismantling and removing the items and restoring the site on which they are located, including the estimated cost of plugging and abandoning wells.

The cost of financing projects that require large investments and financing incurred for projects, net of interest revenues from the temporary investment of these funds, is recognized as part of wells, pipelines, properties, plant and equipment when the cost is directly attributable to the construction or acquisition of a qualifying asset. The capitalization of these costs is suspended during periods in which the development of construction is interrupted, and its capitalization ends when the activities necessary for the use of the qualifying asset are substantially completed. All other financing costs are recognized in the consolidated statements of comprehensive income in the period in which they are incurred.

The cost of self-constructed assets includes the cost of materials and direct labor, interest on financing and any other costs directly attributable to start up. In some cases, the cost also includes the present value of the costs of plugging of wells and removal.

Expenditures related to the construction of wells, pipelines, properties, plant and equipment during the stage prior to commissioning are stated at cost as intangible assets or construction in progress, in accordance with the characteristics of the asset. Once the assets are ready for use, they are transferred to the respective component of wells, pipelines, properties, plant and equipment and depreciation or amortization begins.

If significant parts of an item of wells, pipelines, properties, plant and equipment have different useful lives, then they are accounted for as separate items (major components) of property, plant and equipment.

The capitalized value of finance leases is also included in the line item of wells, pipelines, properties, plant and equipment.

Any gain or loss on disposal of an item of wells, pipelines, properties, plant and equipment is recognized in profit or loss.

Advance payments for the acquisition of pipelines, properties, plant and equipment are also recognized in the line item of wells, pipelines, properties, plant and equipment when the risks and benefits of the ownership have been transferred to PEMEX.

ii. Subsequent expenditure

The costs of major maintenance or replacement of a significant component of an item of wells, pipelines, properties, plant and equipment are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the component will flow to PEMEX and its cost can be measured reliably. The costs of recurring maintenance, repairs and renovations of wells, pipelines, properties, plant and equipment carried out to maintain the facilities in normal operation conditions are recognized in profit or loss as incurred.

iii. Depreciation

Depreciation and amortization of capitalized costs in wells are determined based on the estimated economic life of the field to which the wells belong, considering the relationship between the production of barrels of oil equivalent for the period and proved developed reserves of the field, as of the beginning of the period, with quarterly updates for new development investments.

Depreciation of other elements of pipelines, properties, plant and equipment is recognized in profit or loss on a straight-line basis over the estimated useful life of the asset, beginning as of the date that the asset is available for use, or in the case of construction, from the date that the asset is completed and ready for use.

Properties, plant and equipment acquired through financial leases are depreciated over the shorter of the lease term or the useful life of the asset.

The estimated useful lives of wells, pipelines, properties, plant and equipment for current and comparative periods are described in Note 15.

Estimated useful lives of items of properties, plant and equipment are reviewed and updated prospectively if expectations differ from previous estimates.

F. Intangible assets and oil and natural gas exploration and license, appraisal and development expenditure

Intangible assets mainly include expenditure on the exploration for and evaluation of oil and natural gas resources, right-of-way and easements and licenses software.

i. Intangible assets

Intangible assets acquired separately are measured at the time the initial cost of acquisition is recognized. After the initial recognition, intangible assets are measured at their acquisition cost, less (i) accumulated amortization, measured using the straight-line method during the estimated useful life of the intangible asset and (ii) accumulated impairment.

(Continued)

Rights-of-way and easements and licenses software are amortized over the contract period or over the remaining life of the fixed asset or property to which they pertain.

The estimated useful lives of intangible assets for current and comparative periods are described in Note 15.

The estimated useful lives and residual values of intangible assets are reviewed at each reporting date and adjusted if appropriate.

ii. Oil and natural gas exploration and license, appraisal and development expenditure

Oil and natural gas exploration, appraisal and development expenditure is accounted for using the principles of the successful efforts method of accounting as described below.

Exploration and appraisal expenditure

Geological and geophysical exploration costs are recognized as an expense as incurred.

Costs directly associated with an exploration well are initially capitalized as an intangible asset until the drilling of the well is complete and the results have been evaluated. These costs include employee remuneration, materials and fuel used, rig costs and payments made to contractors.

If potentially commercial quantities of hydrocarbons are not found, the exploration well costs are written off against profit or loss. If hydrocarbons are found and, subject to further appraisal activity, are likely to be capable of commercial development, the costs continue to be carried as an asset. If it is determined that development will not occur, then the costs are expensed against profit or loss.

Costs directly associated with appraisal activity undertaken to determine the size, characteristics and commercial potential of a reservoir following the initial discovery of hydrocarbons, including the costs of appraisal wells where hydrocarbons were not found, are initially capitalized as an intangible asset. When proved reserves of oil and natural gas are determined and development is approved by management, the relevant expenditure is transferred to wells, pipelines, properties, plant and equipment.

Exploration wells more than 12 months old are expensed unless: (i) they are in an area requiring mayor capital expenditure before production can begin, (ii) commercially productive quantities of reserves have been found, and (iii) they are subject to further exploration or appraisal activity, in that either drilling or additional exploration wells is underway or firmly planned for the near future.

PEMEX periodically assesses the amounts included within fixed assets to determine whether capitalization is initially appropriate and can continue. Exploration wells capitalized beyond 12 months are subject to additional scrutiny as to whether the facts and circumstances have changed and therefore whether the conditions described in the preceding paragraph no longer apply.

Development expenditure

Expenditure on the construction, installation and completion of infrastructure facilities such as platforms, pipelines and the drilling of development wells, including service and unsuccessful development or delineation wells, is capitalized within wells, pipelines, properties, plant and equipment and is depreciated from the commencement of production as described in the accounting policy for wells, pipelines, properties, plant and equipment.

G. Crude oil and natural gas reserves

Under Mexican law, all crude oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. In accordance with the aforementioned and based on the applicable regulation as of the date of these consolidated financial statements, the reserves assigned to PEMEX by the Mexican Government are not registered for accounting purposes because they are not PEMEX's property. PEMEX estimates total proved oil and natural gas reserve volumes in accordance with the definitions, methods and procedures established in Rule 4-10(a) of Regulation S-X ("Rule 4-10(a)") of the U.S. Securities and Exchange Commission ("SEC") as amended, and where necessary, in accordance with the Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers (the "SPE") as of February 19, 2007. These procedures are consistent with international reserves reporting practice. The estimation of these reserves depends on assumptions made and the interpretation of the data available and may vary among analysts. The results of drilling activities, test wells and production after the date of estimation are utilized in future revisions of reserves estimates.

Although PEMEX does not own the oil and other hydrocarbon reserves within Mexico, these procedures allow PEMEX to record the effects that such oil and other hydrocarbon reserves have on its consolidated financial statements, including, for example, in the depreciation and amortization line item.

H. Impairment of non-financial assets

The carrying amounts of PEMEX's non-financial assets, other than inventories and deferred taxes, are assessed for indicators of impairment at the end of each reporting period. If the net carrying value of the asset or its cash-generating unit exceeds the recoverable amount, PEMEX records an impairment charge in its consolidated statement of comprehensive income.

A cash-generating unit is the smallest identifiable group of assets which can generate cash flows independently from other assets or groups of assets.

The recoverable amount of an asset or a cash-generating unit is defined as the higher of its fair value minus the costs of disposal and its value in use. The value in use is the discounted present value of the net future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. In measuring value in use, the discount rate applied is the pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the asset. Fair value is calculated using discounted cash flows determined by the assumptions that market participants would apply in order to estimate the price of an asset or cash generating unit, assuming that such participants were acting in their best economic interest.

(Continued)

In the case of cash-generating assets or items dedicated to the exploration and evaluation of hydrocarbons reserves, the recoverable amount is determined using the value in use based on the proved reserves and probable reserves, in some cases, for the risk factor associated with such reserves.

Both impairment losses and reversals are recognized in the statement of comprehensive income in the costs and expenses line items in which the depreciation and amortization are recognized. Impairment losses may not be presented as part of the costs that have been capitalized in the value of any asset. Impairment losses related to inventories are recognized as part of cost of sales. Impairment losses on investments in associates, joint ventures and other investments are recognized as profit (loss) sharing in associates.

An impairment loss shall be reversed if there has been a change in the estimates used since the date when the impairment loss was recognized. These reversals will not exceed the carrying value of the asset as though no impairment had been recognized. Impairment losses and reversals are presented in a separate line item in the consolidated statement of comprehensive income.

I. Leases

The determination of whether an agreement is or contains a lease is based on the economic substance of the agreement at the date of execution. An agreement contains a lease if performance under the agreement depends upon the use of a specific asset or assets, or if the agreement grants the right to use the asset.

Finance leases, which transfer to PEMEX substantially all the inherent benefits and risks of the leased property, are capitalized at the date the lease commences, and the value is recorded as the lower of the fair value of the leased property and the present value of the minimum lease payments. Payments on the lease are divided between the financial costs and the amortization of the remaining debt principal in order to achieve a constant effective interest rate for the outstanding liability. The financing costs are recognized in the consolidated statement of comprehensive income.

Operating lease payments are recognized as expenses in the consolidated statement of comprehensive income on a straight-line basis over the term of the lease and variable rent payments are recognized in the operating results on an accrued basis.

J. Assets held-for-sale

Non-current assets, or disposal groups comprising assets and liabilities, are classified as held-for-sale if it is highly probable that they will be recovered primarily through sale rather than through continuing use.

Such assets, or disposal groups, are generally measured at the lower of their carrying amount and fair value less costs to sell. Any impairment loss on a disposal group is allocated first to goodwill, and then to the remaining assets and liabilities on a pro rata basis, except that no loss is allocated to inventories, financial assets, deferred tax assets, employee benefit assets, investment property or biological assets, which continue to be measured in accordance with PEMEX's other accounting policies. Impairment losses on initial classification as held-for-sale or held-for-distribution and subsequent gains and losses on remeasurement are recognized in profit or loss.

(Continued)

Once classified as held-for-sale, intangible assets and property, plant and equipment are no longer amortized or depreciated, and any equity-accounted investee is no longer equity accounted.

K. Provisions

Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognized as finance cost.

PEMEX recognizes provisions when, as a result of a past event, PEMEX has incurred a legal or assumed present obligation for which a future disbursement is probable and the value of such disbursement is reasonably estimable. In certain cases, such amounts are recorded at their present value.

Environmental liabilities

In accordance with applicable legal requirements and accounting practices, an environmental liability is recognized when the cash outflows are probable and the amount is reasonably estimable. Disbursements related to the conservation of the environment that are linked to revenue from current or future operations are accounted as expenses or assets, depending on the circumstances of each disbursement. Disbursements related to past operations, which no longer contribute to current or future revenues, are accounted for as current period expenses.

The accrual of a liability for a future disbursement occurs when an obligation related to environmental remediation, for which PEMEX has the information necessary to determine a reasonable estimated cost, is identified.

Retirement of assets

The obligations associated with the future retirement of assets, including those related to the retirement of wells, pipelines, properties, plant and equipment and their components are recognized at the date that the retirement obligation is incurred, based on the discounted cash flow method. The determination of the fair value is based on existing technology and regulations. If a reliable estimation of fair value cannot be made at the time the obligation is incurred, the accrual will be recognized when there is sufficient information to estimate the fair value.

The obligations related to the costs of future retirement of assets associated with the principal refining processes for gas and petrochemicals are not recognized. These assets are considered to have an indefinite useful life due to the potential for maintenance and repairs.

The abandonment costs related to wells currently in production and wells temporarily closed are recorded in the statement of comprehensive income based on the units of production method. Total cost of abandonment and plugging for non-producing wells is recognized in the statement of comprehensive income at the end of each period. All estimations are based on the useful lives of the wells, considering their discounted present value. Salvage values are not considered, as these values commonly have not traditionally existed.

(Continued)

L. Employee benefits

i. Short-term employee benefits

Short-term employee benefits are expensed as the related service is provided. A liability is recognized for the amount expected to be paid if PEMEX has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

ii. Defined contribution plans

Obligations for contributions to defined contribution plans are expensed as the related service is provided. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

iii. Defined benefit plan

PEMEX's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in the current and prior periods, discounting that amount and deducting the fair value of any plan assets.

The calculation of defined benefit obligations is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a potential asset for PEMEX, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. To calculate the present value of economic benefits, consideration is given to any applicable minimum funding requirements.

Remeasurements of the net defined benefit liability, which comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest), are recognized immediately in OCI. PEMEX determines the net interest expense (income) on the net defined benefit liability (asset) for the period by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability (asset) at such time, taking into account any changes in the net defined benefit liability (asset) during the period as a result of contributions and benefit payments. Net interest expense and other expenses related to defined benefit plans are recognized in profit or loss.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit that relates to past service or the gain or loss on curtailment is recognized immediately in profit or loss. PEMEX recognizes gains and losses from the settlement of a defined benefit plan when the settlement occurs.

iv. Other long-term employee benefits

PEMEX's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value. Remeasurements are recognized in profit or loss in the period in which they arise.

(Continued)

v. Termination benefits

Termination benefits are expensed at the earlier of when PEMEX can no longer withdraw its offer of those benefits and when PEMEX recognizes costs for a restructuring. If benefits are not expected to be settled in full within 12 months of the reporting date, then they are discounted.

M. Income taxes, duties and royalties

Income tax expense comprises current and deferred tax. It is recognized in profit or loss except to the extent that it relates to a business combination, or items recognized directly in equity or in OCI.
The interest and penalties related to income taxes, including uncertain tax treatments, do not meet the definition of income taxes, and are therefore accounted for under IAS 37 "Provisions, Contingent Liabilities and Contingent Assets."

i. Current tax

Current tax comprises the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to the tax payable or receivable in respect of previous years. The amount of current tax payable or receivable is the best estimate of the tax amount expected to be paid or received that reflects uncertainty related to income taxes, if any. It is measured using tax rates enacted or substantively enacted at the reporting date. Current tax also includes any tax arising from dividends.

Current tax assets and liabilities are offset only if certain criteria are met.

ii. Deferred tax

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for:

- temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that PEMEX is able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and
- taxable temporary differences arising from the initial recognition of goodwill.

Deferred tax assets are recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Future taxable profits are determined based on the reversal of relevant taxable temporary differences. If the amount of taxable temporary differences is insufficient to recognize a deferred tax asset in full, then future taxable profits, adjusted for reversals of existing temporary differences, are considered, based on the business plans of PEMEX. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized. Such reductions are reversed when the probability of future taxable profits improves.

Unrecognized deferred tax assets are reassessed at each reporting date and recognized to the extent that it has become probable that future taxable profits will be available against which they can be used.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

The measurement of deferred tax reflects the tax consequences that would follow from the manner in which PEMEX expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset only if certain criteria are met.

iii. Duties, royalties and considerations

Duties

PEMEX is subject to taxes and special duties, which are based on the value of hydrocarbons extracted, with certain deductions.

These taxes and duties are recognized in accordance with IAS 12, "Income Taxes" (IAS 12), when they have the characteristics of income tax, which occurs when such taxes are set by a government authority and are determined based on a formula that considers the balance of income (or extraction valued at a selling price) less expenses. Taxes and duties that meet this criteria should be recognized for current and deferred income tax based on the above paragraphs. Taxes and duties that do not meet this criteria are recognized as liabilities, affecting the costs and expenses relating to the transactions that gave rise to them.

Royalties and considerations

Royalties and considerations are payable pursuant to license agreements. These royalties are recognized as liabilities and affect the items of costs and expenses related to the operations that gave rise to them. See note 15.

N. Contingencies

Contingency losses are recorded when it is probable that a liability has been incurred and the amount thereof can be reasonably estimated. When a reasonable estimation cannot be made, qualitative disclosure is provided in the notes to the consolidated financial statements. Contingent revenues, earnings or assets are not recognized until realization is assured.

O. Fair value

'Fair value' 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 in the principal or, in its absence, the most advantageous market to which PEMEX has access at that date. The fair value of a liability reflects its non-performance risk.

A number of PEMEX accounting policies and disclosures require the measurement of fair values, for both financial and non-financial assets and liabilities (see Note 8).

When one is available, PEMEX measures the fair value of an instrument using the quoted price in an active market for that instrument. A market is regarded as 'active' if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis.

If there is no quoted price in an active market, then PEMEX uses valuation techniques that maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The chosen valuation technique incorporates all of the factors that market participants would take into account in pricing a transaction.

If an asset or a liability measured at fair value has a bid price and an ask price, then PEMEX measures assets and long positions at the bid price and liabilities and short positions at the ask price.

The best evidence of the fair value of a financial instrument on initial recognition is normally the transaction price (i.e., the fair value of the consideration given or received). If PEMEX determines that the fair value on initial recognition differs from the transaction price and the fair value is evidenced neither by a quoted price in an active market for an identical asset or liability nor based on a valuation technique for which any unobservable inputs are judged to be insignificant in relation to the measurement, then the financial instrument is initially measured at fair value, adjusted to defer the difference between the fair value on initial recognition and the transaction price. Subsequently, that difference is recognized in profit or loss on an appropriate basis over the life of the instrument but no later than when the valuation is fully supported by observable market data or the transaction is closed out.

P. Revenue from contracts with customers

PEMEX initially applied IFRS 15 as of January 1, 2018. Information about accounting policies relating to contracts with customers and the effect of initially applying IFRS 15 is described in Note 4-A).

Q. Operating segments

Operating segments are identifiable components of PEMEX that pursue business activities from which PEMEX earns revenues and incurs expenses and for which information is available to management on a segmented basis and is assessed by the Board of Directors in order to allocate resources and assess the profitability of the segments.

R. Presentation of consolidated statements of comprehensive income

Costs and expenses shown in PEMEX's consolidated statements of income are presented based on their function, which allows for a better understanding of the components of PEMEX's operating income. This classification allows for a comparison to the industry to which PEMEX belongs.

i. Operating profit

Operating profit is the result generated from the continuing principal revenue-producing activities of PEMEX as well as other income and expenses related to operating activities. Operating profit excludes net finance costs, share of profit of equity-accounted investees and income taxes.

Revenues

Represents revenues from sale or products or services.

Cost of sales

Cost of sales represents the acquisition and production costs of inventories, depreciation, amortization, salaries, wages and benefits, a portion of the cost of the reserve for employee benefits and operating expenses related to the production process, production taxes and duties, exploration costs, non-operating costs, among others.

Other revenues (expenses), net

Other revenues (expenses), net consist primarily of income and expenses that are not related directly to the operation of PEMEX.

Transportation, distribution and sale expenses

Transportation, distribution and sale expenses are costs in connection with the storage, sale and delivery of products, such as the depreciation and operating expenses associated with these activities.
Administrative expenses

Administrative expenses are costs related to PEMEX's areas that provide administrative support.

ii. Financing income and financing cost and derivative financial instruments income (cost), net

Financing income

Financing income is comprised of interest income, financial income and other income from financial operations between PEMEX and third parties.

Financing cost

Financing cost is comprised of interest expenses, commissions and other expenses related to PEMEX's financing operations less any portion of the financing cost that is capitalized.

When calculating interest income and expenses, the effective interest rate is applied to the gross carrying amount of the asset (when the asset has no credit impairment) or to the amortized cost of the liability. However, for financial assets with credit impairment after initial recognition, interest income is calculated by applying the effective interest rate at the amortized cost of the financial asset. If the asset ceases to be impaired, the interest income calculation returns to the gross base.

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Derivative financial instruments income (cost), net

Includes the result of changes in the fair falue of derivative financial instruments.

NOTE 4. ACCOUNTING CHANGES AND RECLASSIFICATIONS

A. Accounting changes

As of January 1, 2018, PEMEX adopted IFRS 15 and IFRS 9.

i. IFRS 15

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognized. It replaces existing revenue recognition guidance, including IAS 18 Revenue, IAS 11 Construction Contracts, IFRIC 13 Customer Loyalty Programs and IFRIC 15 Agreements for the Construction of Real Estate.

PEMEX adopted IFRS 15 using the modified retrospective transition method at January 1, 2018. Under this transition method, comparative information has not been restated and continues to be presented under IAS 18, IAS 11 and related interpretations. As of January 1, 2018, no significant uncompleted contracts were identified, so there was no impact on the consolidated financial statements due to the initial adoption of the standard.

Under IFRS 15, revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. PEMEX recognizes revenue when it transfers control over a product or service to a costumer.

In the case of comparative periods, revenue was measured at the fair value of the consideration received or receivable. Revenue from the sale of goods was recognized when the significant risks and rewards of ownership had been transferred to the customer, recovery of the consideration was probable, the associated costs and possible return of goods could be estimated reliably. Revenue from rendering of services was recognized in proportion to the stage of completion of the work performed at the reporting date.

The details of the main impacts generated by the adoption of IFRS 15 are the following:

a. Nature of revenues of products and services

For a description of the nature and sources of PEMEX's primary revenues, see Note 6.

- Crude oil sales

Nature, performance obligations and timing of revenue recognition

Export sales of crude oil are based on delivery terms established in contracts or orders. All sales are performed by the Free on Board International commercial term ("FOB" Incoterm). Therefore, revenue is recognized at a point in time when control of the crude oil has transferred to the customer, which occurs when the product is delivered at the point of shipping. Invoices are generated at that time and are mostly payable within the deadlines established in contracts or orders.

Determination and allocation of the transaction price

The price of the product is determined based on a market components formula and, with respect to crude oil, in accordance with the provisions of the Hydrocarbon Trading Strategies Management.

For international market crude oil sales, revenue is recognized with a provisional price, which undergoes subsequent adjustments until the product has arrived at the port of destination. There may be a period of up to 2 months in determining the final sale price, such as in the case of sales to the European market, the Middle East and Asia.

Crude oil sale contracts consider possible customers' claims due to product quality, volume or delays in boarding, which are estimated in the price of the transaction.

Therefore, due to the implementation of IFRS 15, the main impacts on revenue recognition with respect to the previous year are as follows:

IFRS 15	**IAS 18**
For orders that have variations in price, revenue is adjusted on the closing date of each period. The subsequent variations in the fair value at the different reporting dates are recognized according to IFRS 9	For orders that have variations in price, revenue was adjusted upon the product's arrival at its final destination and the final price is defined.
Revenue is measured initially estimating the variable compensations such as quality and volume claims, delays in boarding etc.	A decrease in revenue was recognized when quality and volume claims, or other variable compensations were known.

- Sale of petroleum products

Nature, performance obligations and timing of revenue recognition

Refined products and their derivatives are sold within the national market. The *Comisión Federal de Electricidad* (Federal Electricity Commission, or "CFE") purchases a significant portion of the fuel oil production, while *Aeropuertos y Servicios Auxiliares* (the Airports and Auxiliary Services Agency) purchases most of the jet fuel. The most important refined products are gasoline and diesel.

Revenue is recognized at a point in time when control is transferred to the customer, which occurs either at the point of shipping or when it is delivered at the customer's facilities. Therefore, transportation fees can be included in the price of sale of the product and are considered part of a single performance obligation since transportation is rendered before control is transferred.

Determination and allocation of the transaction price

The price is determined based on the price at the point of delivery, adding the price of the services rendered (freight, handling of jet fuel, etc.) with the provisions and terms established by the *Comisión Reguladora de Energía* (Energy Regulatory Commission or "ERC"). There are penalties for delivery failures and/or payment obligations, as well as quality and volume claims, which are known days after the transaction.

Therefore, due to the implementation of IFRS 15, the main impacts on revenue recognition with respect to the previous year are as follows:

IFRS 15	IAS 18
For all petroleum products, there is only one performance obligation that includes transport and handling services to the point of delivery.	Transportation and handling services were recognized as a separate service income, on the basis of prices established in the service orders. However, service income was also recognized at the point of delivery.
Revenue is measured initially estimating the variable compensations such as quality and volume claims, etc.	A decrease in revenue was recognized at the time quality and volume claims, or other variable compensations were known.

- Sales of natural gas

The sale of natural gas, liquefied petroleum gas, naphtha, butane, ethane and some other petrochemicals such as methane derivatives, ethane derivatives, aromatics and derivatives are mainly carried out in the domestic market.

Revenue is recognized at a point in time when control is transferred to the customer, which occurs when it is delivered at the customer's facilities. Therefore, transportation fees can be included in the price of sale of the product and are considered part of a single performance obligation since transportation is rendered before control is transferred.

Determination and allocation of the transaction price

The transaction price is established at the time of sale, including the estimation of variable considerations such as capacity, penalties, extraordinary sales not included in contracts, adjustments for quality or volume claims, and incentives for the purchase of products; which are known days after the transaction.

Therefore, due to the implementation of IFRS 15, the main impacts on revenue recognition with respect to the previous year are as follows:

IFRS 15	**IAS 18**
There is only one performance obligation that includes transport and handling services to the point of delivery.	Natural gas supply, transportation and fuel capacity were considered as performance obligations. Sales of natural gas were recorded as sale of products while the amount charged to customers for transportation and fuel capacity was recognized as other revenue at the point of delivery.
Revenue is measured initially estimating the variable compensations as quality and volume claims, etc.	A decrease in revenue was recognized at the time quality and volume claims, or other variable compensations were known

- Drilling services

PEMEX provides drilling, termination and repair of wells services, as well as the execution of well services. The services are provided in accordance with the purchase orders which include the price of the transaction at the date of the service. There are adjustment clauses for quality or volume claims or incentives for the purchase of products, which are known after the transaction.

Therefore, due to the implementation of IFRS 15, the main impacts on the recognition of income with respect to the previous year are as follow:

IFRS 15	IAS 18
If the customer can benefit from the different services within the same service order but separately, each service will be considered as a performance obligation. If the customer cannot benefit separately and the service is considered as a whole, the service order will be considered as a single performance obligation.	Income was recognized when all services within the same service order have been completed, so the entire service order was considered a performance obligation.
The price of the transaction is estimated, considering the prices established in the service orders at the date of sale and variable compensations are estimated, such as penalties for non-delivery, quality claims, etc.	Income was recognized for sale of services. Subsequently, a decrease in income for quality and volume claims was recognized separately as it was known.
Price is not distributed when there is a performance obligation, except, when there is more than one performance obligation, in which case, the price of the transaction will be assigned according to the service price established in the service order.	The price is determined according to the service order as performance obligation.
Income is recognized at a point in time, when the service is rendered.	Income was recognized on a monthly straight line basis, regardless of whether the service had been rendered.

(Continued)

- Logistics services

PEMEX provides transport for hydrocarbons, oil and petrochemicals, through transport strategies by employing pipelines and offshore and onshore resources, as well as the sale of capacity for its storage and management. The prices are established in the contracts, which also include penalties.

Therefore, due to the implementation of IFRS 15, the main impacts on the recognition of income with respect to the previous year are as follow:

IFRS 15	IAS 18
In the case of the contract with CENAGAS, operation and maintenance services for a period of one year are considered a performance obligation; any additional maintenance will be considered a separate performance obligation. For all the other contracts with third parties, in cases where within the same service order there are transportation and storage services, there could exist more than one performance obligation, depending on the term of the service.	All services were recognized as a single performance obligation.
The final price is estimated as follows: For CENAGAS, the price of the transaction is considered based on the prices established in the contract and in the service orders for each additional maintenance. For all other contracts, the price of the transaction is considered based on the prices established in the service orders. In all cases, variable compensations are estimated such as penalties for non-compliance with delivery, quality and volume claims, etc.	The sale of the service was recorded at the price of the sale date without the terms of the contract and a decrease in income was recognized at the time the claims for quality and volume were known.
Price is not distributed when there is a performance obligation, except, when there is more than one performance obligation, in which case, the price of the transaction will be assigned according to the service price established in the service order.	The price is determined according to the service order as performance obligation.
Income is recognized at a point in time, when the service is rendered.	Income was recognized on a monthly straight line basis, regardless of whether the service had been rendered.

- Other products

Ethylene receives revenues from sales of methane, ethane and propylene products, as well as fertilizers and their derivatives. Most sales are made in the domestic market. The sale and delivery of the product are made at the same time and because they are FOB, transportation fees are included in the price of sale of the product.

The transaction price is established at the time of sale, including the estimation of variable considerations such as capacity, penalties, extraordinary sales not included in contracts, adjustments for quality or volume claims, and incentives for the purchase of products; which are known days after the transaction. In the case of fertilizers and their derivatives, there are three types of prices, the list price, the retail customer price (which represents a discount compared to the list price) and the wholesale customer price (which represents a discount compared to the retail customer price).

Therefore, due to the implementation of IFRS 15, the main impacts on the recognition of income with respect to the previous year are as follow:

IFRS 15	IAS 18
There is only one performance obligation that includes transportation for delivery to destination.	An income was recognized for the sale of the products and another for the transportation.
The price of the product is estimated on the date of sale and considered as variable compensations such as quality and volume claims, etc.	The sale is recorded with the price at the time of the sale and delivery of the product and subsequently a decrease in income is recognized at the time quality and volume claims were known.
There is only one performance obligation so the price is not distributed.	The sale of product, freight and other services had their own prices.

ii. IFRS 9

In July 2014, the IASB finalized the accounting reform of financial instruments and issued IFRS 9 which contains: (a) the requirements for the classification and measurement of financial assets and liabilities, (b) the requirements for the impairment methodology, and (c) general information about hedge accounting. IFRS 9 replaces IAS 39 "Financial Instruments: Recognition and Measurement" ("IAS 39") as of its effective date.

PEMEX has adopted IFRS 9 issued in July 2014 with a date of initial application of January 1, 2018. The requirements of IFRS 9 represent a significant change from IAS 39.

The nature and effects of the key changes to PEMEX's accounting policies resulting from its adoption of IFRS 9 are summarized below.

As a result of the adoption of IFRS 9, PEMEX adopted consequential amendments to IAS 1 Presentation of Financial Statements, which requires impairment of financial assets to be presented in a separate line item in the statement of profit or loss and OCI. Previously, PEMEX's approach was to include the impairment of trade receivables in other expenses.

– Classification of financial assets and financial liabilities

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, FVOCI and FVTPL. The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. IFRS 9 eliminates the previous IAS 39 categories of trading, held to maturity, loans and receivables and available for sale. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never separated. Instead, the hybrid financial instrument as a whole is assessed for classification.

With respect to financial liabilities, the current classification and measurement criteria under IAS 39 have been transferred to IFRS 9, including the criteria for using the fair value option. The only change contemplated by IFRS 9 in relation to financial liabilities is related to liabilities designated at FVTPL. Changes in the fair value of such financial liabilities attributable to changes in the entity's own credit risk will be presented in OCI instead of in the period's results. The adoption of IFRS 9 has not had a significant effect on PEMEX's accounting policies for financial liabilities.

– Impairment of financial assets

IFRS 9 replaces the "incurred loss" model in IAS 39 with an ECL model. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investments in equity instruments. Under IFRS 9, credit losses are recognized earlier than under IAS 39.

– Hedge accounting

PEMEX, as part of the initial adoption of, and as permitted under, IFRS 9, elected to continue applying the hedge accounting requirements of IAS 39, instead of those included in IFRS 9. PEMEX uses DFIs to hedge the risk exposure in foreign currency, interest rate and the price of commodities related to its products. However, these contracts are not accounted as designated hedging instruments. DFIs are initially recognized at fair value on the date on which a derivative contract is entered into and after initial recognition are measured again at fair value. DFIs are accounted for as financial assets when the fair value is positive and as a financial liability when the fair value is negative. Any gain or loss arising from changes in the fair value of the DFIs is recognized directly in the income statement. This policy applies to the comparative information presented in 2018 and 2017.

– Transition

PEMEX has defined January 1, 2018 as the initial date of adoption of IFRS 9 and according to the transitional standard in IFRS 9, PEMEX will not restate previous periods for comparison purposes and any difference that may arise as a result of the adoption of IFRS 9 between the previous carrying amount and the carrying amount at the beginning of the reporting period shall be recognized in accumulated results over the opening initial period.

Classification and measurement

The following table sets forth the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of PEMEX's financial assets at January 1, 2018.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Financial Assets	Classification IAS 39	Classification IFRS 9	Carrying amount IAS 39	Carrying amount IFRS 9
Cash and equivalents	Loans and receivables	FVTPL	Ps. 97,851,754	Ps. 97,851,754
Account receivables short term – net	Loans and receivables	Amortized Cost	170,645,234	*170,670,191
Equity instruments	Financial assets available for sale	FVTOCI	1,056,918	1,056,918
Derivative financial instrument	FVTPL	FVTPL	30,113,454	30,113,454
Account receivables long term – net	Loans and receivables	Amortized Cost	148,492,909	*148,492,909
Total financial assets			Ps. 448,160,269	Ps. 448,185,226

* Short-term accounts receivable, which were classified as loans and items receivable under IAS 39, are now classified at amortized cost. An increase of Ps. 24,957 was recognized in the allowance for impairment for these receivables in accumulated results as of January 1, 2018 when the transition to IFRS 9 was made.

Impairment

PEMEX has concluded that the financial assets most affected by the impairment estimate under the ECL model will be its accounts receivables, in relation to PEMEX's holding of the long-term notes issued by the Mexican Government. The evaluation of the possible impairment of the notes was made using the general approach for calculating impairment contemplated under IFRS 9. The evaluation does not have material effects.

PEMEX considers it probable that impairment losses increase and present more volatility for instruments under the new ECL model. Furthermore, PEMEX considers that most of its accounts receivable are short-term without a significant financial component. Accordingly, PEMEX has elected to apply the simplified approach.

PEMEX considers that the application of the impairment requirements of IFRS 9 as of December 31, 2017 did not significantly impact the reserves as of January 1, 2018. The adjustment as of January 1, 2018 of the reserves of financial assets in comparison with impairment losses incurred under IAS 39 was approximately Ps. 24,957.

- Interpretation of IFRIC 22 *Foreign Currency Transactions and Advance Considerations* ("IFRIC 22")

(Figures stated in thousands, except as noted)

As of December 2016, the IASB published an interpretation of IFRIC 22 developed by the International Financial Reporting Standards Interpretations Committee (the Interpretations Committee). The interpretation clarified when to recognize payments and collections of foreign currency transactions paid in advance due the fact that it observed some diversity in practice regarding these transactions.

The interpretations recognized foreign currency transactions when:

i. there is consideration that is denominated or priced in a foreign currency;
ii. the entity recognizes a prepayment asset or a deferred income liability in respect of that consideration, in advance of the recognition of the related asset, expense or income; and
iii. the prepayment asset or deferred income liability is non-monetary.

The Interpretations Committee concluded that:

– The date of the transaction, for the purpose of determining the exchange rate, is the date of initial recognition of the non- monetary prepayment asset or deferred income liability.
– If there are multiple payments or receipts in advance, a date of transaction is established for each payment or receipt.IFRIC 22 is effective for annual reporting periods beginning on or after January 1, 2018. Entities may apply the rule retrospectively, or prospectively, in accordance with IAS 8, with certain exemptions.

The adoption of this interpretation did not have any impact on the consolidated financial statements.

B. Reclassifications

The following amounts as of December 31, 2017 were reclassified to conform their presentation to the statement of financial position for 2018:

	2017		
Line item	**As previously reported**	**Reclassification**	**Following Reclassification**
Accounts receivable, net(i)	Ps. 170,645,234	Ps. (2,522,206)	Ps. 168,123,028
Short-term notes receivable(i)	-	2,522,206	2,522,206
Intangible assets(ii)	Ps. 9,088,563	Ps. 5,590,077	Ps. 14,678,640
Other assets(ii)	11,485,177	(5,590,077)	5,895,100

(i) Due to the fact that Short-term notes receivable are now presented in a separate line ítem, figures for 2017 were recclassified from Accounts receivable, net.
(ii) Due to the fact that intangible assets are now presented in a separate line ítem, figures for 2017 were recclassified from Other assets.

NOTE 5. SUBSIDIARY ENTITIES AND SUBSIDIARY COMPANIES

As of December 31, 2018 and 2017, the Subsidiary Entities consolidated in these financial statements include Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Cogeneration and Services (until July 27, 2018, see Note 1), Pemex Drilling and Services, Pemex Logistics, Pemex Fertilizers and Pemex Ethylene.

As of December 31, 2018 and 2017, the consolidated Subsidiary Companies are as follows:

- PEP Marine, DAC. (PEP DAC) (i)(xi)
- P.M.I. Services, B.V. (PMI SHO) (i)
- P.M.I. Holdings, B.V. (PMI HBV) (i)(vi)
- P.M.I. Trading DAC (PMI DAC) (i)(xii)
- PEMEX Internacional España, S. A. (PMI SES) (i)(iv)
- P.M.I. Holdings Petróleos España, S. L. (HPE) (i)
- P.M.I. Services North America, Inc. (PMI SUS) (i)
- P.M.I. Holdings North America, Inc. (PMI HNA) (i)(v)
- P.M.I. Norteamérica, S. A. de C. V. (PMI NASA) (i)
- P.M.I. Comercio Internacional, S. A. de C. V. (PMI CIM) (i)(ii)
- P.M.I. Field Management Resources, S. L. (FMR) (i)(vii)
- P.M.I. Campos Maduros SANMA, S. de R. L. de C. V. (SANMA)
- Pro-Agroindustria, S. A. de C. V. (AGRO)
- P.M.I. Azufre Industrial, S. A. de C. V. (PMI AZIND) (ix)
- P.M.I. Infraestructura de Desarrollo, S. A. de C. V. (PMI ID) (i)
- P.M.I. Cinturón Transoceánico Gas Natural, S. A. de C. V. (PMI CT) (i)
- P.M.I. Transoceánico Gas LP, S. A. de C. V. (PMI TG) (i)
- P.M.I. Servicios Portuarios Transoceánicos, S. A. de C. V. (PMI SP) (i)
- P.M.I. Midstream del Centro, S. A. de C. V. (PMI MC) (i)
- PEMEX Procurement International, Inc. (PPI)
- Hijos de J. Barreras, S. A. (HJ BARRERAS) (ii)
- PEMEX Finance, Ltd. (FIN) (x)
- Mex Gas Internacional, S. L. (MGAS)
- Pemex Desarrollo e Inversión Inmobiliaria, S. A. de C. V. (PDII)
- Kot Insurance Company, AG. (KOT)
- PPQ Cadena Productiva, S.L. (PPQCP)
- III Servicios, S. A. de C. V. (III Servicios)
- PM.I. Ducto de Juárez, S. de R.L. de C.V. (PMI DJ)(i)
- PMX Cogeneración Internacional, S.L. (MG COG) (viii)
- PMX Cogeneración S.A.P.I. de C.V. (PMX COG) (viii)
- PMX Fertilizantes Holding, S.A de C.V. (PMX FH)
- PMX Fertilizantes Pacífico, S.A. de C.V. (PMX FP)
- Grupo Fertinal (GP FER)
- Compañía Mexicana de Exploraciones, S.A. de C.V. (COMESA)(ii)
- P.M.I. Trading Mexico, S.A. de C.V. (TRDMX) (iii)
- Holdings Holanda Services, B.V. (HHS) (vi)

(Continued)

i. Member Company of the "PMI Subsidiaries".
ii. Non-controlling interest company.
iii. As of January 2017, this company started operations and was included in the consolidated financial statements of PEMEX.
iv. As of February 2017, this company merged with HPE.
v. As of June 2017, this company merged with SUS.
vi. As of October 2017, PMI HBV was divided, and HHS was created and included in the consolidated financial statements of PEMEX.
vii. This company was liquidated in 2017.
viii. As of December 2017, PEMEX acquired shares in these companies and they were included in the consolidated financial statements of PEMEX.
ix. As of August 2018, this company was consolidated by MGAS.
x. On December 17, 2018 PEMEX aquired the total shares in this company and as of December 31, 2018 this company is no longer part of the non-controlling interest.
xi. Formerly P.M.I. Marine DAC until August, 2018
xii. Formerly P.M.I. Trading Ltd until August, 2018.

NOTE 6. Segment financial information

PEMEX's primary business is the exploration and production of crude oil and natural gas, as well as the production, processing, marketing and distribution of petroleum and petrochemical products. After the Corporate Reorganization, PEMEX's operations have been conducted through nine business segments: Exploration and Production, Industrial Transformation, Cogeneration and Services (until July 27, 2018, see Note 1), Drilling and Services, Logistics, Ethylene, Fertilizers, the Trading Companies and Corporate and Other Operating Subsidiary Companies. Due to PEMEX's structure, there are significant amounts of inter-segment sales among the reporting segments, which are made at internal transfer prices established by PEMEX that are intended to reflect international market prices.

The primary sources of revenue for PEMEX's business segments are as described below:

- The exploration and production segment earns revenues from domestic sales of crude oil and natural gas, and from exporting crude oil through certain of the Trading Companies. Export sales are made through PMI CIM to approximately 30 major customers in various foreign markets. Approximately half of PEMEX's crude oil is sold to Pemex Industrial Transformation.

- The industrial transformation segment earns revenues from sales of refined petroleum products and derivatives, mainly to third parties within the domestic market. This segment also sells a significant portion of the fuel oil it produces to the CFE and a significant portion of jet fuel produced to the Airports and Auxiliary Services Agency. The refining segment's most important products are different types of gasoline and diesel.

The industrial transformation segment also earns revenues from domestic sources generated by sales of natural gas, liquefied petroleum gas, naphtha, butane and ethane and certain other petrochemicals such as methane derivatives, ethane derivatives, aromatics and derivatives.

- The cogeneration segment received income from the cogeneration, supply and sale of electricity and thermal energy and also provides technical and management activities associated with these services. During 2018 this company did not generate income. This entity was liquidated on July 27, 2018 (see Note 1).

- The drilling segment receives income from drilling services, and servicing and repairing wells.

- The logistics segment earns income from transportation and storage of crude oil, petroleum products and petrochemicals, as well as related services, which it provides by employing pipelines and offshore and onshore resources, and from providing services related to the maintenance, handling, guarding and management of these products.

- The ethylene segment earns revenues from the distribution and trade of methane, ethane and propylene in the domestic market.

- The fertilizers segment earns revenues from trading ammonia, fertilizers and its derivatives, mostly in the domestic market.

- The trading companies segment, which consist of PMI CIM, PMI NASA, PMI Trading and MGAS (the "Trading Companies"), earn revenues from trading crude oil, natural gas and petroleum and petrochemical products in international markets.

- The segment related to corporate and other operating Subsidiary Companies provides administrative, financing, consulting and logistical services, as well as economic, tax and legal advice and re-insurance services to PEMEX's entities and companies.

The following tables present the condensed financial information of these segments, after elimination of unrealized intersegment gain (loss), and include only select line items. As a result, the line items presented below may not total. These reporting segments are those which PEMEX's management evaluates in its analysis of PEMEX and on which it bases its decision-making.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of/for the year ended December 31, 2018	Exploration and Production	Industrial Transformation	Cogeneration and Services [(1)]	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies	Intersegment eliminations	Total
Sales:											
Trade	Ps. 482,262,631	Ps. 960,558,229	Ps. -	Ps. -	Ps. -	Ps. 2,933,424	Ps. 12,809,114	Ps. 204,103,954	Ps. 9,778,796	Ps. -	Ps. 1,672,446,148
Intersegment	397,199,590	141,997,392	-	3,414,033	63,672,574	65,802	1,635,050	640,382,216	119,762,378	(1,368,129,035)	-
Services income	23,110	546,136	-	198,775	4,708,217	4,742	13,379	64,038	3,114,605	-	8,673,002
(Reversal) Impairment of wells pipelines, properties, plant and equipment, net	(65,013,616)	(659,610)	-	-	40,288,338	2,246,264	-	1,719,627	-	-	(21,418,997)
Cost of sales	402,979,694	1,091,796,331	-	(1,350,678)	42,694,683	4,509,881	15,952,951	837,820,025	54,148,722	(1,249,040,048)	1,199,511,561
Gross income (loss)	541,519,253	11,965,036	-	4,963,486	(14,602,230)	(3,752,177)	(1,495,408)	5,010,556	78,507,057	(119,088,987)	503,026,586
Other revenue (expenses), net	12,475,283	5,370,430	1,788	(3,797,729)	(40,069,840)	71,419	149,028	1,791,001	6,771,950	40,289,181	23,052,511
Distribution, transportation and sales expenses	106,510	26,616,527	-	63	82,755	387,397	251,459	280,407	94,457	(3,462,366)	24,357,209
Administrative expenses	67,988,247	51,613,434	-	965,397	11,592,604	785,883	1,860,759	1,541,092	74,525,804	(76,551,739)	134,321,481
Operating income (loss)	485,899,779	(60,894,495)	1,788	200,297	(66,347,429)	(4,854,038)	(3,458,598)	4,980,058	10,658,746	1,214,299	367,400,407
Financing income	94,009,399	7,475,509	1	350,326	1,351,514	4,916	26,565	702,471	142,481,311	(214,844,890)	31,557,122
Financing cost	(127,343,514)	(1,910,666)	-	(771,639)	(220,721)	(478,044)	(79,335)	(1,379,583)	(202,865,030)	214,321,510	(120,727,022)
Derivative financial instruments (cost) income, net	(19,132,060)	(11,304)	-	-	-	-	-	382,568	(3,497,812)	(5)	(22,258,613)
Foreign exchange (loss) income, net	28,035,087	(1,707,558)	-	31,051	167,982	(2,577)	(28,542)	920,488	(3,756,451)	-	23,659,480
Profit (loss) sharing in joint ventures and associates	54,149	-	-	-	(1,092)	-	-	1,012,490	(124,094,148)	124,555,613	1,527,012
Taxes, duties and other	469,669,529	-	-	(407,217)	(2,474,189)	-	1,446,202	1,840,409	(8,496,511)	-	461,578,223
Net (loss) income	(8,146,689)	(57,048,514)	1,789	217,252	(62,575,557)	(5,329,743)	(4,986,112)	4,778,083	(172,576,873)	125,246,527	(180,419,837)
Total current assets	1,109,407,361	238,486,786	-	11,478,067	15,343,841	2,772,995	8,337,752	137,727,664	723,490,973	(1,853,935,478)	393,109,961
Total non current assets	1,023,144,103	283,521,897	-	15,267,696	100,097,224	4,187,744	17,771,292	28,939,309	1,624,995,944	(1,415,837,902)	1,682,087,307
Total current liabilities	334,709,929	155,402,987	-	2,962,370	31,418,555	9,682,768	6,710,315	98,007,805	1,662,808,360	(1,853,926,795)	447,776,294
Total non current liabilities	2,254,024,319	529,484,079	-	10,739,495	10,332,359	108,467	149,750	4,272,341	2,116,660,861	(1,838,945,265)	3,086,826,406
Equity (deficit), net	(456,182,784)	(162,878,383)	-	13,043,898	73,690,151	(2,830,496)	19,248,979	64,386,827	(1,430,982,304)	423,098,680	(1,459,405,432)
Depreciation and amortization	124,671,118	19,183,640	-	1,483,248	4,409,226	(246,697)	1,385,445	403,122	2,092,938	-	153,382,040
Net periodic cost of employee benefits	33,688,888	51,239,055	-	27,105	191,132	9,162	8,839	(321,683)	26,861,666	2,917,450	114,621,614

(1) This company was liquidated on July 27, 2018. Except for certain expenses incurred in the liquidation, all operations were transferred to Pemex Industrial Transformation. (See Note 1)

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of/for the year ended December 31, 2017	Exploration and Production	Industrial Transformation	Cogeneration and Services [1]	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies	Intersegment eliminations	Total
Sales:											
Trade	Ps. -	Ps. 857,456,146	Ps. -	Ps. -	Ps. -	Ps. 4,123,006	Ps. 12,621,648	Ps. 508,539,112	Ps. 3,159,238	Ps. -	Ps. 1,385,899,150
Intersegment	762,637,362	150,360,283	114,233	3,400,456	70,671,871	642,965	1,565,757	539,193,190	79,031,944	(1,607,618,061)	-
Services income	-	6,116,937	334,755	41,741	3,714,941	2,339	26,733	66,621	826,502	-	11,130,569
(Reversal) Impairment of wells pipelines, properties, plant and equipment, net	129,350,315	15,952,092	-	-	-	1,935,500	-	-	4,206,653	-	151,444,560
Cost of sales	391,089,410	1,004,683,554	472,732	468,171	50,926,263	6,001,259	14,272,340	1,031,997,901	33,033,923	(1,528,740,673)	1,004,204,880
Gross income (loss)	242,197,637	(6,702,280)	(23,744)	2,974,026	23,460,549	(3,168,449)	(58,202)	15,801,022	45,777,108	(78,877,388)	241,380,279
Other revenue (expenses), net	10,204,045	1,515,538	2,646	(31,454)	(24,134,436)	9,013	23,030	307,212	(5,344,872)	22,623,354	5,174,076
Distribution, transportation and sales expenses	-	26,049,566	13,581		73,526	528,370	334,663	375,482	59,043	(5,544,561)	21,889,670
Administrative expenses	58,539,119	38,994,887	37,679	888,776	7,459,928	352,537	1,105,554	1,564,859	62,001,641	(51,005,526)	119,939,454
Operating income (loss)	193,862,563	(70,231,195)	(72,358)	2,053,796	(8,207,341)	(4,040,343)	(1,475,389)	14,167,893	(21,628,448)	296,053	104,725,231
Financing income	121,293,404	11,427,907	147	57,313	1,622,827	2,248	46,113	905,405	145,907,795	(265,097,306)	16,165,853
Financing cost	(136,378,338)	(2,398,643)	(19,882)	(795,947)	(2,307,427)	(211,004)	(1,964)	(1,328,827)	(239,003,771)	264,801,255	(117,644,548)
Derivative financial instruments (cost) income, net	(1,613,874)	5,835	-	-	-	-	-	(772,143)	27,718,506	-	25,338,324
Foreign exchange (loss) income, net	10,043,316	4,924,209	-	227,365	613,099	(20,925)	(10,486)	(4,318)	7,411,862	-	23,184,122
Profit (loss) sharing in joint ventures and associates	(75,195)	485,224	-	-	(74)	-	-	1,049,809	(212,666,494)	211,567,170	360,440
Taxes, duties and other	338,169,260	-	-	276,967	(7,444,967)	-	-	1,972,718	6,063	-	332,980,041
Net (loss) income	(151,037,384)	(55,786,663)	(92,093)	1,265,560	(833,949)	(4,270,024)	(1,441,726)	12,045,101	(292,266,613)	211,567,172	(280,850,619)
Total current assets	1,036,063,541	570,380,888	179,807	6,871,148	49,391,784	3,155,476	3,994,381	158,414,445	506,187,594	(1,971,112,774)	363,526,290
Total non current assets	1,021,972,864	286,815,419	-	19,349,601	142,504,209	5,767,980	19,147,664	28,394,454	1,605,553,140	(1,361,029,507)	1,768,475,824
Total current liabilities	284,656,058	459,130,165	531,580	2,201,936	44,521,371	6,455,246	2,183,654	112,046,527	1,439,097,882	(1,961,697,234)	389,127,185
Total non current liabilities	2,285,756,339	617,978,584	-	11,684,489	12,184,880	100,804	125,236	4,796,353	2,148,891,089	(1,836,290,460)	3,245,227,314
Equity (deficit), net	(512,375,992)	(219,912,442)	(351,773)	12,334,324	135,189,742	2,367,406	20,833,155	69,966,018	(1,476,248,237)	465,845,413	(1,502,352,385)
Depreciation and amortization	127,742,568	17,935,112	-	2,368,123	4,562,140	422,930	1,688,493	(19,798)	2,004,945	-	156,704,513
Net periodic cost of employee benefits	32,794,386	52,538,989	-	39,697	(4,954)	(1,999)	(12,561)	16,166	22,703,351	-	108,073,075

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

For the year ended December 31, 2016	Exploration and Production	Industrial Transformation	Cogeneration and Services	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies	Intersegment eliminations	Total
Sales:											
Trade	Ps. -	Ps. 648,088,013	Ps. -	Ps. -	Ps. -	Ps. 3,873,403	Ps. 15,392,552	Ps. 395,118,117	Ps. 2,646,505	Ps. -	Ps. 1,065,118,590
Intersegment	616,380,615	117,096,378	51,913	1,981,754	68,316,958	900,464	1,764,438	405,293,283	50,683,175	(1,262,468,978)	-
Services income	-	5,565,604	132,521	70,112	2,813,887	1,908	60,141	236,230	473,415	(379,176)	8,974,642
(Reversal) Impairment of wells pipelines, properties, plant and equipment, net	(271,709,433)	(52,498,881)	-	-	(5,829,520)	-	(1,276,509)	-	-	-	(331,314,343)
Cost of sales	359,064,884	823,763,927	166,721	143,956	61,248,584	5,506,198	13,936,213	783,691,245	7,260,043	(1,188,959,550)	865,822,221
Gross income (loss)	529,025,164	(515,051)	17,713	1,907,910	15,711,781	(730,423)	4,557,427	16,956,385	46,543,052	(73,888,604)	539,585,354
Other revenue (expenses), net	27,346,794	19,964,654	-	591,704	(27,189,969)	32,710	63,989	3,412,711	(906,183)	(666,804)	22,649,606
Distribution, transportation and sales expenses	-	50,792,317	8,232	6	148,215	185,168	481,727	229,432	49,162	(26,663,019)	25,231,240
Administrative expenses	54,509,047	34,183,846	32,126	983,560	7,175,451	731,479	2,101,834	1,157,182	60,497,232	(48,718,224)	112,653,533
Operating income (loss)	501,862,911	(65,526,560)	(22,645)	1,516,048	(18,801,854)	(1,614,360)	2,037,855	18,982,482	(14,909,525)	825,835	424,350,187
Financing income	56,040,129	11,056,345		72,995	373,301	4,358	64,582	1,098,079	125,964,466	(180,925,000)	13,749,255
Financing cost	(109,946,363)	(3,188,892)	(12,055)	(642,711)	(481,741)	(20,217)	(2,980)	(1,342,351)	(163,400,779)	180,193,625	(98,844,464)
Derivative financial instruments (cost) income, net	-	3,172	-	-	-	-	-	(1,951,959)	(12,052,200)	-	(14,000,987)
Foreign exchange (loss) income, net	(217,166,718)	(12,858,875)	-	(1,570,317)	(1,118,537)	(29,263)	(2,843)	174,866	(21,441,056)	-	(254,012,743)
Profit (loss) sharing in joint ventures and associates	(21,164)	649,520	-	-	-	-	-	1,586,503	(117,426,818)	117,347,804	2,135,845
Taxes, duties and other	276,647,448	-	-	(481,581)	(10,010,686)	-	-	7,380,870	(9,014,616)	-	264,521,435
Net (loss) income	(45,878,653)	(69,865,290)	(34,700)	(142,404)	(10,018,145)	(1,659,482)	2,096,614	11,166,750	(194,251,296)	117,442,264	(191,144,342)
Depreciation and amortization	124,329,921	17,425,472		2,559,357	2,230,557	481,241	1,395,232	86,707	1,931,004	-	150,439,491
Net periodic cost of employee benefits	32,617,215	52,886,397	5,860	31,491	30,340	(1,178)	1,424	(552,735)	24,719,602	-	109,738,416

PEMEX's management measures the performance of the segments based on operating income and net segment income before elimination of unrealized intersegment gain (loss), as well as by analyzing the impact of the results of each segment on the consolidated financial statements. For certain of the items in these consolidated financial statements to conform with the individual financial statements of the operating segments, they must be reconciled. The tables below present the financial information of PEMEX's operating segments, before intersegment eliminations:

The following tables present accounting reconciliations between individual and consolidated information.

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of/for the year ended December 31, 2018		Exploration and Production	Industrial Transformation	Cogeneration and Services[1]	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies
Sales:										
By segment	Ps.	910,443,812	1,105,255,786	-	8,716,657	68,380,791	3,051,428	14,457,543	844,550,208	132,655,779
Less unrealized intersegment sales		(30,958,481)	(2,154,029)	-	(5,103,849)	-	(47,460)	-	-	-
Total consolidated sales	Ps.	879,485,331	1,103,101,757	-	3,612,808	68,380,791	3,003,968	14,457,543	844,550,208	132,655,779
Operating income (loss):										
By segment	Ps.	488,151,914	(70,799,130)	1,788	406,574	(97,029,061)	(5,162,552)	(9,520,020)	4,913,736	10,658,746
Less unrealized intersegment sales		(30,958,481)	(2,154,029)	-	(5,103,849)	-	(47,460)	-	-	-
Less unrealized gain due to production cost valuation of inventory		(596,889)	12,058,664	-	4,537,200	-	-	-	66,322	-
Less capitalized refined products		(1,774,227)	-	-	-	-	-	-	-	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets		30,958,481	-	-	360,372	30,681,632	355,974	6,061,422	-	-
Total consolidated operating income (loss)	Ps.	485,899,779	(60,894,495)	1,788	200,297	(66,347,429)	(4,854,038)	(3,458,598)	4,980,058	10,658,746
Net income (loss):										
By segment	Ps.	(5,867,212)	(65,286,932)	1,789	971,701	(85,357,751)	(6,248,709)	(6,144,326)	4,711,761	(172,576,873)
Less unrealized intersegment sales		(30,958,481)	(2,154,029)	-	(5,103,849)	-	(47,460)	-	-	-
Less unrealized gain due to production cost valuation of inventory		(596,889)	12,058,664	-	3,799,980	-	-	-	66,322	-
Less capitalized refined products		(1,774,227)	-	-	-	-	-	-	-	-
Less equity method elimination		(27,342)	(1,666,217)	-	-	666	610,452	(3,457,006)	-	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets, net of deferred taxes		30,958,481	-	-	549,420	22,781,528	355,974	4,615,220	-	-
Total consolidated net (loss) income	Ps.	8,146,689	(57,048,514)	1,789	217,252	(62,575,557)	(5,329,743)	(4,986,112)	4,778,083	(172,576,873)
Assets:										
By segment	Ps.	2,161,126,244	567,768,812	-	28,400,765	176,047,827	10,018,775	31,365,663	177,684,447	2,348,486,917
Less unrealized intersegment sales		1,557,729	(7,544,007)	-	-	7,184	(26,886)	(5,304)	(408,060)	-
Less unrealized gain due to production cost valuation of inventory		(4,254,421)	(30,320,566)	-	-	-	(47,460)	-	(9,339,859)	-
Less capitalized refined products		(1,774,227)	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets, net of deferred taxes		(23,660,467)	-	-	(1,655,002)	(60,523,859)	(1,801,679)	(5,186,318)	(424,850)	-
Less equity method for unrealized profits		(562,375)	(7,903,679)	-	-	(90,087)	(1,182,011)	(64,997)	(844,705)	-
Less amortization of capitalized interest		118,981	8,123	-	-	-	-	-	-	-
Total consolidated assets	Ps.	2,132,551,464	522,008,683	-	26,745,763	115,441,065	6,960,739	26,109,044	166,666,973	2,348,866,917
Liabilities:										
By segment	Ps.	2,588,734,248	689,306,996	-	12,328,030	41,750,914	9,791,235	6,860,065	104,239,692	3,779,469,221
Less unrealized intersegment sales		-	(4,419,930)	-	1,373,835	-	-	-	(1,959,546)	-
Total consolidated liabilities	Ps.	2,588,734,248	684,887,066	-	13,701,865	41,750,914	9,791,235	6,860,065	102,280,146	3,779,469,221

(1) This company was liquidated on July 27, 2018. Except for certain expenses incurred in the liquidation, all operations were transferred to Pemex Industrial Transformation. (See Note 1)

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of/for the year ended December 31, 2017		Exploration and Production	Industrial Transformation	Cogeneration and Services	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies
Sales:										
By segment	Ps.	762,637,362	1,015,157,118	448,988	6,679,132	74,386,812	4,795,196	14,214,138	1,047,874,453	83,017,684
Less unrealized intersegment sales		-	(1,223,752)	-	(3,236,935)	-	(26,886)	-	(75,530)	-
Total consolidated sales	Ps.	762,637,362	1,013,933,366	448,988	3,442,197	74,386,812	4,768,310	14,214,138	1,047,798,923	83,017,684
Operating income (loss):										
By segment	Ps.	194,814,292	(59,989,652)	(72,358)	882,692	(61,696,313)	(7,148,431)	(4,698,838)	14,490,017	(21,628,448)
Less unrealized intersegment sales		-	(1,223,752)	-	(3,236,935)	-	(26,886)	-	(75,530)	-
Less unrealized gain due to production cost valuation of inventory		(496,329)	(9,017,791)	-	2,932,663	-	-	-	(246,594)	-
Less capitalized refined products		(574,381)	-	-	-	-	-	-	-	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets		-	-	-	1,475,376	53,488,972	3,134,974	3,223,449	-	-
Total consolidated operating income (loss)	Ps.	193,862,563	(70,231,195)	(72,358)	2,053,796	(8,207,341)	(4,040,343)	(1,475,389)	14,167,893	(21,628,448)
Net income (loss):										
By segment	Ps.	(150,388,699)	(44,599,751)	(358,862)	345,913	(40,300,942)	(8,616,130)	(5,866,542)	5,200,268	(292,266,613)
Less unrealized intersegment sales		-	(1,223,752)	-	(3,236,935)	-	(26,886)	-	(75,530)	-
Less unrealized gain due to production cost valuation of inventory		(496,329)	(9,017,791)	-	2,932,663	-	-	-	(246,594)	-
Less capitalized refined products		(574,381)	-	-	-	-	-	-	-	-
Less equity method elimination		303,044	(945,369)	266,769	-	333	1,238,018	1,201,367	7,166,957	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets, net of deferred taxes		-	-	-	1,223,919	39,466,660	3,134,974	3,223,449	-	-
Total consolidated net (loss) income	Ps.	(151,037,384)	(55,786,663)	(92,093)	1,265,560	(833,949)	(4,270,024)	(1,441,726)	12,045,101	(292,266,613)
Assets:										
By segment	Ps.	2,084,553,745	912,770,881	179,807	28,256,876	276,537,764	17,689,305	35,498,783	195,538,239	2,111,740,734
Less unrealized intersegment sales		858,094	(5,389,977)	-	-	7,183	-	(5,303)	(408,059)	-
Less unrealized gain due to production cost valuation of inventory		(3,657,242)	(42,379,229)	-	-	-	(26,886)	-	(7,163,664)	-
Less capitalized refined products		(574,381)	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated transferred assets, net of deferred taxes		(22,503,168)	-	-	(2,036,127)	(84,557,831)	(2,165,068)	(9,522,686)	(424,849)	-
Less equity method for unrealized profits		(759,624)	(7,813,492)	-	-	(91,123)	(6,573,895)	(2,828,749)	(732,768)	-
Less amortization of capitalized interest		118,981	8,124	-	-	-	-	-	-	-
Total consolidated assets	Ps.	2,058,036,405	857,196,307	179,807	26,220,749	191,895,993	8,923,456	23,142,045	186,808,899	2,111,740,734
Liabilities:										
By segment	Ps.	2,570,412,397	1,081,528,677	531,580	13,186,297	56,706,251	6,556,050	2,308,890	116,648,398	3,587,988,971
Less unrealized intersegment sales		-	(4,419,928)	-	700,128	-	-	-	194,482	-
Total consolidated liabilities	Ps.	2,570,412,397	1,077,108,749	531,580	13,886,425	56,706,251	6,556,050	2,308,890	116,842,880	3,587,988,971

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

For the year ended December 31, 2016		Exploration and Production	Industrial Transformation	Cogeneration and Services	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies
Sales:										
By segment	Ps.	616,380,615	771,597,427	184,434	6,263,093	71,130,845	4,775,775	17,217,131	800,979,076	53,803,095
Less unrealized intersegment sales		-	(847,432)	-	(4,211,227)	-	-	-	(331,446)	-
Total consolidated sales	Ps.	616,380,615	770,749,995	184,434	2,051,866	71,130,845	4,775,775	17,217,131	800,647,630	53,803,095
Operating income (loss):										
By segment	Ps.	503,679,153	(60,347,367)	(22,645)	1,271,202	(25,701,065)	(2,877,725)	(3,504,812)	19,526,997	(14,909,525)
Less unrealized intersegment sales		-	(847,432)	-	(4,211,227)	-	-	-	(331,446)	-
Less unrealized gain due to production cost valuation of inventory		(273,237)	3,572,498	-	3,815,371	-	905,910	(2,163)	(213,069)	-
Less capitalized refined products		(1,661,986)	(7,904,259)	-	-	-	-	-	-	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation and impairment of revaluated assets		-	-	-	640,702	6,899,211	357,455	5,544,830	-	-
Total consolidated operating income (loss)	Ps.	501,862,911	(65,526,560)	(22,645)	1,516,048	(18,801,854)	(1,614,360)	2,037,855	18,982,482	(14,909,525)
Net income (loss):										
By segment	Ps.	(44,069,001)	(61,639,067)	(381,214)	(387,250)	(16,917,356)	(7,820,835)	(3,780,706)	11,711,265	(194,251,296)
Less unrealized intersegment sales		-	(847,432)	-	(4,211,227)	-	-	-	(331,446)	-
Less unrealized gain due to production cost valuation of inventory		(273,237)	3,572,498	-	3,815,371	-	905,910	(2,163)	(213,069)	-
Less capitalized refined products		(1,661,986)	(7,904,259)	-	-	-	-	-	-	-
Less equity method elimination		6,590	(3,047,030)	346,514	-	-	4,897,988	334,653	-	-
Less amortization of capitalized interest		118,981	-	-	-	-	-	-	-	-
Less depreciation of revaluated assets		-	-	-	640,702	6,899,211	357,455	5,544,830	-	-
Total consolidated net (loss) income	Ps.	(45,878,653)	(69,865,290)	(34,700)	(142,404)	(10,018,145)	(1,659,482)	2,096,614	11,166,750	(194,251,296)

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Supplemental geographic information:

	For the years ended December 31,		
	2018	**2017**	**2016**
Domestic sales	Ps. 980,559,538	Ps. 877,360,038	Ps. 670,000,473
Export sales:			
United States	434,838,159	302,912,999	221,954,461
Canada, Central and South America	11,274,714	13,943,080	14,058,897
Europe	158,900,339	71,470,613	64,348,997
Other	86,873,398	120,212,420	94,755,762
Total export sales	691,886,610	508,539,112	395,118,117
Services income	8,673,002	11,130,569	8,974,642
Total sales	**Ps. 1,681,119,150**	**Ps. 1,397,029,719**	**Ps. 1,074,093,232**

PEMEX does not have significant long-lived assets outside of Mexico.

The following table shows income by product:

	For the years ended December 31,		
	2018	**2017**	**2016**
Domestic sales			
Refined petroleum products and derivatives (primarily gasolines)	Ps. 850,342,124	Ps. 738,943,017	Ps.578,718,674
Gas	110,219,691	116,021,269	59,648,576
Petrochemical products	19,997,723	22,395,752	31,633,223
Total domestic sales	Ps. 980,559,538	Ps. 877,360,038	Ps.670,000,473
Export sales			
Crude oil	Ps. 482,259,045	Ps. 356,623,114	Ps.288,625,794
Refined petroleum products and derivatives (primarily gasolines)	167,796 ,526	124,644,353	92,705,248
Gas	34,446,277	22,253,493	20,995
Petrochemical products	7,384,762	5,018,152	13,766,080
Total export sales	**Ps. 691,886,610**	**Ps. 508,539,112**	**Ps.395,118,117**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

NOTE 7. REVENUE

As of December 31, 2018 and 2017, the revenues were as follows:

A. Revenue disaggregation

For the period ended December 31 ,	Exploration and Production	Industrial Transformation	Cogeneration and Services[1]	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies	Total
Geographical market										
2018										
United States	276,785,650	-	-	-	-	-	-	158,713,210	-	435,498,860
Other	51,708,232	-	-	-	-	-	-	40,743,480	5,660,310	98,112,022
Europe	153,765,163	-	-	-	-	-	-	4,647,265	2,905,858	161,318,286
Local	26,696	961,104,365	-	198,775	4,708,217	2,938,167	12,822,493	64,037	4,327,232	986,189,982
Total	482,285,741	961,104,365	-	198,775	4,708,217	2,938,167	12,822,493	204,167,992	12,893,400	1,681,119,150
2017*										
United States	-	-	-	-	-	-	-	320,069,332	-	320,069,332
Other	-	-	-	-	-	-	-	71,209,448	-	71,209,448
Europe	-	-	-	-	-	-	-	117,260,334	1,062,795	118,323,129
Local	-	863,573,083	334,755	41,741	3,714,941	4,125,345	12,648,381	66,619	2,922,945	887,427,810
Total	-	863,573,083	334,755	41,741	3,714,941	4,125,345	12,648,381	508,605,733	3,985,740	1,397,029,719
2016*										
United States	-	-	-	-	-	-	-	236,095,685	-	236,095,685
Other	-	-	-	-	-	-	-	67,377,456	72,660	67,450,116
Europe	-	-	-	-	-	-	-	90,817,488	-	90,817,488
Local	-	653,653,617	132,521	70,112	2,813,887	3,875,311	15,452,693	862,641	2,869,161	679,729,943
Total	-	653,653,617	132,521	70,112	2,813,887	3,875,311	15,452,693	395,153,270	2,941,821	1,074,093,232
Major products and services										
2018										
Crude oil	482,259,045	-	-	-	-	-	-	-	-	482,259,045
Gas	3,586	110,216,105	-	-	-	-	-	34,446,277	-	144,665,968
Refined petroleum products	-	850,342,124	-	-	-	-	-	167,796,526	-	1,018,138,650
Oher	-	-	-	-	-	2,933,425	12,809,114	1,861,152	9,778,794	27,382,485
Services	23,110	546,136	-	198,775	4,708,217	4,742	13,379	64,037	3,114,606	8,673,002
Total	482,285,741	961,104,365	-	198,775	4,708,217	2,938,167	12,822,493	204,167,992	12,893,400	1,681,119,150

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

For the period ended December 31 ,	Exploration and Production	Industrial Transformation	Cogeneration and Services[1]	Drilling and Services	Logistics	Fertilizers	Ethylene	Trading Companies	Corporate and Other Operating Subsidiary Companies	Total
2017*										
Crude oil	-	-	-	-	-	-	-	356,623,113	-	356,623,113
Gas	-	116,021,269	-	-	-	-	-	22,253,493	-	138,274,762
Refined petroleum products	-	738,943,017	-	-	-	-	-	124,644,353	-	863,587,370
Oher	-	2,491,860	-	-	-	4,123,006	12,621,648	5,018,152	3,159,239	27,413,905
Services	-	6,116,937	334,755	41,741	3,714,941	2,339	26,733	66,622	826,501	11,130,569
Total	-	863,573,083	334,755	41,741	3,714,941	4,125,345	12,648,381	508,605,733	3,985,740	1,397,029,719
2016*										
Crude oil	-	-	-	-	-	-	-	268,999,873	-	268,999,873
Gas	-	115,997,297	-	-	-	-	-	13,813,301	-	129,810,598
Refined petroleum products	-	529,322,404	-	-	-	-	-	106,770,273	-	636,092,677
Oher	-	2,768,313	-	-	-	3,873,402	15,392,552	5,534,217	2,646,958	30,215,442
Services	-	5,565,603	132,521	70,112	2,813,887	1,909	60,141	35,606	294,863	8,974,642
Total	-	653,653,617	132,521	70,112	2,813,887	3,875,311	15,452,693	395,153,270	2,941,821	1,074,093,232
Timing of revenue recognition										
2018										
Products transferred at a point in time	482,262,631	960,558,229	-	-	-	2,933,425	12,809,114	204,103,954	9,778,794	1,672,446,147
Products and services transferred over the time	23,110	546,136	-	198,775	4,708,217	4,742	13,379	64,038	3,114,606	8,673,003
Total	482,285,741	961,104,365	-	198,775	4,708,217	2,938,167	12,822,493	204,167,992	12,893,400	1,681,119,150
2017*										
Products transferred at a point in time	-	857,456,146	-	-	-	4,123,006	12,621,648	508,539,111	3,159,239	1,385,899,150
Products and services transferred over the time	-	6,116,937	334,755	41,741	3,714,941	2,339	26,733	66,622	826,501	11,130,569
Total	-	863,573,083	334,755	41,741	3,714,941	4,125,345	12,648,381	508,605,733	3,985,740	1,397,029,719
2016*										
Products transferred at a point in time	-	648,088,014	-	-	-	3,873,402	15,392,552	395,117,664	2,646,958	1,065,118,590
Products and services transferred over the time	-	5,565,603	132,521	70,112	2,813,887	1,909	60,141	35,606	294,863	8,974,642
Total	-	653,653,617	132,521	70,112	2,813,887	3,875,311	15,452,693	395,153,270	2,941,821	1,074,093,232

* PEMEX applied the modified retrospective transition method to the implementation of IFRS 15. Under this method the comparative financial information is not re-established.

(1) This company was liquidated on July 27, 2018. Except for certain expenses incurred in the liquidation, all the operations were transferred to Pemex Industrial Transformation. (See Note 1)

(Continued)

B. Accounts receivable in the Statement of Financial Position

As of December 31, 2018 and 2017, PEMEX had accounts receivable derived from customer contracts in the amounts of Ps. 87,740,515 and Ps. 114,486,024, respectively (see Note 10).

C. Practical expedients

1) Expiration of contracts.

PEMEX has no outstanding performance obligations to meet as of December 31, 2018 due to the nature of its operations (see Note 4-A).

2) Significant financial component, less than one year.

PEMEX does not need to adjust the amount committed in consideration for goods and services to account for the effects of a significant financing component, since the transfer and the time of payment of a good or service committed to the customer is less than one year.

3) PEMEX applied the practical file, so disclosure about remaining performance obligations that conclude in less than one year is not needed.

When PEMEX is entitled to consideration for an amount that directly corresponds to the value of the performance that PEMEX has completed, it may recognize an income from ordinary activities for the amount to which it has the right to invoice.

NOTE 8. FINANCIAL INSTRUMENTS

A. Accounting classifications and fair values of financial instruments

The following tables present information about PEMEX's carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy, as of December 31, 2018 and 2017. It does not include fair value information for financial assets and financial liabilities not measured at fair value if the carrying amount is a reasonable approximation of fair value.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Carrying amount						Fair value hierarchy			
As of December 31, 2018 In thousands of pesos	**FVTPL**	**FVOCI – debt instruments**	**FVOCI – equity instruments**	**Financial assets at amortized cost**	**Other financial liabilities**	**Total carrying amount**	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets measured at fair value										
Derivative financial instruments	Ps. 22,382,277	-	-	-	-	Ps. 22,382,277	-	22,382,277	-	22,382,277
Equity instruments	-	-	245,440	-	-	245,440	-	245,440	-	245,440
Total	**Ps. 22,382,277**	**-**	**245,440**	**-**	**-**	**Ps. 22,627,717**				
Financial assets not measured at fair value										
Cash and cash equivalents	Ps. -	-	-	81,912,409	-	Ps. 81,912,409	-	-	-	-
Accounts receivable, net	-	-	-	167,139,778	-	167,139,778	-	-	-	-
Investments in joint ventures, associates and other	-	-	-	16,841,545	-	16,841,545	-	-	-	-
Long-term notes receivable	-	-	-	157,982,449	-	157,982,449	-	-	-	-
Total	**Ps. -**	**-**	**-**	**423,876,181**	**-**	**Ps. 423,876,181**				
Financial liabilities measured at fair value										
Derivative financial instruments	Ps. (15,895,245)	-	-	-	-	Ps. (15,895,245)	-	(15,895,245)	-	(15,895,245)
Total	**Ps.(15,895,245)**	**-**	**-**	**-**	**-**	**Ps. (15,895,245)**				
Financial liabilities not measured at fair value										
Suppliers	Ps. -	-	-	-	(149,842,712)	Ps. (149,842,712)	-	-	-	-
Accounts and accrued expenses payable	-	-	-	-	(24,917,669)	(24,917,669)	-	-	-	-
Debt	-	-	-	-	(2,082,286,116)	(2,082,286,116)	-	(1,913,377,218)	-	(1,913,377,218)
Total	**Ps. -**	**-**	**-**	**-**	**(2,257,046,497)**	**Ps. (2,257,046,497)**				

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of December 31, 2017 In thousands of pesos	Carrying amount FVTPL	Held-to-maturity	Loans and receivables	Available-for-sale	Other financial liabilities	Total carrying amount	Fair value hierarchy Level 1	Level 2	Level 3	Total
Financial assets measured at fair value										
Derivative financial instruments	Ps. 30,113,454	-	-	-	-	Ps. 30,113,454	-	30,113,454	-	30,113,454
Equity instruments	-	-	-	1,056,918	-	1,056,918	-	1,056,918	-	1,056,918
Total	**Ps. 30,113,454**	**-**	**-**	**1,056,918**	**-**	**Ps. 31,170,372**				
Financial assets not measured at fair value										
Cash and cash equivalents	Ps .-	-	97,851,754	-	-	Ps. 97,851,754	-	-	-	-
Accounts receivable, net	-	-	168,123,028	-	-	168,123,028	-	-	-	-
Investments in joint ventures, associates and other	-	16,707,364	-	-	-	16,707,364	-	-	-	-
Long-term notes receivable	-	151,015,115	-	-	-	151,015,115	-	-	-	-
Total	**Ps. -**	**167,722,479**	**265,974,782**	**-**	**-**	**Ps. 433,697,261**				
Financial liabilities measured at fair value										
Derivative financial instruments	Ps. (17,745,979)	-	-	-	-	Ps. (17,745,979)	-	(17,745,979)	-	(17,745,979)
Total	**Ps. (17,745,979)**	**-**	**-**	**-**	**-**	**Ps. (17,745,979)**				
Financial liabilities not measured at fair value										
Suppliers	Ps. -	-	-	-	(139,955,378)	Ps. (139,955,378)	-	-	-	-
Accounts and accrued expenses payable	-	-	-	-	(23,211,401)	(23,211,401)	-	-	-	-
Debt	-	-	-	-	(2,037,875,071)	(2,037,875,071)	-	(2,153,383,220)	-	(2,153,383,220)
Total	Ps. -	-	-	-	(2,201,041,850)	Ps. (2,201,041,850)				

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Debt is valued and registered at amortized cost and the fair value of debt is estimated using quotes from major market sources which are then adjusted internally using standard market pricing models. As a result of relevant assumptions, the estimated fair value does not necessarily represent the actual terms at which existing transactions could be liquidated or unwound.

As of December 31, 2018 and 2017, PEMEX had monetary assets and liabilities denominated in foreign currency as indicated below:

	As of December 31, 2018				
	Foreing currency				
	Asset	**Liability**	**Net Asset (Liability)**	**Exchange rate**	**Equivalent in Mexican Pesos**
U.S. dollar	8,458,532	80,583,838	(72,125,306)	19.6829	(1,419,635,185)
Euro	14,459	15,714,542	(15,700,083)	22.5054	(353,336,648)
Pounds sterling	-	816,469	(816,469)	25.0878	(20,483,411)
Japanese yen	-	467,077,295	(467,077,295)	0.1793	(83,746,959)
Swiss francs	-	2,843,298	(2,843,298)	19.9762	(56,798,290)
		Total			**Ps. (1,934,000,493)**

	As of December 31, 2017				
	Foreing currency				
	Asset	**Liability**	**Net Asset (Liability)**	**Exchang e rate**	**Equivalent in Mexican Pesos**
U.S. dollar	12,942,402	79,871,378	(66,928,976)	19.7867	(1,324,303,569)
Euro	701,619	13,988,051	(13,286,432)	23.7549	(315,617,864)
Pounds sterling	-	870,661	(870,661)	26.7724	(23,309,685)
Japanese yen	-	341,603,010	(341,603,010)	0.1757	(60,019,649)
Swiss francs	-	2,642,304	(2,642,304)	20.2992	(53,636,657)
		Total			**Ps. (1,776,887,424)**

(Figures stated in thousands, except as noted)

The information related to "Cash and cash equivalents", "Accounts receivable, net", "Equity instruments", "Investment in joint ventures and associates", "Long-term notes receivable and other assets", "Debt" and "Derivative Financial Instruments" is described in the following notes, respectively:

- Note 9, Cash and cash equivalents.
- Note 10, Accounts receivable, net.
- Note 12, Equity instruments.
- Note 14, Investment in joint ventures and associates.
- Note 17, Long-term notes receivable and other assets.
- Note 18, Debt.
- Note 19, Derivative financial instruments.

B. Fair value hierarchy

PEMEX values the fair value of its financial instruments under standard methodologies commonly applied in the financial markets. PEMEX's related assumptions and inputs therefore fall under the three Levels of the fair value hierarchy for market participant assumptions, as described below.

The fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets or liabilities. Fair values determined by Level 2 inputs are based on quoted prices for similar assets or liabilities in active markets, and inputs other than quoted prices that are observed for assets or liabilities. Level 3 inputs are unobservable inputs for the assets or liabilities, and include situations where there is little, if any, market activity for the assets or liabilities.

Management uses appropriate valuation techniques based on the available inputs to measure the fair values of PEMEX's applicable financial assets and liabilities.

When available, PEMEX measures fair value using Level 1 inputs, because they generally provide the most reliable evidence of fair value.

NOTE 9. CASH AND CASH EQUIVALENTS

a. As of December 31, 2018 and 2017, cash and cash equivalents were as follows:

		2018		2017
Cash on hand and in banks[(i)]	Ps.	41,974,735	Ps.	55,871,127
Highly liquid investments [(ii)]		39,937,674		41,980,627
	Ps.	**81,912,409**	**Ps.**	**97,851,754**

(i) Cash on hand and in banks is primarily composed of cash in banks.
(ii) Mainly composed of short-term Mexican Government investments.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

NOTE 10. ACCOUNTS RECEIVABLE, NET

As of December 31, 2018 and 2017, accounts receivable and other receivables were as follows:

a. Customers

		2018		2017
Domestic customers, net	Ps.	48,520,478	Ps.	60,057,141
Export customers, net		39,220,037		54,428,883
Total customers	Ps.	87,740,515	Ps.	114,486,024
Sundry debtors [i]		53,388,512		23,583,497
Taxes to be recovered and prepaid taxes		18,405,990		23,039,023
Employees and officers		6,333,216		5,681,478
Advances to suppliers		597,700		1,250,846
Other accounts receivable		673,845		82,160
Total account receivable	Ps.	79,399,263	Ps.	53,637,004
Total account receivable, net	**Ps.**	**167,139,778**	**Ps.**	**168,123,028**

(i) Mainly Special Tax on Production and Services.

The following table shows a breakdown of accounts receivable based on their credit history at December 31, 2018 and 2017, as well as the relation between the breakdown and the impaired amount:

	Domestic customers			
		2018		2017
1 to 30 days	Ps.	1,172,961	Ps.	10,188,070
31 to 60 days		133,538		4,081,862
61 to 90 days		375,790		777,409
More than 90 days		584,886		11,345,933
Past due		2,267,175		26,393,274
Impaired (reserved) [1]		(1,409,014)		(951,932)
Unimpaired		858,161		25,441,342
Current		47,662,317		34,615,799
Total	**Ps.**	**48,520,478**	**Ps.**	**60,057,141**

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

(1) The increase in the impairment of domestic customers of Ps.457,082 in 2018, comes mainly from accounts receivables of Pemex Industrial Transformation.

	Export customers	
	2018	**2017**
1 to 30 days	Ps. 34,839	Ps. 334,155
31 to 60 days	3,313	-
61 to 90 days	26,444	-
More than 90 days	307,089	315,888
Past due	371,865	650,043
Impaired (reserved)	(321,438)	(272,813)
Unimpaired	50,247	377,230
Current	39,169,790	54,051,653
Total	**Ps. 39,220,037**	**Ps. 54,428,883**

As of December 31, 2018 and 2017, PEMEX has exposure to credit risk related to accounts receivable with an average payment term of 36 and 43 days, respectively.

Additionally, the reconciliation for impaired accounts receivable is as follows:

	Domestic customers	
	2018	**2017**
Balance at the beginning of the year	Ps. (951,932)	Ps. (458,428)
Adjustment on initial application of IFRS9	44,590	-
Balance at January 1 under IFRS 9	(907,342)	(458,428)
Additions against income	-	(493,514)
Amount used	-	10
Impairment accounts receivable	(501,672)	-
Balance at the end of the year	**Ps. (1,409,014)**	**Ps. (951,932)**

	Export customers	
	2018	**2017**
Balance at the beginning of the year	Ps. (272,813)	Ps. (374,699)
Adjustment on initial application of IFRS9	(69,639)	-
Balance at January 1 under IFRS 9	(342,452)	(374,699)
Additions against income	-	(204,713)
Amount used	-	297,047
Translation effects	-	9,552
Impairment accounts receivable	21,014	-
Balance at the end of the year	**Ps.(321,438)**	**Ps.(272,813)**

(Continued)

(Figures stated in thousands, except as noted)

Methodology to determine the estimation of the impairment of the accounts receivable

PEMEX allocates each exposure to a credit risk grade based on data that is determined to be predictive of the risk of loss (including but not limited to, audited financial statements, management accounts and cash flow projections and available information about customers) and applying experienced credit judgment. Credit risk grades are defined using qualitative and quantitative factors that are indicative of the risk of default. Exposures within each credit risk grade are segmented by each Subsidiary Entity and its commercial business lines, so the expected credit loss rate is calculated for each segment based on actual credit loss experienced over the past two years. These rates are multiplied by scale factors to reflect differences between the economic conditions during the period over which historical data has been collected, current conditions and PEMEX's view of economic conditions over the expected lives of the receivables.

As of December 31, 2018, the expected percentage of credit loss for accounts receivable for each Subsidiary Entity and Subsidiary Company was: 0.72% for Pemex Fertilizers, 2.70% for Pemex Industrial Transformation, 3.15% for Pemex Corporate, 0.69% for Pemex Ethylene, 10.80% for Pemex Logistics, 21.71% for Pemex Drilling and Services, 0.06% for PMI CIM and 4.65% for PMI TRD.

The amount of impairment of accounts receivables recognized in the income statement was Ps. 582,855, which includes the impairment of customers and other accounts receivables.

NOTE 11. INVENTORIES

As of December 31, 2018 and 2017, inventories were as follows:

		2018		2017
Refined and petrochemicals products	Ps.	43,134,519	Ps.	27,862,384
Products in transit		16,260,213		19,112,606
Crude oil		16,708,606		11,445,780
Materials and products in stock		5,292,796		5,172,779
Materials in transit		490,403		180,711
Gas and condensate products		136,031		84,670
	Ps.	**82,022,568**	**Ps.**	**63,858,930**

NOTE 12. EQUITY INSTRUMENTS

As of December 31, 2017, PEMEX was in the process of selling its shares of TAG Norte Holding, S. de R.L. de C.V. and TAG Pipeline Sur, S. de R.L. de C.V. These shares were valued at their net realizable value, which, as of December 31, 2017, resulted in a negative value that was recognized in the profit or loss at the end of the year. As of December 31, 2017, available-for-sale current non-financial assets amounted to Ps. 1,056,918.

On September 4 and 5, 2018, PEMEX received the payment for the sale of its 5% interest in TAG Norte Holding, S. de R.L. de C.V., which was recorded as equity instruments in the amount of U.S.$ 43,036 (Ps. 826,046), obtaining a net profit of Ps.10,257.

(Continued)

(Figures stated in thousands, except as noted)

As of December 31, 2018, due to the adoption of IFRS 9, PEMEX classified its TAG Pipeline Sur, S. de R.L. de C.V. shares of Ps. 245,440 as equity instruments.

Before the initial application of IFRS 9 on January 1, 2018, PEMEX classified these investments as available-for-sale financial assets. Beginning January 1, 2018 these investments are now classified as equity instruments.

NOTE 13. HELD-FOR-SALE NON-FINANCIAL ASSETS

As of December 31, 2018, Pemex Logistics has Ps. 1,253,638 as held-for-sale current non-financial assets, the potential sale of which is being given careful consideration to maximize its value and maintain a presence in the market.

These held-for-sale current non-financial assets consisted of the following:

	December 31, 2018
Plants	Ps. 712,246
Pipelines	143,434
Buildings	116,868
Lands	92,400
Telecommunications equipment	6,311
Oher assets	1,278
	Ps.1,072,537

The details relating to the potential sale of these assets are classified as "reserved", pursuant to Article 110, sections VIII and XIII of the Ley Federal de Transparencia y Acceso a la información Pública (Federal Law on Transparency and Access to Public Information), in relation to Article 82 and Article 111 of the Petróleos Mexicanos Law, since the details are still being considered and evaluated and contain sensitive facts about the commercial and economic scope, which only pertain to PEMEX and its commercial partners.

In addition to the Ps. 1,072,537, there are Ps. 181,101 in held-for-sale assets to CENAGAS, composed of 74 buildings and 10 undeveloped properties.

(Continued)

(Figures stated in thousands, except as noted)

NOTE 14. INVESTMENTS IN JOINT VENTURES AND ASSOCIATES

The investments in joint ventures and associates as of December 31, 2018 and 2017, were as shown in the next page.

	Percentage of investment	December 31, 2018	December 31, 2017
Deer Park Refining Limited	49.99%	Ps. 14,731,030	Ps. 14,405,542
Sierrita Gas Pipeline LLC	35.00%	1,068,995	1,084,169
Frontera Brownsville, LLC.	50.00%	472,898	471,085
Texas Frontera, LLC.	50.00%	228,564	239,782
CH 4 Energía, S. A.	50.00%	155,878	315,713
Administración Portuaria Integral de Dos Bocas, S. A. de C.V.	40.00%	118,478	64,328
PMV Minera, S. A. de C. V. (iii)	44.09%	-	45,133
Ductos el Peninsular, S. A. P. I. de C. V.	30.00%	17,244	18,336
Other-net	Various	48,458	63,276
		Ps. 16,841,545	**Ps. 16,707,364**

Profit (loss) sharing in joint ventures and associates:

	2018	2017	2016
Deer Park Refining Limited	Ps. 872,885	Ps. 920,409	Ps. 1,437,850
Sierrita Gas Pipeline LLC	124,209	129,401	105,825
Frontera Brownsville, LLC.	59,973	66,798	57,769
Texas Frontera, LLC.	55,316	51,412	50,710
CH4 Energía S.A. de C.V.	15,395	125,132	-
Administración Portuaria Integral de Dos Bocas, S.A. de C.V.	54,149	(75,195)	-
PMV Minera, S.A. de C.V. (iii)	6,863	6,253	-
Ductos el Peninsular, S. A. P. I. de C. V.	(1,092)	74	-
Petroquímica Mexicana de Vinilo, S. A. de C. V. (iii)	352,816	(1,223,640)	(190,468)
Ductos y Energéticos del Norte, S.A. de C.V.(i)	-	360,092	-
Gasoductos de Chihuahua, S. de R. L. de C. V. (ii)	-	-	638,126
Other, net	(13,502)	(296)	45,800
Profit sharing in joint ventures and associates, net	**Ps. 1,527,012**	**Ps. 360,440**	**Ps. 2,135,845**

i. On November 16, 2017, PEMEX sold its 50% interest in Ductos y Energéticos del Norte, S. de R.L. de C. V., to Infraestructura Energética Nova, S.A.B. of C.V. for a total of U.S. $ 3,141,710, yielding a gain of Ps. 3,139,103.

ii. On September 28, 2016, PEMEX completed the divestiture of its 50% ownership interest in the Gasoductos de Chihuahua S. de R.L. de C.V. joint venture with Infraestructura Energética Nova, S.A.B. de C. V. The stock was sold for Ps. 22,684,736, yielding a gain of Ps. 15,211,039.

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

iii. On November 30, 2018, PEMEX received the payment for the sale of its total 44.09% interest in Petroquímica Mexicana de Vinilo, S.A. de C.V. and 44.09% interest in PMV Minera, S.A. de C.V. which were recorded as investments in joint ventures and associates. The sale price was Ps. 3,198,597 and Ps. 53,701, respectively, for a gain of Ps. 689,268 and Ps. 1,646, respectively.

The following tables show condensed financial information of major investments recognized under the equity method during 2018 and 2017:

	Condensed statements of financial position			
	Deer Park Refining Limited		Sierrita Gas Pipeline, LLC	
	2018	2017	2018	2017
Total assets	Ps. 41,119,684	Ps. 41,075,547	Ps. 3,140,289	Ps. 3,518,036
Total liabilities	Ps. 11,654,678	Ps. 12,261,581	Ps. 86,014	Ps. 420,410
Total equity	29,465,006	28,813,966	3,054,275	3,097,626
Total liabilities and equity	**Ps. 41,119,684**	**Ps. 41,075,547**	**Ps. 3,140,289**	**Ps. 3,518,036**

	Condensed statements of comprehensive income					
	Deer Park Refining Limited			Sierrita Gas Pipeline, LLC		
	December 31,			December 31,		
	2018	2017	2016	2018	2017	2016
Sales and other income	Ps.17,519,219	Ps.16,427,064	Ps.16,750,155	Ps. 615,150	Ps. 840,414	Ps. 717,351
Costs and expenses	15,773,274	14,586,061	13,874,172	260,272	470,697	414,994
Net result	**Ps.1,745,945**	**Ps.1,841,003**	**Ps. 2,875,983**	**Ps. 354,878**	**Ps. 369,717**	**Ps. 302,357**

Additional information about the significant investments in joint ventures and associates is presented below:

- *Deer Park Refining Limited*. On March 31, 1993, PMI NASA acquired 49.99% of the Deer Park Refinery. In its capacity as general partner of Deer Park Refining Limited Partnership, Shell is responsible for the operation and management of the refinery, the purpose of which is to provide oil refinery services to PMI NASA and Shell for a processing fee. Shell is responsible for determining the crude oil and production materials requirements and both partners are required to contribute in equal amounts. Deer Park returns to PMI NASA and Shell products in the same amounts. Shell is responsible for purchasing the total amount of finished products in stock at market prices. This joint venture is recorded under the equity method.

- *Petroquímica Mexicana de Vinilo, S.A. de C.V.* On September 13, 2013, Pemex-Petrochemicals (now Pemex Industrial Transformation), through its subsidiary PPQ Cadena Productiva, S.L. and Mexichem founded Petroquímica Mexicana de Vinilo, S.A. de C.V. ("Mexicana de Vinilo"). The principal activity of *Mexicana de Vinilo* is the production and sale of chemicals. Mexicana de Vinilo's main products are chlorine, caustic soda, ethylene and monomers of vinyl chloride. Mexichem has been responsible for operational and financial decisions for Mexicana de Vinilo. In November 2018, PEMEX sold its total ownership interest in this company.

- *Sierrita Gas Pipeline LLC.* This company was created on June 24, 2013. Its main activity is the developing of projects related to the transportation infrastructure of gas in the United States. This investment is recorded under the equity method.

- *Frontera Brownsville, LLC*. Effective April 1, 2011, PMI SUS entered into a joint venture with TransMontaigne Operating Company L.P (TransMontaigne) to create Frontera Brownsville, LLC. Frontera Brownsville, LLC was incorporated in Delaware, United States, and has the corporate power to own and operate certain facilities for the storage and treatment of clean petroleum products. This investment is recorded under the equity method.

- *Texas Frontera, LLC*. This company was constituted on July 27, 2010, and its principal activity is the lease of tanks for the storage of refined product. PMI SUS, which owns 50% interest in Texas Frontera, entered into a joint venture with Magellan OLP, L.P. (Magellan), and together they are entitled to the results in proportion of their respective investment. The company has seven tanks with a capacity of 120,000 barrels per tank. This joint venture is recorded under the equity method.

- *CH4 Energía, S.A.* This company was constituted on December 21, 2000. CH4 Energía engages in the purchase and sale of natural gas and in activities related to the trading of natural gas, such as transport and distribution in Valle de Toluca, México. This joint venture is recorded under the equity method.

- *Administración Portuaria Integral de Dos Bocas, S.A. de C.V.* This company was constituted on August 12, 1999. Its primary activity is adminitrating the Dos Bocas port, which is in Mexico's public domain, promoting the port's infrastructure and providing related port services. This investment is recorded under the equity method.

- *PMV Minera, S.A. de C.V.* This company was constituted on October 1, 2014 and the principal activity is the extraction and sale of salmuera (mixture of salt and water). This investment is recorded under the equity method. In November 2018, PEMEX sold its total ownership interest in PMV Minera, S.A. de C.V.

- *Ductos el Peninsular S.A.P.I. de C.V.* This company was created on September 22, 2014. Its primary activity is the construction and operation of an integral transportation system and storage of petroleum products in the Peninsula of Yucatán.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

NOTE 15. WELLS, PIPELINES, PROPERTIES, PLANT AND EQUIPMENT, NET

		Plants	Drilling equipment	Pipelines	Wells	Buildings	Offshore platforms	Furniture and equipment	Transportation equipment	Construction in progress [(1)]	Land	Unproductive fixed assets	Other fixed assets	Total fixed assets
Investment														
Balances as of January 1, 2017	Ps	758,446,110	23,269,116	460,145,428	1,318,822,917	62,743,033	322,704,205	50,746,687	19,442,845	207,414,148	44,571,618	-	491,506	3,268,797,613
Acquisitions		10,018,030	418,283	7,054,793	14,937,882	802,300	7,811,374	1,183,679	284,445	51,410,469	58,563	-	-	93,979,818
Reclassifications		3,146,955	-	(53,349)	-	98,245	(10,199,213)	(96,899)	(75,674)	(812,943)	(560)	-	4,072,464	(3,920,974)
Capitalization		43,033,864	-	21,357,074	36,564,811	1,265,246	8,677,765	30,879	3,746,395	(114,700,828)	29,248	-	(4,454)	-
Impairment		(48,020,616)	-	2,226,771	(83,236,991)	-	(15,564,190)	-	-	(6,849,534)	-	-	-	(151,444,560)
Disposals		(10,598,983)	(244,283)	(8,862,541)	(19,340,709)	(208,353)	-	(806,694)	(226,375)	(6,724,930)	(112,170)	-	(4,440,865)	(51,565,902)
Balances as of December 31, 2017		756,025,360	23,443,116	481,868,176	1,267,747,910	64,700,471	313,429,941	51,057,652	23,171,636	129,736,382	44,546,699	-	118,651	3,155,845,995
Acquisitions		13,362,218	1,059,027	852,308	38,829,246	329,969	4,958,299	473,812	117,632	54,407,962	434,698	(106)	-	114,825,065
Reclassifications		1,400,531	45,268	(1,603,022)	-	37,343	(4,039,499)	3,015,144	101,424	32,280	(6,620)	2,780,266	(869)	1,762,246
Capitalization		25,752,538	-	2,456,977	21,269,614	991,061	-	163,000	227,334	(50,828,761)	-	-	(31,763)	-
Impairment		20,226,139	-	(59,632,531)	59,774,797	(831,561)	12,133,524	-	(6,981,561)	(3,269,810)	-	-	-	21,418,997
Disposals		(5,496,395)	(4,466,446)	(2,705,958)	(8,297,844)	(382,120)	-	(2,689,566)	(1,476,513)	(725,540)	(623,152)	(2,780,160)	(53,361)	(29,697,055)
Balances as of December 31, 2018	Ps	811,270,391	20,080,965	421,235,950	1,379,323,723	64,845,163	326,482,265	52,020,042	15,159,952	129,352,513	44,351,625	-	32,659	3,264,155,248
Accumulated depreciation and amortization														
Balances as of January 1, 2017	Ps	(360,016,979)	(2,942,575)	(152,365,227)	(850,536,754)	(39,124,631)	(153,161,770)	(36,990,666)	(5,916,763)	-	-	-	-	(1,601,055,365)
Depreciation and amortization		(45,709,123)	(2,198,867)	(15,095,115)	(74,673,473)	(1,906,164)	(13,192,369)	(2,890,563)	(1,038,839)	-	-	-	-	(156,704,513)
Reclassifications		2,799,244	-	(72,841)	-	(69,236)	1,146,904	102,375	14,532	-	-	-	-	3,920,978
Disposals		8,902,711	127,458	7,573,769	16,810,591	59,022	-	805,916	222,764	-	-	-	-	34,502,231
Balances as of December 31, 2017		(394,024,147)	(5,013,984)	(159,959,414)	(908,399,636)	(41,041,009)	(165,207,235)	(38,972,938)	(6,718,306)	-	-	-	-	(1,719,336,669)
Depreciation and amortization		(44,925,549)	(1,347,046)	(14,799,664)	(70,255,577)	(2,026,403)	(15,968,324)	(2,827,887)	(1,231,590)	-	-	-	-	(153,382,040)
Reclassifications		(212,207)	(45,953)	232,680	-	17,387	1,344,469	(3,003,850)	(94,772)	-	-	-	-	(1,762,246)
Disposals		2,558,780	408,502	1,262,358	5,187,467	125,769	-	2,643,297	625,618	-	-	-	-	12,811,791
Balances as of December 31, 2018	Ps	(436,603,123)	(5,998,481)	(173,264,040)	(973,467,746)	(42,924,256)	(179,831,090)	(42,161,378)	(7,419,050)	-	-	-	-	(1,861,669,164)
Wells, pipelines, properties, plant and equipment—net as of December 31,2017	Ps	362,001,214	18,429,132	321,908,762	359,348,274	23,659,462	148,222,706	12,084,714	16,453,330	129,736,382	44,546,699	-	118,651	1,436,509,326
Wells, pipelines, properties, plant and equipment—net as of December 31,2018	Ps	374,667,268	14,082,484	247,971,910	405,855,977	21,920,907	146,651,175	9,858,664	7,740,902	129,352,513	44,351,625	-	32,659	1,402,486,084
Depreciation rates		3 to 5%	5%	2 to 7%	-	3 to 7%	4%	3 to 10%	4 to 20%	-	-	-	-	-
Estimated useful lives		20 to 35	20	15 to 45	-	33 to 35	25	3 to 10	5 to 25	-	-	-	-	-

(1) Mainly wells, pipelines and plants

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

a. As of December 31, 2018, 2017 and 2016, the financing cost identified with fixed assets in the construction or installation stage, capitalized as part of the value of such fixed assets, was Ps. 2,198,191, Ps. 3,060,963 and Ps. 3,667,752, respectively.

b. The combined depreciation of fixed assets and amortization of wells for the fiscal years ended December 31, 2018, 2017 and 2016, recognized in operating costs and expenses, was Ps. 153,382,040, Ps.156,704,513 and Ps. 150,439,491, respectively, which includes costs related to plugging and abandonment of wells for the years ended December 31, 2018, 2017 and 2016 of Ps. 983,438, Ps. 850,015 and Ps. 1,698,312, respectively.

c. As of December 31, 2018 and 2017, provisions relating to future plugging of wells costs amounted to Ps. 84,050,900 and Ps. 68,797,600, respectively, and are presented in the "Provisions for plugging of wells" (see Note 21).

d. As of December 31, 2018 and 2017, acquisitions of property, plant and equipment include transfers from wells unassigned to a reserve for Ps. 6,726,769 and Ps. 16,440,645, respectively (see Note 16) and Ps. 4,652,314 from avalilable-for-sale non-financial assets as of December 31, 2017.

e. As of December 31, 2018 and 2017, PEMEX recognized a net reversal of impairment of Ps. 21,418,997 and a net impairment of Ps. (151,444,560), respectively, which is presented as a separate line item in the consolidated statement of comprehensive income as follows:

i. As of December 31, 2018, the net reversal of impairment was as follows:

	(Impairment)	Reversal of impairment	Reversal of impairment / (Impairment)
Pemex Logistics	Ps. (40,288,338)	Ps. -	Ps. (40,288,388)
Pemex Fertilizers	(2,246,264)	-	(2,246,264)
PMI NASA	(1,719,627)	-	(1,719,627)
Pemex Exploration and Production	(63,252,635)	128,266,251	65,013,616
Pemex Industrial Transformation	(13,788,470)	14,448,080	659,610
Total	**Ps. (121,295,334)**	**Ps. 142,714,331**	**Ps. 21,418,997**

Cash Generating Units of Pemex Logistics

Cash Generating Units of pipelines

As of December 31, 2018, Pemex Logistics recognized an impairment in the CGU of pipelines for Ps. 40,288,338, mainly due to a decrease in income flows projection of 46%, from an annual average income of Ps. 47,219,903 at the end of 2017 to Ps. 25,271,404 at the end of 2018, in addition to an increase in the cost of non-operating losses of 40%, from an annual average of Ps. 18,067,730 at the end of 2017 to Ps. 25,226,769 at the end of 2018. This increase was partially offset by a decrease in direct operating costs of 58%, from annual average costs at the end of 2017 of Ps. 16,485,969 to Ps. 6,880,967 at the end of December 2018, as well as a decrease in the discount rate, from 15.41% at the end of 2017 to 13.55% at the end of 2018.

(Continued)

(Figures stated in thousands, except as noted)

The recoverable amounts of the assets as of December 31, 2018, corresponding to the discounted cash flows at the rate of 13.55% are the following:

TAD, TDGL, TOMS (Stotage terminals)	Ps.	92,772,003
Land Transport (white pipes)		445,377
Primary logistics		111,941,265
Total	Ps.	205,158,645

Cash Generating Units of Pemex Fertilizers

Cash generating units are plants used in the ammonia process.

The recoverable amount of assets is based on each asset's value in use. To determine cash flows, volumes to be produced and sales to be carried out were taken into consideration. The discount rate used was 8.92%.

As of December 31, 2018, Pemex Fertilizers recognized an impairment of Ps. (2,246,264). The impairment is presented as a separate line item in the consolidated statement of comprehensive income.

Cash Generating Units of PMI NASA

As of December 31, 2018, PMI NASA recognized an impairment of Ps. (1,719,627), due to the disuse of the Cerro de la Pez Flotel, as a consequence of the reduction in the development of projects in recent months. This impairment was calculated by comparing the disbursement that would have to be made to acquire a flotel with similar characteristics compared to the valuation made by a specialized company of the flotel.

Cash Generating Unit of Pemex Exploration and Production

As of December 31, 2018, Pemex Exploration and Production recognized a net reversal of impairment in the amount of Ps. 65,013,616 mainly due to (i) an advance of production in Cantarell for rethinking physical goals for the period from 2024 to 2029 with a recovery of Ps. 98,673,388. This computation was projected using a discount rate of 7.03% and a tax rate of 30% (observable market) on the operating profit with an economic horizon of 25 years, compared to a discount rate of 14.40% that includes the cost of financing and the pyramiding of taxes and observable rights in similar companies, including the Profit-sharing; (ii) application in the fourth quarter of the relevant discount rate and tax rate (observable market), a net benefit was generated in most of the projects with respect to the previous year, mainly in the Aceite Terciario del Golfo project in the amount of Ps. 29,592,863. The foregoing was partially offset by an impairment of Ps. (63,252,635), mainly in (i) the Aguas Someras 2 projects in the amount of Ps. (58,318,030), (ii) the Crudo Ligero Marino projects, mainly due to higher water and salt content in the hydrocarbons reserves, (iii) the Yaxche Project, due to operating impacts in the fields directly related to production, and (iv) the Tsimin Xux and Chuc projects, mainly due to the natural decline of proved hydrocarbon reserves.

(Continued)

(Figures stated in thousands, except as noted)

The cash generating units of Pemex Exploration and Production are investment projects in productive fields with hydrocarbon reserves associated with proved reserves. These productive hydrocarbon fields contain varying degrees of heating power consisting of a set of wells and are supported by fixed assets associated directly with production, such as pipelines, production facilities, offshore platforms, specialized equipment and machinery.

Each project represents the smallest unit which can concentrate the core revenues, with clear costs and expenses that enable future cash flows (value in use) to be determined.

To determine the value in use of long-lived assets associated to hydrocarbon extraction, the net present value of reserves is determined based on the following assumptions:

Average crude oil price	58.02 USD/bl
Average gas price	4.89 USD/mpc
Average condensates price	43.21 USD/bl
Discount rate	7.03% annual

Pemex Exploration and Production, in compliance with practices observed in the industry, estimates the recovery value of asset by determining its value in use, based on cash flows associated with proved reserves after taxes and using a discount rate, also after taxes.

During 2018, Pemex Exploration and Production performed an analysis of the discount rate for its oil and gas activities cash flows in the domestic and international markets, taking into account the international price conditions, to value its production reserves.

In 2017, Pemex Exploration and Production used cash flows associated with proved reserves before tax and used an equally pre-tax discount rate, which was based on a weighted average cost of capital ("WACC") grossed-up after taxes with a weight of the corporate tax rate of 30%, and the median of taxes and duties on hydrocarbon extraction from countries with similar conditions to the fields in Mexico, which discount rate was 57%.

As a result of the analysis performed in 2018, Pemex Exploration and Production noted that the industry is currently using after tax discount rates. Accordingly, Pemex Exploration and Production determined it would comply with the practices observed in the industry and started using the after-tax discount rate. The after-tax discount rate considers the present value of future cash flows, increasing interest rates of debt incurred by Petróleos Mexicanos, the risk of the country and specific industry-related risks (calculated as the median of the beta of industry companies), which is then used to calculate the WACC. The discount rate is independent of the capital structure of the subsidiary entity. The WACC considers the median proportion of debt and capital observed for companies in the sector.

Taking into consideration the assumptions described above, the pre-tax discount rate used by Pemex Exploration and Production in 2018 for the value in use was 7.03%, resulting in a net reversal or impairment of Ps. 65,013,616 for 2018.

(Continued)

(Figures stated in thousands, except as noted)

For 2017, the pre-tax discount rate was 14.40%. If the same methodology had been applied in 2018, the discount rate after tax would have been 16.12% (the result of the gross-up of the 7.03% discount rate) and the net impairment would have been Ps. (958,060).

The total forecast production, calculated with a horizon of 25 years is 6,192 million barrels per day of crude oil equivalent.

Pemex Exploration and Production determines the recoverable amount of fixed assets based on the long-term estimated prices for Pemex Exploration and Production's proved reserves. The recoverable amount on each asset is the value in use.

Cash Generating Units of Pemex Industrial Transformation

As of December 31, 2018, Pemex Industrial Transformation recognized a net reversal of impairment of Ps. 659,610.

The net reversal of impairment was in the following cash generating units:

Minatitlán Refinery	Ps. 14,448,080
Reversal of impairment	14,440,080
Salina Cruz Refinery	(7,955,528)
Tula Refinery	(5,099,635)
Madero Refinery	(733,307)
Impairment	(13,788,470)
Net reversal of impairment	Ps. 659,610

The net reversal of impairment was mainly due to (i) an increase in processing of refined products due to higher imports of crude oil and humid gas resulting in an increase in income related to transportation fees; (ii) the appreciation of the U.S. dollar against the peso, from a peso-U.S. dollar exchange rate of Ps.19.7867 to U.S. $1.00 as of December 31, 2017 to a peso-U.S. dollar exchange rate of Ps. 19.6829 to U.S. $1.00 as of December 31, 2018; (iii) a decrease in the discount rate of cash generating units of refined products and gas and petrochemicals by 0.1% and 8.1%, respectively; and (iv) an increase in maintenance of the refineries and a decrease in gas production.

Cash-generating units in Pemex Industrial Transformation are processing centers grouped according to their types of processes as refineries, gas complex processors, and petrochemical centers. These centers produce various finished products for direct sale to customers or intermediate products that can be processed in another of its cash generating units or by a third party. Each processing center of Pemex Industrial Transformation represents the smallest unit that can concentrate the core revenues, with clear costs and expenses that enable future cash flows (value in use) to be determined.

(Continued)

(Figures stated in thousands, except as noted)

Cash flow determinations are made based on PEMEX's business plans, operating financial programs, forecasts of future prices of products related to the processes of the cash generating units, budget programs and various statistical models that consider historical information of processes and the capacity of various processing centers.

To determine the value in use of long-lived assets associated with the cash-generating units of Pemex Industrial Transformation, the net present value of cash flows was determined based on the following assumptions:

	Refining	**Gas**	**Petrochemicals**
Average crude oil Price	53.98 U.S dollars	N.A.	N.A.
Processed volume	680 mbd	2,717 mmpcd of humid gas	Variable because the load inputs are diverse
Rate of U.S. dollar	Ps. 19.6829 mxp/usd	Ps. 19.6829 mxp/usd	Ps. 19.6829 mxp/usd
Useful lives of the cash generating units	Average 14 years	Average 8 years	Average 7 years
Discount rate	11.52% annually	10.22% annually	8.92% annually
Period	2019-2034	2019-2027	2019-2026

The recoverable amount of assets is based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration the volumes to be produced and sales to be carried out. As of December 31, 2018, the value in use for the impairment or reversal of impairment of fixed assets was as follows:

Minatitlán Refinery	Ps.	54,846,565
Madero Refinery		21,083,328
Salina Cruz Refinery		9,428,152
Tula Refinery		39,429,897
Total value in use	**Ps.**	**124,787,942**

ii. As of December 31, 2017, the net impairment was as follows:

	Impairment	**Reversal of impairment**	**Net Impairment**
Pemex Exploration and Production	Ps. (129,350,315)	Ps. -	Ps. (129,350,315)
Pemex Industrial Transformation	(19,751,882)	3,799,790	(15,952,092)
AGRO	(4,206,653)	-	(4,206,653)
Pemex Fertilizers	(1,935,500)	-	(1,935,500)
Total	**Ps. (155,244,350)**	**Ps. 3,799,790**	**Ps. (151,444,560)**

(Figures stated in thousands, except as noted)

Cash Generating Unit of Pemex Exploration and Production

Pemex Exploration and Production recognized an impairment in the amount of Ps. (129,350,315) as of December 31, 2017, arising from: (i) the deferral of the development investments in the first 5 years of the economic horizon in the proved reserves, which caused a decrease in production and consequently in income, as well as the re-categorization of part of the proved reserves as probable reserve, as a consequence of budget adjustments in the strategic investments in the Cantarell, Aceite terciario del Golfo, Crudo Ligero Marino, Antonio J. Bermúdez and Tzimin Xux projects, (ii) insufficient cash flows to make up for costs recovery at the Burgos and Lakach projects as a result of the appreciation of the Mexican peso against the U.S. dollar by 4.3%, from a peso–U.S. dollar exchange rate of Ps. 20.6640 to U.S. $1.00 as of December 31, 2016 to a peso–U.S. dollar exchange rate of Ps. 19.7867 to U.S. $1.00 as of December 31, 2017, given that cash inflows are denominated in U.S. dollars and then translated to the reporting currency using the exchange rate at the date of report; (iii) a 0.3% increase in the discount rate; (iv) a 7.2% decrease in crude oil forward prices from 60.24 usd/bl in 2016 to 55.89 usd/bl in 2017 and (v) the natural decline in production in the Macuspana project.

The cash generating units of Pemex Exploration and Production are investment projects in productive fields with hydrocarbon reserves associated with proved reserves. These productive hydrocarbon fields contain varying degrees of heating power consisting of a set of wells and are supported by fixed assets associated directly with production, such as pipelines, production facilities, offshore platforms, specialized equipment and machinery.

Each project represents the smallest unit which can concentrate the core revenues, with clear costs and expenses that enable future cash flows (value in use) to be determined. To determine the value in use of long-lived assets associated with hydrocarbon extraction, the net present value of reserves is determined based on the following assumptions:

Average crude oil price	55.89 U.S. dollars/bl
Average gas price	4.92 U.S. dollars /mpc
Average condensates price	38.33 U.S. dollars /bl
Discount rate	14.40% annually

The total forecast production, calculated with a horizon of 25 years is 7,091 million barrels per day of crude oil equivalent.

Pemex Exploration and Production determines the recoverable amount of fixed assets based on the long-term estimated prices for Pemex Exploration and Production's proved reserves. The recoverable amount on each asset is the value in use.

Cash Generating Units of Pemex Industrial Transformation

As of December 31, 2017, Pemex Industrial Transformation recognized a net impairment of Ps.(15,952,092).

(Figures stated in thousands, except as noted)

The impairment was in the following cash generating units:

Minatitlán Refinery	Ps. (5,691,005)
Madero Refinery	(8,480,880)
Salina Cruz Refinery	(5,579,997)
Total impairment of assets	(19,751,882)
Cangrejera Petrochemical Center	3,565,355
Independencia Petrochemical Center	112,292
Arenque gas processor complex	57,039
Matapionche gas processor complex	65,104
Reversal of impairment	3,799,790
Net impairment	**Ps. (15,952,092)**

The impairment was mainly due to (i) an increase in capitalizable maintenance expenses in refining; (ii) the appreciation of the Mexican peso against the U.S. dollar, from a peso–U.S. dollar exchange rate of Ps. 20.6640 to U.S. $1.00 as of December 31, 2016 to a peso–U.S. dollar exchange rate of Ps. 19.7867 to U.S. $1.00 as of December 31, 2017; partially offset by (i) an increase in the transportation fees; (ii) an increase in the processing of wet gas due to higher imports of this product and redistribution by Pemex Exploration and Production; (iii) an increase in prices arising from the price liberalization in 2017; and (iv) a decrease in the discount rate of cash generating units of refined products, gas and petrochemicals of 4.4%, 4.5%, and 5.6%, respectively.

Cash-generating units in Pemex Industrial Transformation are processing centers grouped according to their types of processes as refineries, gas complex processors, and petrochemical centers. These centers produce various finished products for direct sale to customers or intermediate products that can be processed in another of its cash generating units or by a third party. Each processing center of Pemex Industrial Transformation represents the smallest unit which can concentrate the core revenues, with clear costs and expenses that enable future cash flows (value in use) to be determined.

Cash flow determinations are made based on PEMEX's business plans, operating financial programs, forecasts of future prices of products related to the processes of the cash generating units, budget programs and various statistical models that consider historical information of processes and the capacity of the various processing centers.

To determine the value in use of long-lived assets associated with the cash-generating units of Pemex Industrial Transformation, the net present value of cash flows was determined based on the following assumptions:

(Figures stated in thousands, except as noted)

	Refining	Gas	Petrochemicals
Average crude oil Price	51.30 U.S. dollars	N.A.	N.A.
Processed volume	767 mbd	3,085 mmpcd or sour gas	Variable because the load inputs are diverse
Rate of U.S. dollar	Ps.19.7867 mxp/usd	Ps.19.7867 mxp/usd	Ps.19.7867 mxp/usd
Useful lives of the cash generating units	Average of 16 years	Average of 9 years	Average of 6 years
Discount rate	11.53% annually	10.24% annually	9.71% annually
Period	2018-2034	2018-2029	2016-2024

The recoverable amount of assets is based on each asset's value in use. The value in use for each asset is calculated based on cash flows, taking into consideration the volumes to be produced and sales to be carried out. As of December 31, 2017, the value in use for the impairment or reversal of impairment of fixed assets was as follows:

Minatitlán Refinery	Ps.	32,531,925
Madero Refinery		11,420,952
Salina Cruz Refinery		12,051,597
Cangrejera Petrochemical Center		17,544,825
Independencia Petrochemical Center		3,146,413
Arenque gas processor complex		1,283,201
Matapionche gas processor complex		1,074,729
Total value in use	**Ps.**	**79,053,642**

Pro-Agroindustria, S.A. de C.V.

Pro-Agroindustria, S.A. de C.V. recognized an impairment for Ps. (4,206,653) related to its nitric acid, amonium nitrate and UAN 32 acquired plants, the rehabilitation of which has not yet commenced. The company will not be able to develop an alternate plan for the rehabilitation of these plants in the following five years due to its financing commitments.

Cash Generating Units of Pemex Fertilizers

Cash generating units are plants used in the ammonia process.

Pemex Fertilizers recognized an impairment of Ps. (1,935,500) for the year ended December 31, 2017 resulting from (i) a decrease in the production capacity in fertilizers plants due to a shortage of raw material; (ii) an increase in raw material prices; and (iii) a decrease in ammonia sale prices.

The recoverable amount of assets is based on each asset's value in use. To determine cash flows, volumes to be produced and sales to be carried out were taken into consideration. The value in use for the impairment of fixed assets was Ps. 2,744,600. The discount rate used was 9.71%.

(Continued)

(Figures stated in thousands, except as noted)

f. Capital Lease Arrangements

As of December 31, 2013, PEMEX had entered into nine capital lease arrangements for drilling equipment. These leases expire on various dates over the next 10 years.

As of December 31, 2015, PEMEX had entered into certain capital lease arrangements for two offshore platforms. These leases expire on various dates over the next 10 years.

As of December 31, 2018 and 2017, assets acquired through these capital leases were as follows:

	2018	2017
Investment in tankers and drilling equipment	Ps. 7,963,262	Ps.11,142,197
Less accumulated depreciation	(886,946)	(1,696,089)
	Ps. 7,076,316	**Ps. 9,446,108**

The liabilities relating to the assets listed above are payable in the years following December 31, 2018 as presented below:

Year	Pesos	U.S. dollars
2019	Ps. 1,255,105	U.S. $ 63,766
2020	1,186,253	60,268
2021	1,186,253	60,268
2022	1,186,253	60,268
2023	1,186,253	60,268
2024 and thereafter	892,218	45,330
	6,892,335	350,168
Less: short-term unaccrued interest	251,768	12,791
Less: long-term unaccrued interest	587,287	29,837
Total capital leases	6,053,280	307,540
Less: current portion of leases (excluding interest)	934,546	47,480
Total long-term capital leases	**Ps. 5,118,734**	**U.S. $ 260,060**

The interest expense from capital leases for the years ended December 31, 2018, 2017 and 2016 was Ps. 301,449, Ps. 418,883 and Ps. 500,654, respectively.

g. PEMEX can conduct exploration and extraction activities through Exploration and Extraction Contracts ("EECs"). The EECs are awarded individually, through associations or joint ventures based on guidelines approved by the NHC and are classified into:

   a. Production-sharing contracts;
   b. Profit-sharing contracts;
   c. License agreements; and
   d. Service contracts.

EECs as of December 31, 2018 are:

a. Production-sharing contracts:

The object of the Profit-sharing contracts is the execution of oil activities under shared production contracts among Mexico through the Mexican Government via the NHC, Pemex Exploration and Production (as contractor), for the contractual area and the sharing of costs, risks, and terms and conditions involved in the contract and in accordance with the applicable regulations and best practices of the industry receiving, in exchange, benefits in favor of the contractor.

- Exploration and Extraction Contract related to Block 2 Tampico Misantla, pursuant to a consortium formed by Pemex Exploration and Production and DEA and Compañía Española de Petróleos, S. A. U., (jointly liable). The object of the contract is the realization of oil activities, under shared production contracts, by the contractor for the contractual area and the sharing of costs, risks, terms and conditions involved in the contract and in accordance with the applicable regulations and best practices of the industry, receiving in exchange, benefits in favor of the contractor. Pemex Exploration and Production and DEA each have a 50% interest in this contractual area. Pemex Exploration and Production is the operator under this contract.

- Exploration and Extraction Contract, related to Block 8 Cuencas del Sureste, pursuant to a consortium formed by Pemex Exploration and Production, EPC Hidrocarburos México, S. A. de C. V. (EPC). and Ecopetrol Global Energy, S. L. U. (jointly liable). Pemex Exploration and Production was designated by all the participating companies and with the approval of the NHC as the operator of this contract and all operational aspects of the petroleum activities will be carried out only by the operator on behalf of all participating companies. Pemex Exploration and Production and EPC each have a 50% interest in this contractual area.

- Exploration and Extraction Contract, related to Block 16, Tampico Misantla, pursuant to a consortium by Pemex Exploration and Production, DEUTSCHE Erdoel México S. de R.L. de C.V. (as operator) and CEPSA E.P. México S. de R.L. de C.V., as jointly liable. Pemex Exploration and Production owns 40% of this contractual area, DEUTSCHE Erdoel México S. de R.L. de C.V. owns 40%, and CEPSA E.P. México S. de R.L. de C.V. owns 20%.

- Exploration and Extraction Contract, related to Block 17, Tampico Misantla, pursuant to a consortium by Pemex Exploration and Production, DEUTSCHE Erdoel México S. de R.L. de C.V. (as operator) and CEPSA E.P. México S. de R.L. de C.V., as jointly liable. Pemex Exploration and Production owns 40% of this contractual area, DEUTSCHE Erdoel México S. de R.L. de C.V. owns 40%, and CEPSA E.P. México S. de R.L. de C.V. owns 20%.

- Exploration and Extraction Contract, related to Block 18, Tampico Misantla, pursuant to a consortium by Pemex Exploration and Production (as operator) and CEPSA E.P. México S. de R.L. de C.V. (as partner). Pemex Exploration and Production owns 80% of this contractual area, and CEPSA E.P. México S. de R.L. de C.V. owns 20%.

- Hydrocarbons Exploration and Extraction Contract for Block 29, Cuenca del Sureste, in which Pemex Exploration and Production owns 100% of the project.

- Hydrocarbons Exploration and Extraction Contract for Block 32, Cuenca del Sureste, by Pemex Exploration and Production (as operator) and Total E&P México, S.A. de C.V. (as partner). Pemex Exploration and Total E&P México, S.A. de C.V each have a 50% interest in this contractual area.

- Hydrocarbons Exploration and Extraction Contract for Block 33, Cuenca del Sureste, by Pemex Exploration and Production (as operator) and Total E&P México, S.A. de C.V. Pemex Exploration and Total E&P México, S.A. de C.V each have a 50% interest in this contractual area.

- Hydrocarbons Exploration and Extraction Contract for Block 35, Cuenca del Sureste, by Shell Exploración y Extracción de México, S.A. de C.V (as operator) and Pemex Exploration and Production. Total E&P México, S.A. de C.V. and Pemex Exploration each have a 50% interest in this contractual area.

- Hydrocarbon Extraction Contract for the Ek-Balam (shallow water) Block. Pemex Exploration and Production owns 100% of this contractual area.

- Exploration and Extraction Contract, related to the Santuario El Golpe Block, pursuant to a consortium formed by Pemex Exploration and Production (as partner) and Petrofac México, S.A. de C.V. (PETROFAC), as operator. Pemex Exploration and Production owns 64% of this contractual area and PETROFAC owns 36%.

- Exploration and Extraction Contract, related to the Misión Block, pursuant to a consortium formed by Pemex Exploration and Production (as partner) and Servicios Múltiples de Burgos, S.A. de C.V. (as operator). Pemex Exploration and Production owns 51% of this contractual area and Servicios Múltiples de Burgos owns 49%.

- Exploration and Extraction Contract, related to Ébano Blocl, pursuant to a consortium formed by Pemex Exploration and Production (as partner), DS Servicios Petroleros, S.A. de C.V. (as operator) and D&S Petroleum S.A. de C.V. (as partner). Pemex Exploration and Production owns 45% of this contractual area, Servicios Múltiples de Burgos owns 54.99%, while D&S Petroleum S.A. de C.V. owns 0.01%.

b. License contracts

The nature of the contract relationship is the execution of oil activities, under the license contracting modality, under which the contractor is granted the right to explore and extract at its exclusive cost and risk hydrocarbons owned by the Mexican nation, who must comply with the obligations arising from the contract in the name and representation of each of the signatory companies in the contractual area in accordance with the applicable regulations, industry best practices and the terms and conditions of the contract. The contractor shall be entitled to payment for hydrocarbons produced, in accordance with the terms of the contracts, and after payments to the Mexican Government are made.

- Hydrocarbons Exploration and Extraction Contract for Block 3 "Plegado Perdido", in deep waters, formed by INPEX Corporation ("INPEX") (as partner), Chevron Energía de Mexico, S. de R.L. de C.V. ("Chevron") (as operator) and Pemex Exploration and Production, (as partner). Chevron, Pemex Exploration and Production and Inpex have a 37.50%, 27.50% and 35.00% interest in this project, respectively, and will be jointly liable for all obligations of the contractors according to this contract regardless of their participation interest.

- Hydrocarbons Exploration and Extraction Contract for Block 2, Plegado Perdido, formed by Pemex Exploration and Production (as partner) and Shell Exploración y Extracción de México, S.A. de C.V. (as operator). Pemex Exploration and Production and Shell Exploración y Extracción de México, S.A. de C.V. each have a 50% interest in this project.

- Hydrocarbons Exploration and Extraction Contract for Block 5, Plegado Perdido, in which Pemex Exploration and Production owns 100% of the project.

- Hydrocarbons Exploration and Extraction Contract for Block 18, Cordilleras Mexicanas, in which Pemex Exploration and Production owns 100% of the project.

- Hydrocarbons Exploration and Extraction Contract for Block 22, Cuenca Salina, formed by Pemex Exploration and Production, Inpex E&P México, S.A. de C.V., (as partners), and Chevron (as operator). Chevron, Pemex Exploration and Production and Inpex E&P México, S.A. de C.V., have a 37.5%, 27.5% and 35% interest in this project, respectively.

- A licensing contract with BHP Billiton Petróleo Operaciones de México, S. de R.L. ("BHP Billiton") for the Trión Block. BHP Billiton owns 60% of the contractual area, while Pemex Exploration and Production owns 40%, and each of the signatory companies are jointly liable for all obligations of the contractors.

- Hydrocarbons Exploration and Extraction Contract for the Cárdenas Mora Block, for onshore fields, formed by Pemex Exploration and Production (as partner), Petrolera Cárdenas Mora, S. A. P. I. de C. V. (as operator) and Cheiron Holding Limited (jontly liable). Pemex Exploration and Production and Petrolera Cárdenas Mora, S. A. P. I. de C. V. each have a 50% of interest in this project.

(Continued)

- Hydrocarbons Exploration and Extraction Contract for the Ogarrio Block, for onshore fields, formed by Pemex Exploration and Production (as partner), Deutche Erdoel México, S. de R.L. de C.V. (as operator) and DEA Deutche Erdoel, A.G. ("DEA") (jointly liable). Pemex Exploration and Production and DEA each have a 50% interest in this project.

- Hydrocarbons Exploration and Extraction Contract for the Miquetla Block, for onshore fields, formed by Pemex Exploration and Production (as partner) and Operadora de Campos DWF, S.A. de C.V. (as operator). Pemex Exploration and Production has a 49% interest in this project while Operadora de Campos DWF, S.A. de C.V. has a 51% interest.

Certain of the EECs are operated though joint arrangements, for which PEMEX recognizes in its financial statements, both the rights to the assets and the obligations for the liabilities, as well as profits and losses relating to the arrangements.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

See below for a condensed statement of comprehensive income and condensed statement of financial position, summarizing the projects listed above:

	Production-sharing contracts												
As of /For the year ended December 31, 2018	***EK / Balam***	***Block 2***	***Block 8***	***Block 16***	***Block 17***	***Block 18***	***Block 29***	***Block 32***	***Block 33***	***Block 35***	***Santuario El Golpe***	***Misión***	***Ébano***
Sales:													
Net sales	10,374,061	-	-	-	-	-	-	-	-	-	1,268,482	644,768	421,591
Cost of sales	4,204,499	57,197	67,481	12,485	10,332	60,624	8,072	5,871	8,337	20,142	305,733	306,110	97,643
Gross income (loss)	6,169,562	(57,197)	(67,481)	(12,485)	(10,332)	(60,624)	(8,072)	(5,871)	(8,337)	(20,142)	962,749	338,658	323,948
Other income (loss), net	157,876	-	-	-	-	-	-	-	-	-	-	-	-
Administrative expenses	129,451	-	-	-	-	-	-	-	-	-	-	-	-
Operating income (loss)	6,197,987	(57,197)	(67,481)	(12,485)	(10,332)	(60,624)	(8,072)	(5,871)	(8,337)	(20,142)	962,749	338,658	323,948
Taxes, duties and other	3,980	-	-	-	-	-	-	-	-	-	-	-	-
Net income (loss)	6,194,007	(57,197)	(67,481)	(12,485)	(10,332)	(60,624)	(8,072)	(5,871)	(8,337)	(20,142)	962,749	338,658	323,948
Cash and cash equivalents	-	54,617	112,592	-	-	-	-	10,578	-	-	-	-	-
Accounts receivable	11,698,071	27,376	27,189	874	927	-	-	-	35,454	3,701	1,308,008	669,805	335,434
Total current assets	11,698,071	81,993	139,780	874	927	-	-	10,578	35,454	3,701	1,308,008	669,805	335,434
Wells, pipelines, properties, plant and equipment, net	20,344,054	-	-	-	-	-	-	-	-	-	1,022,923	2,210,968	406,075
Total assets	32,042,125	81,993	139,780	874	927	-	-	10,578	35,454	3,701	2,330,931	2,880,773	741,509
Suppliers	1,466,286	-	-	-	-	-	-	-	-	-	-	35,984	-
Taxes and duties payable	3,980	-	-	-	-	-	-	-	-	-	-	-	-
Other current liabilities	2,436,996	139,190	207,261	13,359	11,259	60,624	8,072	16,449	43,791	23,843	301,619	207,387	-
Total current liabilities	3,907,262	139,190	207,261	13,359	11,259	60,624	8,072	16,449	43,791	23,843	301,619	243,371	-
Other liabilities	69,195												
Total liabilities	3,976,457	139,190	207,261	13,359	11,259	60,624	8,072	16,449	43,791	23,843	301,619	243,371	-
Equity (deficit), net	21,871,661	-	-	-	-	-	-	-	-	-	1,066,563	2,298,744	417,561

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Licence contracts							
As of /For the year ended December 31, 2018	***Block 3***	***Block 2***	***Block 5***	***Block 18***	***Block 22***	***Cárdenas Mora***	***Ogarrio***	***Miquetla***
Sales:								
Net sales	-	-	-	-	-	1,586,080	1,265,620	
Cost of sales	58,261	41,156	52,555	9,390	186,693	714,233	604,373	2,713
Gross income (loss)	(58,261)	(41,156)	(52,555)	(9,390)	(186,693)	871,847	661,247	(2,713)
Other income (loss), net	-	-	-	-	-	-	-	-
Administrative expenses	-	-	-	-	-	-	-	-
Operating income (loss)	(58,261)	(41,156)	(52,555)	(9,390)	(186,693)	871,847	661,247	(2,713)
Taxes, duties and other	-	-	-	-	-	-	-	-
Net income (loss)	(58,261)	(41,156)	(52,555)	(9,390)	(186,693)	871,847	661,247	(2,713)
Cash and cash equivalents	-	-	-	3,362	-	-	-	-
Accounts receivable	14,888	6,151	-	-	23,555	1,820,428	1,300,773	406
Total current assets	14,888	6,151	-	3,362	23,555	1,820,428	1,300,774	406
Wells, pipelines, properties, plant and equipment, net	-	-	-	-	-	2,528,860	2,122,341	26,206
Total assets	14,888	6,151	-	3,362	23,555	4,349,288	3,423,115	26,612
Suppliers	-	-	-	-	-	-	-	-
Taxes and duties payable	-	-	-	-	-	-	-	-
Other current liabilities	73,149	47,307	52,555	12,752	210,248	860,137	564,565	2,943
Total current liabilities	73,149	47,307	52,555	12,752	210,248	860,137	564,565	2,943
Other liabilities								
Total liabilities	73,149	47,307	52,555	12,752	210,248	860,137	564,565	2,943
Equity (deficit), net	-	-	-	-	-	2,617,304	2,197,303	26,382

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Profit-sharing			**License**		
As of /For the year ended December 31, 2017	***EK / Balam***	***Block 2***	***Block 8***	***Trion***	***Block 3***	**Total**
Sales:						
Net sales	7,009,464	-	-	-	-	7,009,464
Cost of sales	5,447,955	5,953	4,845	-	511	5,459,264
Gross income (loss)	1,561,509	(5,953)	(4,845)		(511)	1,550,200
Other income (loss), net	4,852	-	-	-	-	4,852
Administrative expenses	34,338	-	-	-	-	34,338
Operating income (loss)	1,532,023	(5,953)	(4,845)	-	(511)	1,520,714
Taxes, duties and other	158,347	-	-	-	-	158,347
Net income (loss)	1,373,676	(5,953)	(4,845)	-	(511)	1,362,367
Cash and cash equivalents	-	20	25	-	-	45
Accounts receivable	-	1,013	1,804	-	327	3,144
Total current assets	-	1,033	1,829	-	327	3,189
Wells, pipelines, properties, plant and equipment, net	14,869,906	-	-	4,498,234	1,107,311	20,475,451
Total assets	14,869,906	1,033	1,829	4,498,234	1,107,638	20,478,640
Suppliers	796,300	-	-	-	-	796,300
Taxes and duties payable	973	-	-	-	-	973
Other current liabilities	4,391	1,809	2,369	-	-	8,569
Total current liabilities	801,664	1,809	2,369	-	-	805,842
Total liabilities	801,664	1,809	2,369	-	-	805,842
Equity (deficit), net	14,068,242	(776)	(540)	4,498,234	1,107,638	19,672,798

(Continued)

(Figures stated in thousands, except as noted)

NOTE 16. INTANGIBLE ASSETS, NET

At December 31, 2018 and 2017, intangible assets, net are wells unassigned to a reserve, which amounted to Ps. 13,720,540 and Ps. 14,678,640, respectively as follows:

	2018	2017
Wells unassigned to a reserve:		
Balance at the beginning of period	Ps. 9,088,563	Ps. 8,639,242
Additions to construction in progress	20,352,351	20,553,952
Transfers against expenses	(12,934,906)	(3,663,986)
Transfers against fixed assets	(6,726,769)	(16,440,645)
Balance at the end of period	**Ps. 9,779,239**	**Ps. 9,088,563**

In addition, as of December 31, 2018 and 2017, PEMEX recognized expenses related to unsuccessful wells of Ps. 2,508,180 and Ps. 2,500,638, respectively, directly in its statement of comprehensive income.

The other components of intangible assets are:

As of December 31, 2018	**Rights of way**	**Licenses**	**Exploration expenses, evaluation of assets and concessions**	**Total**
Cost				
Balance at the beginning of the year	Ps. 2,311,743	3,586,553	1,940,583	Ps. 7,838,879
Additions	40,323	638,479	325,471	1,004,273
Effects of foreign exchange	-	(10,397)	(10,503)	(20,900)
	2,352,066	4,214,635	2,255,551	8,822,252
Amortization accumulated				
Balance at the beginning of the year	Ps. (179,312)	(1,401,443)	(668,047)	(2,248,802)
Amortization	(86,332)	(2,480,760)	(76,234)	(2,643,326)
Effects of foreign exchange	-	10,761	416	11,177
	(265,644)	(3,871,442)	(743,865)	(4,880,951)
Balance at the end of the year	**Ps. 2,086,422**	**343,193**	**1,511,686**	**Ps. 3,941,301**
Useful lives	23 years	1 to 3 years	Up to 36 years	

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of December 31, 2017	**Rights of way**	**Licenses**	**Exploration expenses, evaluation of assets and concessions**	**Total**
Cost				
Balance at the beginning of the year	Ps. 2,311,743	2,990,011	1,940,316	7,242,070
Additions	-	589,918	267	590,185
Effects of foreign exchange	-	6,624	-	6,624
	Ps. 2,311,743	3,586,553	1,940,583	7,838,879
Amortization accumulated				
Balance at the beginning of the year	Ps. (179,312)	(1,150,473)	(636,573)	(1,966,358)
Amortization	-	(250,970)	(30,026)	(280,996)
Effects of foreign exchange	-	-	(1,448)	(1,448)
	(179,312)	(1,401,443)	(668,047)	(2,248,802)
Balance at the end of the year	**Ps. 2,132,431**	**2,185,110**	**1,272,536**	**5,590,077**
Useful lives	23 years	1 to 3 years	Up to 36 years	

NOTE 17. MEXICAN GOVERNMENT LONG-TERM NOTES RECEIVABLE AND OTHER ASSETS

A. Long-term notes receivable

As of December 31, 2018 and 2017, the balance of long-term notes receivable was as follows:

	2018	**2017**
Promissory notes issued by the Mexican Government	Ps. 118,827,894	Ps. 147,274,076
Other long-term notes receivable [1]	1,000,704	1,218,833
Total long-term notes receivable	**Ps. 119,828,598**	**Ps. 148,492,909**

(1) Mainly collection rights related to Value Added Tax from the non-recourse factoring contract between Pemex Logistics and Banco Interacciones, S.A.

(Figures stated in thousands, except as noted)

Promissory notes issued by the Mexican Government

	2018	2017
Long-term promissory notes issued by the Mexican Government	Ps 156,981,745	Ps. 149,796,282
Less: current portion of notes receivable issued by the Mexican Government [(2)]	38,153,851	2,522,206
Long-term promissory notes	**Ps.118,827,894**	**Ps. 147,274,076**

[(2)] For 2018, the increase relates to the principal and interest from promissory notes 21 to 26A,as well as promissory note No. 3 which matured on March 31, 2019. (see Note 30)

On December 24, 2015, the SHCP published in the Official Gazette of the Federation the *Disposiciones de carácter general relativas a la asunción por parte del Gobierno Federal de obligaciones de pago de pensiones y jubilaciones a cargo de Petróleos Mexicanos y sus empresas productivas subsidiarias* (General provisions regarding the assumption by the Mexican Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its productive state-owned subsidiaries). These regulations stated the terms, conditions, financing mechanisms and payment arrangements pursuant to which the SHCP would assume a portion of the payment obligations related to PEMEX's pensions and retirement plans. An independent expert reviewed the calculation, the methodology used, the maturity profile and all of the information provided by PEMEX.

In accordance with these provisions and prior to the completion of the independent expert's review described above, on December 24, 2015, the Mexican Government issued in advance payment, through the SHCP, a Ps. 50,000,000 non-negotiable promissory note due December 31, 2050 payable to Petróleos Mexicanos. The promissory note, which accrued interest at a rate of 6.93% per year, was recognized as a long-term note receivable in non-current assets once the independent expert named by SHCP concluded its review.

On August 5, 2016, Petróleos Mexicanos received promissory notes issued by the Mexican Government at a value of Ps. 184,230,586 as of June 29, 2016, as part of the Mexican Government's assumption of a portion of the payment liabilities related to Petróleos Mexicanos and Subsidiary Entities' pensions and retirement plans, which notes were delivered in exchange for the Ps. 50,000,000 promissory notes issued to Petróleos Mexicanos on December 24, 2015. On August 15, 2016, Petróleos Mexicanos exchanged Ps. 47,000,000 of these promissory notes for short-term floating rate Mexican Government debt securities, known as Bonos de Desarrollo del Gobierno Federal (Development Bonds of the Mexican Government or "BONDES D"). Petróleos Mexicanos then sold the BONDES D to Mexican development banks at market prices.

Petróleos Mexicanos recognized a Ps. 135,439,612 increase in equity as a result of the Ps. 184, 230,586 of the promissory notes as of June 29, 2016, minus the Ps. 50,000,000 promissory note received by Petróleos Mexicanos on December 24, 2015, plus a Ps. 1,209,026 increase in the value of the promissory notes from June 29, 2016 to August 15, 2016, the date on which PEMEX received the promisorry notes (see Note 24).

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of December 31, 2018 and 2017, these promissory notes amounted to Ps. 156,981,745 and Ps. 149,796,282, respectively. PEMEX intends to hold them to maturity. These promissory notes will be converted into cash with annual maturity dates ranging from 5.14% to 7.04% in 2018, as follows:

As of December 31, 2018				
Number of Promissory Notes	**Maturity**	**Yield Rate Range**		**Principal Amount**
7(1)	2019	5.14% to 7.04%	Ps.	38,153,851
1	2020	5.39%		4,663,037
1	2021	5.57%		5,534,162
1	2022	5.74%		6,142,562
1	2022	5.88%		6,712,753
5	2024 to 2028	5.99% to 6.48%		37,123,836
5	2029 to 2033	6.62% to 6.85%		37,522,297
3	2034 to 2036	6.90% to 7.00%		21,129,247
	Total promissory notes		Ps.	156,981,745
	Less: current portion			38,153,851
	Long-term notes receivable		**Ps.**	**118,827,894**

(1) Includes promissory note No.3 with an original maturity date of March 31, 2019 and interest rates of 5.14%, and promissory notes No. 21 to 26A with original maturity dates ranging from 2037 to 2042 and interest rates from 6.94% to7.04%.

From January 1 to December 31, 2018 PEMEX recognized Ps. 9,737,131 in accrued yields from these promissory notes, of which Ps. 28,818 corresponds to accrued interests. This amount was recognized as financing income in the consolidated statement of comprehensive income.

Yield rates for these promissory notes are fixed all throughout their lifespans and up to their maturities. In addition, PEMEX believes the promissory notes do not have a credit risk because they are issued by the Mexican Government in Mexican pesos. The expected credit losses as of December 31, 2018 are zero.

As of December 31, 2018 two promissory notes have expired: the first with maturity on March 31, 2017 in the amount of Ps. 1,562,288 (Ps 1,518,932 of principal and Ps. 43,356 of interest), and the second with maturity on March 31, 2018 in the amount of Ps. 2,551,024 (Ps. 2,364,053 of principal and Ps. 186,971 of interest), which were transferred to the Fondo Laboral PEMEX (Pemex Labor Fund or "FOLAPE"), for the payment obligations related to pensions and retirement plans. The payment of the second promissory note was carried out two days after the expiration date, which generated additional interest of $644. The monetized amount of the second promissory note was Ps. 2,551,668 (Ps. 2,364,053 of principal and Ps. 187,615 of interest).

(Figures stated in thousands, except as noted)

B. Other assets

At December 31, 2018 and 2017, the balance of other assets was as follows:

	2018	2017
Insurance	Ps. 3,591,079	Ps. 3,089,801
Payments in advance	1,114,513	1,593,315
Other	1,720,218	1,211,984
Total other assets	**Ps. 6,425,810**	**Ps. 5,895,100**

NOTE 18. DEBT

The Federal Income Law applicable to PEMEX as of January 1, 2018, published in the Official Gazette of the Federation on November 15, 2017, authorized Petróleos Mexicanos and its Subsidiary Entities to incur an internal net debt up to Ps. 30,000,000 and an external net debt up to U.S. $6,182,800. PEMEX can incur additional internal or external debt, as long as the total amount of net debt (Ps. 143,000,000 equivalent to U.S. $7,813,000) does not exceed the ceiling established by the Federal Income Law.

The Board of Directors approves the terms and conditions for the incurrence of obligations that constitute public debt of Petróleos Mexicanos for each fiscal year, in accordance with the Petróleos Mexicanos Law and the Reglamento de la Ley de Petróleos Mexicanos (Regulations to the Petróleos Mexicanos Law). These terms and conditions are promulgated in accordance with the guidelines approved by the SHCP for Petróleos Mexicanos for the respective fiscal year.

Subsequently, the Board of Directors of PEMEX approved the debt program for fiscal year 2018 in accordance with Article 13 section XXVI of the Petróleos Mexicanos Law.

During the period from January 1 to December 31, 2018, PEMEX participated in the following financing activities:

- On February, 12, 2018, Petróleos Mexicanos issued U.S. $4,000,000 of debt securities under its U.S. $92,000,000 Medium-Term Notes Program, Series C, in two tranches: (1) U.S. $2,500,000 5.35% Notes due 2028 and (2) U.S. $1,500,000 6.35% Bonds due 2048.

- On February 12, 2018, Petróleos Mexicanos consummated an exchange offer pursuant to which it exchanged (1) U.S. $952,454, aggregate principal amount of its outstanding 5.500% Bonds due 2044 for U.S. $881,899, aggregate principal amount of its new 6.350% Bonds due 2048 and (2) U.S. $ 1,021,065, aggregate principal amount of its outstanding 5.625% Bonds due 2046 for U.S. $946,764, aggregate principal amount of its new 6.350% Bonds due 2048.

- On March 5, 2018, Petróleos Mexicanos consummated a tender offer pursuant to which it purchased U.S. $138,598 aggregate principal amount of its outstanding 3.125% Notes due 2019, U.S. $558,644 aggregate principal amount of its outstanding 5.500% Notes due 2019, U.S. $91,843 aggregate principal amount of its outstanding 8.000% Notes due 2019, U.S. $183,017 aggregate principal amount of its outstanding 6.000% Notes due 2020 and U.S. $817,303 aggregate principal amount of its outstanding 3.500% Notes due 2020.

- On March 27, 2018, Petróleos Mexicanos entered into a credit line in the amount of U.S. $181,101, which bears interest at a rate linked to LIBOR plus 70 basis points, due February 2025 and was used on April 13, 2018.

- On April 16, 2018, Petróleos Mexicanos increased its Medium-Term Notes Program, Series C, from U.S. $92,000,000 to U.S. $102,000,000.

- On May 24, 2018, Petróleos Mexicanos issued €3,150,000 of debt securities under its U.S.$102,000,000 Medium Term Notes Program, Series C in four tranches: (i) €600,000 of its 2.500% Notes due on November 24, 2022; (ii) €650,000 of its Floating Rate Notes due on August 24, 2023; (iii) €650,000 of its 3.625% Notes due on November 24, 2025; and (iv) €1,250,000 of its 4.750% Notes due on February 26, 2029. All debt securities issued under this program are guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services and their respective successors and assignees.

- On June 4, 2018, Petróleos Mexicanos issued CHF365,000 of its 1.750% Notes due 2023 under its U.S.$102,000,000 Medium Term Notes Program, Series C.

- On June 26, 2018, Pro-Agroindustrias, refinanced a credit line for U.S. $250,000 by entering into a new credit line for the same amount, which bears interest at a floating rate linked to LIBOR plus 300 basis points on a quarterly basis and matures on December 26, 2025. This credit agreement is guaranteed by Petróleos Mexicanos.

- On August 23, 2018, Petróleos Mexicanos entered into a loan agreement in the amount of U.S. $200,000, which bears interest at a floating rate linked to LIBOR and matures in 2023.

- On October 23, 2018 Petróleos Mexicanos issued U.S. $ 2,000,000, of debt securities under U.S. $ 102,000,000 of its 6.500%, Medium-Term Notes Program, Series C, due 2029.

- On November 9, 2018, Petróleos Mexicanos entered into a revolving credit facility in the amount of Ps. 9,000,000, which matures in 2023.

- On November 30, 2018, Petróleos Mexicanos borrowed U.S. $250,000 from a bilateral credit line, which bears interest at a floating rate linked to LIBOR plus 80 basis points and matures in 2028.

As of December 31, 2018, Petróleos Mexicanos had U.S. $6,700,000 and Ps. 32,500,000 in available credit lines in order to ensure liquidity, which U.S. $6,400,000 and Ps. 26,200,000 are available.

All the financing activities were guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (in the case of Pemex Cogeneration and Services, until July 27, 2018, the date it was liquidated (see Note 1)).

From January 1 to December 31, 2018, PMI HBV (until July 31, 2018) and P.M.I. Holdings Holland Services, B.V., obtained U.S. $ 21,449,200 from its revolving credit line and repaid U.S. $ 21,099,000. As of December 31, 2017, the outstanding amount under this revolving credit line was U.S. $350,000. As of December 31, 2018, the outstanding amount under this revolving credit line was U.S. $ 700,000.

The Federal Income Law applicable to PEMEX as of January 1, 2017, published in the Official Gazette of the Federation on November 17, 2016, authorized Petróleos Mexicanos and its Subsidiary Entities to incur an internal net debt up to Ps. 28,000,000 and an external net debt up to U.S. $7,100,000. PEMEX can incur additional internal or external debt, as long as the total amount of net debt (Ps. 150,000,000 equivalent to U.S. $8,055,900) does not exceed the ceiling established by the Federal Income Law.

On July 8, 2016, the Board of Directors of Petróleos Mexicanos approved policies and general requirements for obligations that constitute public debt of Petróleos Mexicanos and Subsidiary Entities, in accordance with Article 106 section I of the Petroleos Mexicanos Law.

Subsequently, the Board of Directors of PEMEX, approved the debt program for fiscal year 2017 in accordance with Article 13 section XXVI of the Petróleos Mexicanos Law.

During the period from January 1 to December 31, 2017, PEMEX participated in the following financing activities:

a. On February 14, 2017, Petróleos Mexicanos issued € 4,250,000 of debt securities under its Medium-Term Notes Program, Series C in three tranches: (i) € 1,750,000 of its 2.50% Notes due August 2021;(ii) € 1,250,000 of its 3.75% Notes due February 2024; and (iii) € 1,250,000 of its 4.875% Notes due February 2028.

b. On April 6, 2017, Petróleos Mexicanos executed a U.S. $132,000, non-revolving bilateral credit line from Banco Mercantil del Norte, S.A., Institución de Banca Múltiple, Grupo Financiero Banorte, due on April 6, 2024, which bears a fixed interest rate of 5.25%.

c. On May 15, 2017, Petróleos Mexicanos entered into a simple credit line in the amount of U.S. $400,000 at a floating interest rate linked to LIBOR plus 165 basis points, due May 2020 and was used in two tranches of U.S. $200,000 (on May 24, 2017 and July 14, 2017, respectively).

d. On June 16, 2017, Petróleos Mexicanos increased its Medium-Term Notes Program, Series C, from U.S. $72,000,000 to U.S. $92,000,000.

e. On July 17, 2017, Petróleos Mexicanos entered into a revolving credit facility in the amount of U.S. $1,950,000 and matures in 2020.

f. On July 18, 2017, Petróleos Mexicanos issued under its U.S.$92,000,000 Medium-Term Notes Program, Series C: (i) U.S. $2,500,000 of its 6.500% Notes due March 2027; and (ii) U.S. $2,500,000 of its 6.75% Bonds due September 2047.

g. On July 21, 2017, Petróleos Mexicanos consummated a tender offer pursuant to which it purchased U.S. $922,485 aggregate principal amount of its outstanding 5.750% Notes due 2018, U.S. $644,374 aggregate principal amount of its outstanding 3.500% Notes due 2018 and U.S. $172,591 aggregate principal amount of its outstanding 3.125% Notes due 2019.

h. On November 16, 2017, Petróleos Mexicanos issued ₤ 450,000 at a rate interest of its 3.750% Notes due 2025 under its U.S.$92,000,000 Medium-Term Notes Program, Series C.

i. On December 15, 2017, AGRO refinanced a credit line for U.S. $390,000, prepaying U.S. $140,000 and entering into a new credit line for the outstanding U.S. $250,000, which bears interest at a floating rate linked to LIBOR plus 250 basis points on a quarterly basis and matures on June 29, 2018.

j. On December 18, 2017, Petróleos Mexicanos entered into a bilateral credit line facility in the amount of U.S. $200,000, which bears interest at a floating rate linked to LIBOR plus 165 basis points and matures on December 18, 2020.

k. On December 21, 2017, Petróleos Mexicanos borrowed U.S. $300,000 from a bilateral credit line which bears interest at a floating rate linked to LIBOR plus 175 basis points, which matures on December 21, 2022.

All the financing activites were guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services.

From January 1 to December 31, 2017, PMI HBV obtained U.S. $15,141,500 in financing from its revolving credit line and repaid U.S. $14,914,000. As of December 31, 2017, the outstanding amount under this revolving credit line was U.S. $227,500.

As of December 31, 2017, Petróleos Mexicanos had U.S. $6,700,000 and Ps. 23,500,000 in available credit lines in order to ensure liquidity. The available amounts are U.S. $5,400,000 and Ps. 23,500,000, respectively.

Various financial transactions (including credit facilities and bond issuances) require compliance with various covenants that, among other things, place restrictions on the following types of transactions by PEMEX, subject to certain exceptions:

- The sale of substantial assets essential for the continued operations of its business.

(Figures stated in thousands, except as noted)

- The incurrence of liens against its assets.
- Transfers, sales or assignments of rights to payment not yet earned under contracts for the sale of crude oil or natural gas, accounts receivable or other negotiable instruments.

As of December 31, 2018 and 2017 and as of the date of the issuance of these consolidated financial statements, PEMEX was in compliance with the covenants described above.

As of December 31, 2018, long-term debt was as follows:

	Rate of interest [1]	Maturity	Pesos (thousands)	Foreign currency (thousands)
U.S. dollars				
Bonds	Fixed from 1.7% to 9.5% and LIBOR plus 0.35% to 3.65%	Various to 2048	Ps. 1,163,861,026	US$ 59,130,566
Purchasing loans	LIBOR plus 0.85%	Various to 2019	5,904,870	300,000
Project financing	Fixed from 2.45% to 3.81% and LIBOR plus 0.24% to 1.75%	Various to 2028	52,159,977	2,650,015
Direct loans	Fixed from 3.31% to 5.25% and LIBOR plus 1.65% to 1.75%	Various to 2031	51,365,998	2,609,676
Syndicated loans	LIBOR plus 0.85%	Various to 2020	39,164,611	1,989,778
Bank loans	LIBOR plus 1.19% to 3.50%	Various to 2023	2,704,412	137,399
Financial leases	Fixed from 4.44% to 4.54%	Various to 2025	6,053,280	307,540
Lease-back [4]	Fixed from 5.4% to 8.4%	Various to 2036	30,903,650	1,570,076
Total financing in U.S. dollars			1,352,117,824	US$ 68,695,050
Euros				
Bonds	Fixed from 1.875% to 5.5%	Various to 2030	334,044,298	€ 14,842,851
Financial leases	Fixed to 11.26%	Various to 2022	222	10
Direct loans	Fixed to 5.11%	Various to 2023	11,255,352	500,118
Total financing in Euros			345,299,872	€ 15,342,979
Japanese yen:				
Bonds	Fixed from 0.54% to 3.5% and LIBOR yen plus 0.75%	Various to 2026	**31,171,326**	**¥ 173,850,117**

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Rate of interest (1)	Maturity	Pesos (thousands)	Foreign currency (thousands)
Pesos				
Certificados bursátiles	Mexican Government Treasury Certificates ("Cetes") , TIIE(1) less 0.06% to 1.35%, and fixed at 7.19% to 9.1%	Various to 2026	Ps. 148,090,688	
Direct loans	Fixed at 6.55% and TIIE plus 0.50% to 4.0%	Various to 2029	32,309,858	
Syndicated loans	TIIE plus 0.95%	Various to 2025	28,925,329	
Total financing in pesos			Ps. 209,325,875	
Unidades de Inversión Certificados bursátiles				
Certificados bursátiles	Zero rate and Fixed at 3.02% to 5.23%	Various to 2035	59,727,769	
Other currencies:				
Bonds	Fixed from 1.5% to 8.25%	Various to 2025	48,192,756	
Total principal in pesos(2)			2,045,835,422	
Plus: accrued interest			33,432,631	
Notes payable to contractors(3)			3,018,063	
Total principal and interest			2,082,286,116	
Less: short-term maturities			154,191,754	
Short-term portion of financing lease			2,490,963	
Current portion of notes payable to contractors(3)			1,680,361	
Accrued interest			33,432,631	
Total short-term debt and current portion of long-term debt			191,795,709	
Long-term debt			Ps. 1,890,490,407	

As of December 31, 2017, long-term debt was as follows:

	Rate of interest (1)	Maturity	Pesos (thousands)	Foreign currency (thousands)
U.S. dollars				
Bonds	Fixed from 1.7% to 9.5% and LIBOR plus 0.35% to 3.65%	Various to 2047	Ps. 1,138,845,231	US$ 57,556,097
Purchasing loans	LIBOR plus 0.85%	Various to 2018	25,722,710	1,300,000
Project financing	Fixed from 2.35% to 3.81% and LIBOR plus 0.24% to 1.75%	Various to 2025	64,974,389	3,283,741
Direct loans	Fixed from 5.25% to 5.44% and LIBOR plus 1.65%	Various to 2020	43,141,231	2,180,315
Syndicated loans	LIBOR plus 0.85%	Various to 2020	39,347,774	1,988,597
Bank loans	Fixed from 3.5% to 5.28%	Various to 2023	3,451,629	174,442
Financial leases	Fixed from 0.38% to 1.99%	Various to 2025	7,621,062	385,161
Lease-back (4)	Fixed from 0.45% to 0.7%	Various to 2036	32,677,268	1,651,476
Total financing in U.S. dollars			1,355,781,294	US$ 68,519,829

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Rate of interest [1]	Maturity	Pesos (thousands)	Foreign currency (thousands)
Euros				
Bonds	Fixed from 1.875% to 5.5%	Various to 2030	287,386,195	€ 12,097,975
Project financing	Fixed from 2.1% to 5.11%	Various to 2023	11,879,379	500,081
Total financing in Euros			299,265,574	€ 12,598,056
Japanese yen:				
Bonds	Fixed from 0.54% to 3.5% and LIBOR yen plus 0.75%	Various to 2026	30,541,407	¥ 173,827,018
Pesos				
Certificados bursátiles	Mexican Government Treasury Certificates ("Cetes") , TIIE[1] less 0.06% to 1.35%, and fixed at 7.19% to 9.1%	Various to 2026	Ps. 149,564,918	
Direct loans	Fixed at 6.55% and TIIE plus 0.85% to 1.25%	Various to 2025	28,597,423	
Syndicated loans	TIIE plus 0.95	Various to 2025	33,646,107	
Total financing in pesos			Ps. 211,808,448	
Unidades de Inversión Certificados bursátiles				
Certificados bursátiles	Zero rate and Fixed at 3.02% to 5.23%	Various to 2035	57,197,211	
Other currencies:				
Bonds	Fixed from 1.5% to 8.25%	Various to 2025	47,148,936	
Total principal in pesos[2]			2,001,742,870	
Plus: accrued interest			32,078,624	
Notes payable to contractors[3]			4,053,577	
Total principal and interest			2,037,875,071	
Less: short-term maturities			119,855,835	
Short-term portion of financing lease			3,101,723	
Current portion of notes payable to contractors[3]			2,173,285	
Accrued interest			32,078,624	
Total short-term debt and current portion of long-term debt			157,209,467	
Long-term debt			Ps. 1,880,665,604	

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

The following table presents the roll-forward of total debt of PEMEX for each of the year ended December 31, 2018 and 2017, which includes short and long-term debt:

	2018 (i)	2017 (i)
Changes in total debt:		
At the beginning of the year	Ps. 2,037,875,071	Ps. 1,983,170,730
Loans obtained - financing institutions	899,769,012	704,715,468
Debt payments	(838,934,803)	(639,950,041)
Accrued interest	120,727,022	117,644,548
Interest paid	(115,289,389)	(108,910,417)
Foreign exchange	(19,762,208)	(16,685,439)
Discounts and expenses related to debt issuance	(2,098,589)	(2,109,778)
At the end of the year	**Ps. 2,082,286,116**	**Ps. 2,037,875,071**

(i) These amounts include accounts payable by Financed Public Works Contracts ("FPWC") (formerly known as Multiple Services Contracts), which do not generate cash flows.

	2019	2020	2021	2022	2023	2024 and thereafter	Total
Maturity of the total principal outstanding and accrued interest as of December 31, 2018, for each of the years ending December 31.	Ps.191,795,709	189,948,833	184,328,985	171,607,627	168,577,397	1,176,027,565	Ps.2,082,286,116

(1) As of December 31, 2018 and 2017, interest rates were as follows: 3 month LIBOR of 2.80763% and 1.69428%, respectively; 6 month LIBOR of 2.875630% and 1.83707%, respectively; TIIE rate of 8.5897% and 7.6241%, respectively, for 28 days; TIIE rate of 8.6375% and 7.6556%, respectively, for 91 days.

(2) Includes financing from foreign banks of Ps. 1,746,196,819 and Ps. 1,701,363,406, as of December 31, 2018 and 2017, respectively.

(3) The total amounts of notes payable to contractors as of December 31, 2018 and 2017, current and long-term, are as follows:

(Figures stated in thousands, except as noted)

	2018	2017
Total notes payable to contractors [(a) (b)]	Ps. 3,018,063	Ps. 4,053,577
Less: current portion of notes payable to contractors	1,680,361	2,173,285
Notes payable to contractors (long-term)	**Ps. 1,337,702**	**Ps. 1,880,292**

[(a)] PEMEX has entered into FPWCs pursuant to which the hydrocarbons and construction in progress are property of Pemex Exploration and Production. Pursuant to the FPWC, the contractors manage the work in progress, classified as development, infrastructure and maintenance. As of December 31, 2018 and 2017, PEMEX had an outstanding amount payable of Ps. 1,153,108 and Ps. 1,678,843, respectively.

[(b)] During 2007, Pemex-Exploration and Production contracted for the purchase of a Floating Production Storage and Offloading ("FPSO") vessel. The investment in the vessel totaled U.S. $723,575. As of December 31, 2018 and 2017, the outstanding balances owed to the contractor were Ps. 1,864,955 (U.S. $ 94,751) and Ps. 2,374,734 (U.S. $120,017), respectively. In accordance with the contract, the estimated future payments are as follows:

Year	Amount
2019	U.S.$ 25,267
2020	25,267
2021	25,267
2022	18,950
Total	**U.S $ 94,751**

[(4)] PEMEX obtained financing through the sale and leaseback of certain infrastructure assets and a plant, which will require periodic payments through 2036.

This transaction was recognized as a financing activity due to the fact that PEMEX retained all of the risks and benefits associated with ownership of the asset and substantially all of the operating rights to the assets.

The outstanding liability for this transaction is payable as follows:

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Years	Pesos	U.S. dollars
2019	Ps. 3,865,651	U.S. $ 196,396
2020	3,865,651	196,396
2021	3,865,651	196,396
2022	3,865,651	196,396
2023	3,865,651	196,396
2024 and thereafter	35,325,193	1,794,715
	54,653,448	2,776,695
Less: short-term unaccrued interest	2,309,281	117,324
Less: long-term unaccrued interest	21,440,519	1,089,297
Total financing	30,903,648	1,570,074
Less: short-term portion of financing (excluding interest)	1,556,370	79,072
Total long term financing	**Ps. 29,347,278**	**U.S.$ 1,491,002**

(5) As of December 31, 2018 and 2017, PEMEX used the following exchange rates to translate the outstanding balances in foreign currencies to pesos in the statement of financial position:

	2018	2017
U.S. dollar	Ps. 19.6829	Ps. 19.7867
Japanese yen	0.1793	0.1757
Pounds sterling	25.0878	26.7724
Euro	22.5054	23.7549
Swiss francs	19.9762	20.2992
Canadian dollar	14.4138	15.7858
Australian dollar	13.8617	15.4752

NOTE 19. DERIVATIVE FINANCIAL INSTRUMENTS

PEMEX faces market risk caused by the volatility of hydrocarbon prices, exchange rates and interest rates, credit risk associated with investments and financial derivatives, as well as liquidity risk. In order to monitor and manage these risks, PEMEX has approved general provisions relating to financial risk management, which are comprised of policies and guidelines that promote an integrated framework for risk management, regulate the use of DFIs, and guide the development of risk mitigation strategies.

This regulatory framework establishes that DFIs should be used only for the purpose of mitigating financial risk. The use of DFIs for any other purpose must be approved in accordance with PEMEX's current internal regulation. PEMEX has a Financial Risk Working Group (FRWG) which is a specialized working group with decision-making authority on financial risk exposure, financial risk mitigation schemes, and DFIs trading of Petróleos Mexicanos, the subsidiary entities, and where applicable, subsidiary companies.

Approved DFIs are mainly traded on the OTC (Over the Counter) market; however, exchange traded instruments may also be used. In the case of PMI Trading, DFIs are traded on CME-ClearPort.

The different types of DFIs that PEMEX trades are described below, in the subsections corresponding to the applicable trading markets.

One of PEMEX's policies is to contribute minimizing the impact that unfavorable changes in financial risk factors have on its financial results by promoting an adequate balance between incoming cash flows from operations and outgoing cash flows related to its liabilities.

As part of the regulatory framework for financial risk management, PEMEX has established the eligible counterparties with which it may trade DFIs and other financial instruments.

In addition, certain PMI companies have implemented a regulatory framework for risk management with respect to its activities, which consists of policies, guidelines and procedures to manage the market risk associated with its commodity trading activities in accordance with industry best practices, such as: 1) the use of DFIs for financial risk mitigation purposes; 2) the segregation of duties; 3) valuation and monitoring mechanisms, such as the generation of a daily portfolio risk report, value at risk ("VaR") computation; and 4) VaR limits, both at a global and business unit level and the implementation of stop loss mechanisms. In addition, PMI Trading also has its own risk management subcommittee which supervises the trading of DFIs.

Given that PEMEX's outstanding DFIs have been entered into for risk mitigation purposes, particularly with economic hedging purposes, there is no need to establish and monitor market risk limits.

For those portfolios with an open market risk exposure, PEMEX's financial risk management regulatory framework establishes the implementation and monitoring of market risk limits such as VaR and capital at risk (an aggregation of fair value or mark-to-market ("MtM") and profit and loss ("P&L"), or "CaR").

PEMEX has also established credit guidelines for DFIs that Pemex Industrial Transformation offers to its domestic customers, which include the use of guarantees and credit lines. For exchange traded DFIs, PEMEX trades under the margin requirements of the corresponding exchange market, and therefore does not have internal policies for these DFIs.

DFIs held with financial counterparties do not require collateral exchange clauses. Notwithstanding, PEMEX's regulatory framework promotes credit risk mitigation strategies such as collateral exchange.

PEMEX does not have an independent third party to verify compliance with these internal standards; however, PEMEX has internal control procedures that certify compliance with existing policies and guidelines.

A. Risk Management

I. Market Risk

i. Interest rate risk

PEMEX is exposed to fluctuations in floating interest rate liabilities. PEMEX is exposed to U.S. dollar LIBOR and to Mexican peso TIIE. As of December 31, 2018, approximately 15.3% of PEMEX's total net debt outstanding (including DFIs) consisted of floating rate debt.

Occasionally, for strategic reasons or in order to offset the expected inflows and outflows, PEMEX has entered into interest rate swaps. Under its interest rate swap agreements, PEMEX acquires the obligation to make payments based on a fixed interest rate and is entitled to receive floating interest rate payments based on LIBOR, TIIE or a rate referenced to or calculated from TIIE.

As of December 31, 2018, PEMEX was a party to four interest rate swap agreements denominated in U.S. dollars for an aggregate notional amount of U.S. $1,401,250 at a weighted average fixed interest rate of 2.35% and a weighted average term of 6.29 years.

Similarly, in order to eliminate the volatility associated with variable interest rates of long-term financing operations, PMI NASA has executed interest rate swap agreements denominated in U.S. dollars for an aggregate notional amount of U.S. $56,692, at a weighted average fixed interest rate of 4.17% and a weighted average term of 3.41 years.

Moreover, PEMEX invests in pesos and U.S. dollars in compliance with applicable internal regulations, through portfolios that have different purposes that seek an adequate return subject to risk parameters that reduce the probability of capital losses. The objective of the investments made through these portfolios is to meet PEMEX's obligations payable in pesos and U.S. dollars.

The investments made through PEMEX's portfolios are exposed to domestic and international interest rate risk and credit spread risk derived from government and corporate securities, and inflation risk arising from the relationship between UDIs and pesos. However, these risks are mitigated by established limits on exposure to market risk.

ii. Exchange rate risk

Most of PEMEX's revenues are denominated in U.S. dollars, a significant amount of which is derived from exports of crude oil and petroleum products, which are priced and payable in U.S. dollars. Additionally, PEMEX's revenues from domestic sales of gasoline and diesel net of IEPS Tax, tax duties, incentives, and other related taxes, as well as domestic sales of natural gas and its byproducts, LPG and petrochemicals, are referenced to international U.S. dollar-denominated prices.

PEMEX's expenses related to hydrocarbon duties are calculated based on international U.S. dollar-denominated prices and the cost of hydrocarbon imports that PEMEX acquires for resale in Mexico or use in its facilities are indexed to international U.S. dollar-denominated prices. By contrast, PEMEX's capital expenditure and operating expenses are established in pesos.

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As a result of this cash flow structure, the depreciation of the peso against the U.S. dollar increases PEMEX's financial balance. The appreciation of the peso relative to the U.S. dollar has the opposite effect. PEMEX manages this risk without the need for hedging instruments, because the impact on PEMEX's revenues of fluctuations in the exchange rate between the U.S. dollar and the peso is offset in whole or in part by its impact on its obligations.

Therefore, PEMEX prioritizes debt issuances denominated in U.S. dollars; nonetheless, this is not always achievable, hence non-U.S. dollar denominated debt issued in international currencies is hedged through DFIs to mitigate their exchange rate exposure, either by swapping them into U.S. dollars or through other derivative structures. The rest of the debt is denominated in pesos or in UDIs, for which most of the debt denominated in UDIs has been converted into pesos through DFIs in order to eliminate the inflationary risk exposure.

As a consequence of the above, PEMEX's debt issued in international currencies other than U.S. dollars has exchange rate risk mitigation strategies. PEMEX has selected strategies that further seek to reduce its cost of funding by leaving, in some cases, part of this exchange rate exposure unhedged when assessed appropriate.

The underlying currencies of PEMEX's DFIs are the euro, Swiss franc, Japanese yen and Pound sterling against the U.S. dollar and UDIs against the peso.

As of December 31, 2018, PEMEX entered into various cross-currency swaps to hedge inflation risk arising from debt obligations denominated in UDIs for an aggregate notional amount of Ps. 6,844,866 and during 2017, PEMEX entered into the same kind of instruments to hedge inflation risk arising from debt denominated in UDIs, for an aggregate notional amount of Ps. 6,291,969.

Additionally, in 2018, PEMEX entered into, without cost, structures which are composed of a cross-currency swap and the sale of a call option, in order to hedge the notional risk of four debt issues in euros for an aggregate notional amount of € 3,150,000, and an issue of debt in swiss francs for Fr. 365,000, guaranteeing complete protection up to a certain exchange rate and partial protection above that level.

Moreover, in 2017 PEMEX entered into, without cost, three options structures called "Seagull Option" to hedge the notional risk of three debt issues in euros for an aggregate notional amount of € 4,250,000. These structures protect the short exposure in euros against an appreciation of the euro versus the U.S. dollar in a specific range and result in a benefit if the euro depreciates up to a certain exchange rate, for each debt issue. Whereas, in order to mitigate the exchange rate risk caused by the coupons of these issues PEMEX entered into only coupon swaps.

Additionally, in 2017, PEMEX entered into, without cost, a structure which is composed of a cross-currency swap and the sale of a call option, in order to hedge the notional risk of a debt issue in Pounds sterling for £ 450,000, guaranteeing complete protection up to a certain exchange rate and partial protection above that level.

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PEMEX recorded a total net foreign exchange gain (loss) of Ps. 23,659,480, Ps. 23,184,122 and Ps. (254,012,743), for the years ended December 31, 2018, 2017 and 2016, respectively; these amounts include the unrealized foreign exchange gain (loss) associated with debt of Ps. 19,762,208, Ps. 16,685,439 and Ps. (243,182,764) for the years ended December 31, 2018, 2017 and 2016, respectively. The appreciation of the peso during 2018 and 2017 caused a total net foreign exchange gain because a significant part of PEMEX's debt, 89.77% (principal only) as of December 31, 2018 is denominated in foreign currency. Unrealized foreign exchange gains and losses do not impact PEMEX's cash flows. Due to the cash flow structure described above, the depreciation of the peso relative to the U.S. dollar does not affect PEMEX's ability to meet U.S. dollar-denominated financial obligations and improves PEMEX's ability to meet peso-denominated financial obligations. On the other hand, the appreciation of the peso relative to the U.S. dollar may increase PEMEX's peso debt service costs on a U.S. dollar basis. PEMEX's foreign exchange gain in 2018 was due to the appreciation of the peso, from Ps. 19.7867 = U.S. $1.00 on December 31, 2017 to Ps. 19.6829 = U.S. $1.00 on December 31, 2018. PEMEX's foreign exchange gain in 2017 was due to the appreciation of the peso, from Ps. 20.6640 = U.S. $1.00 on December 31, 2016 to Ps. 19.7867 = U.S. $1.00 on December 31, 2017. PEMEX's foreign exchange loss in 2016 was due to the depreciation of the peso, from Ps. 17.2065 = U.S. $1.00 on December 31, 2015 to Ps. 20.6640 = U.S. $1.00 on December 31, 2016.

Certain of the PMI companies face market risks generated by fluctuations in foreign exchange rates. In order to mitigate these risks, the boards of directors of several of these companies have authorized a policy which stipulates that no more than 5% of a company's total financial assets may be denominated in a currency other than its functional currency, unless the company owes a duty or expected payment in a currency other than its functional one. Accordingly, some PMI companies will, from time to time, enter into DFIs in order to mitigate the risk associated with financing operations denominated in currencies other than their respective functional currency.

Finally, a significant amount of PMI Trading's income and expenses, including the cost of sales and related sales costs, is derived from the trade of refined products, petrochemicals and gas liquids to PEMEX subsidiaries and third parties, whose prices are determined and are payable in U.S. dollars. PMI Trading's exposure to foreign currency risk results primarily from the need to fund tax payments denominated in domestic currency, as well as certain related sales costs denominated in domestic currency.

PMI Trading believes it can adequately manage the risk created by the payment of taxes in domestic currency without the need to enter into hedging instruments because the exposure to this risk is marginal relative to the total flows of U.S. dollar. In addition, in the event that a potential foreign exchange risk arises in connection with a commercial transaction, PMI Trading may implement risk mitigation measures by entering into DFIs.

iii. Hydrocarbon Price Risk

PEMEX periodically assesses its revenues and expenditures structure in order to identify the main market risk factors that PEMEX's cash flows are exposed to in connection with international hydrocarbon prices. Based on this assessment, PEMEX monitors its exposure to the most significant risk factors and quantifies their impact on PEMEX's financial balance.

PEMEX's exports and domestic sales are directly or indirectly related to international hydrocarbon prices. Therefore, PEMEX is exposed to fluctuations in these prices. In terms of crude oil and natural gas, part of this risk is transferred to the Mexican Government under PEMEX's current fiscal regime.

PEMEX's exposure to hydrocarbon prices is partly mitigated by natural hedges between its inflows and outflows.

Additionally, PEMEX continuously evaluates the implementation of risk mitigation strategies, including those involving the use of DFIs, considering the operative and budgetary feasibility of those strategies.

In 2017, the Board of Directors of Petróleos Mexicanos approved the establishment of an Annual Oil Hedging Program. Since then, PEMEX has implemented hedging strategies to partially protect its cash flows from drops in the Mexican crude oil basket price below the one established in the Federal Revenue Law.

In April 2017, PEMEX entered into a crude oil hedge for fiscal year 2017, in which PEMEX hedged 409 thousand barrels per day from May to December of fiscal year 2017, for U.S. $133,503. Afterwards, during the second half of 2017, PEMEX entered into a crude oil hedge for fiscal year 2018, in which PEMEX hedged 440 thousand barrels per day from January to December of fiscal year 2018, for U.S. $449,898.

During 2018, the crude oil hedge for fiscal year 2019 was implemented, pursuant to which PEMEX hedged 320 thousand barrels per day for the period between December 2018 and December 2019, for U.S. $149,588.

In addition to supplying natural gas, Pemex Industrial Transformation offers DFIs to its domestic customers in order to provide them with support to mitigate the risk associated with the volatility of natural gas prices. Until 2016, Pemex Industrial Transformation entered into DFIs with Mex Gas Supply, S.L. under the opposite position to those DFIs offered to its customers in order to mitigate the market risk it bears under such offered DFIs. Mex Gas Supply, S.L. then transfered the related price risk derived from the DFI position held with Pemex Industrial Transformation to international financial counterparties by entering into these opposite position DFIs with such parties. As of 2017, Pemex Industrial Transformation must enter into DFIs with Petróleos Mexicanos under the opposite position to those DFIs offered to its customers, thereby replacing Mex Gas Supply, S.L. However, as of December 31, 2018, no DFI had been carried out under this mechanism.

Due to the above, Pemex Industrial Transformation maintains a negligible or even null exposure to market risk. These portfolios have VaR and CaR limits in order to limit market risk exposure.

PMI Trading faces market risk generated by the terms of the purchase and sale of refined products and natural gas liquids, as well as the volatility of oil prices. Accordingly, it frequently enters into DFIs in order to mitigate this risk, thereby reducing the volatility of its financial results.

(Continued)

iv. Market risk quantification

The quantification of market risk exposure in PEMEX's financial instruments is presented below, in accordance with the applicable international risk management practices.

Interest rate risk quantification

The quantification of interest rate risk of investment portfolios is carried out by using the one-day horizon historical VaR, with a confidence level of 95%, over a period of one year. The VaR incorporates interest rate and spread risks. In addition, for portfolios in domestic currency, the VaR includes the inflation risk embedded in securities denominated in UDI. For portfolio management purposes, interest rate risk is mitigated by VaR limits.

As of December 31, 2018, the VaRs of PEMEX's investment portfolios were Ps. (17.19) for the Peso Treasury Portfolio, Ps. 0.00 for the Fondo Laboral Pemex Portfolio ("FOLAPE"), and U.S. $ 0.00 for the U.S. Dollar Treasury Portfolio. The Fideicomiso de Cobertura Laboral y de Vivienda Portfolio ("FICOLAVI") and the Mexican Peso Treasury Portfolio managed by Operadora de Fondos Nafinsa S.A. de C.V. ("OFINSA") were written off in 2018.

In addition to the exposure to interest rate fluctuations of the DFIs in which PEMEX is obligated to pay floating rates, PEMEX's DFIs are exposed to MtM volatility as a result of changes in the interest rate curves used in their valuation.

Interest rate risk quantification was calculated for DFIs in conjunction with the interest rate risk quantification for the debt portfolio. The following table shows the sensitivity of PEMEX's DFIs and debt portfolio to a parallel shift of 10 basis points (bp) over the zero coupon rate curves. The 10bp parallel shift may be used to estimate in a simple manner the impact for proportional values to this shift and was selected in accordance with market practices for financial risk management.

For the debt portfolio, interest rate risk sensitivity was calculated taking into account both the DFI interbank market yield curves and the PEMEX curves (which were also used to estimate the debt portfolios' fair value). These metrics were calculated solely for informational purposes and are not used for portfolio management purposes because PEMEX does not intend to prepay its debt or terminate its DFIs early. Therefore, there is no interest rate risk arising from fixed rate obligations.

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INTEREST RATE and CURRENCY DFIs
Interest rate sensitivity to + 10 bp

	Interbank Yield Curves			PEMEX Curves
Currency	**Sensitivity debt**	**Sensitivity DFIs**	**Sensitivity net**	**Sensitivity debt**
in thousands U.S. dollars				
CHF	3,816	(3,473)	343	3,340
Euro	103,859	(85,825)	18,034	73,784
Pound Sterling	5,871	(5,445)	426	4,598
Yen	7,600	(3,470)	4,130	5,518
Peso	24,783	1,693	26,476	19,808
UDI	14,032	(14,032)	0	9,803
U.S. dollar	779,844	93,006	872,850	333,180

In addition, PEMEX performed a retrospective sensitivity analysis of the impact on its financial statements for the years ended December 31, 2018, 2017 and 2016, in which PEMEX assumed either an increase or decrease of 25 basis points in the floating interest rates of its debt and corresponding hedges.

At December 31, 2018, 2017 and 2016, had market interest rates been 25 basis points higher, with all other variables remaining constant, net loss for the year would have been Ps. 649,339, Ps. 704,011 and Ps. 841,024 higher for December 31, 2018, 2017 and 2016, respectively, primarily as a result of an increase in interest expense. Conversely, had market interest rates been 25 basis points lower, net loss for the year would have been Ps. 649,339, Ps. 704,011 and Ps. 841,024 lower at December 31, 2018, 2017 and 2016, respectively, primarily as a result of a decrease in interest expense.

Exchange rate risk quantification

The investments of PEMEX's portfolios do not face foreign exchange rate risk because the funds of such portfolios are used to meet obligations in pesos and U.S. dollars.

Currency DFIs are entered into in order to hedge exchange rate risk arising from debt flows in currencies other than pesos and U.S. dollars or inflation risk arising from debt flows in UDIs. However, due to the accounting treatment, net income is exposed to mark-to-market volatility as a result of changes in the exchange rates used in their valuation.

Exchange rate risk quantification was calculated for DFIs in conjunction with the exchange rate risk quantification for the debt portfolio. The following table shows the sensitivity of PEMEX's DFIs and debt portfolio to an increase of 1% to the exchange rates of currencies against the U.S. dollar. The 1% may be used to estimate in a simple manner the impact for proportional values to this increase and was selected in accordance with market practices for financial risk management.

(Continued)

For the debt portfolio, exchange rate risk sensitivity was calculated taking into account both, interbank market yield curves and the PEMEX curves. In addition, the table shows the one-day horizon historical VaR of the remaining open position, with a confidence level of 95%, over a period of one year. These metrics were calculated solely for informational purposes. Nevertheless, in order to carry out management activities related to its debt portfolio, PEMEX periodically conducts quantitative analyses in order to estimate the exchange rate risk exposure generated by its debt issuances. Based on these analyses, PEMEX has elected to enter into DFIs as an exchange rate risk mitigation strategy. These DFIs along with the debt that they hedge are shown in the following table:

INTEREST RATE and CURRENCY DFIs

	Interbank Yield Curves				PEMEX Curves
Currency	**1% Debt**	**1% DFIs**	**1% Net**	**VaR 95% Net**	**1% Debt**
in thousands U.S. dollars					
CHF	(15,283)	14,597	(686)	(463)	(14,183)
Euro	(214,136)	185,752	(28,384)	(25,365)	(173,687)
Pound Sterling	(12,318)	11,701	(617)	(527)	(10,292)
Yen	(17,118)	11,569	(5,549)	(4,482)	(14,158)
Peso	(104,478)	(32,064)	(136,542)	(164,722)	(95,975)
UDI	(30,163)	30,163	(0)	(0)	(25,951)

As shown in the table above, exchange rate risk derived from debt denominated in currencies other than pesos and U.S. dollars is almost fully hedged by DFIs. The exchange rate risk exposure to the Swiss franc, euro, Pound sterling and Japanese yen is a result of the delta of the structures described above (Seagull Options and Calls), and considering the current exchange rate levels, represents a lower funding cost than the hedging strategies carried through swaps.

In addition, PEMEX performed a retrospective sensitivity analysis of the impact on its financial statements of the years ended December 31, 2018, 2017 and 2016, in which PEMEX assumed either an increase or decrease of 10% in the exchange rate between the U.S. dollar and peso in order to determine the impact on net income and equity as a result of applying these new rates to the monthly balances of assets and liabilities denominated in U.S. dollars.

At December 31, 2018, 2017 and 2016, had the peso depreciated against the U.S. dollar by 10% with other variables remaining constant, net loss would have been Ps.192,025, Ps. 149,669 and Ps. 124,512 highte, respectively, primarily as a result of an increase in the exchange rate losses. However, had the peso appreciated against the U.S. dollar by 10%, net loss for the period would have decreased by Ps. 192,025, Ps. 149,669 and Ps. 124,512, respectively, primarily as a result of the decrease in exchange rate losses.

Hydrocarbon price risk quantification

Pemex Industrial Transformation occasionally faces market risk due to open positions arising from the mismatch between the DFI portfolio offered to domestic customers and hedges with international counterparties. As of December 31, 2018, Pemex Industrial Transformation's natural gas DFI portfolio had no market risk exposure.

Market risk exposure is measured using the 20-day Delta-Gamma VaR methodology, with a confidence level of 95%, based on 500 daily observations; VaR and CaR are monitored and mitigated by pre-established limits.

It should be noted that sensitivity analyses were not carried out for other financial instruments, such as accounts receivable and payable (as defined in the financial reporting standards). Such accounts are cleared in short-term, and therefore market risk is considered to be nonexistent. Most of these accounts are related to hydrocarbon prices.

In accordance with the risk management regulatory framework that PMI Trading has implemented, VaR and the change in profit and loss by portfolio are calculated daily and compared to the maximum applicable limits in order to implement risk mitigation mechanisms as necessary.

PMI Trading's global VaR associated with commodities market risk was U.S. $(8,687) as of December 31, 2018. This VaR was calculated using the historical method with a 99% confidence level, two-year history and a one-day horizon. The minimum VaR recorded on the year was U.S. $(2,903) (registered on June 11, 2018) and the maximum VaR recorded on the year was U.S. $(26,533) (registered on September 21, 2018). As of December 31, 2017, the global VaR was U.S. $(8,789).

The quantification of crude oil price risk is carried out by using the one-day horizon historical VaR, with a confidence level of 95%, over a period of one year. As of December 31, 2018, this was U.S.$ (19,651).

II. Credit Risk

When the fair value of a DFI is favorable to PEMEX, PEMEX faces the risk that the counterparty will not be able to meet its obligations. PEMEX monitors its counterparties' creditworthiness and calculates the credit risk exposure for its DFIs. As a risk mitigation strategy, PEMEX only enters into DFIs with major financial institutions with a minimum credit rating of BBB-. These ratings are issued and revised periodically by risk rating agencies. Furthermore, PEMEX seeks to maintain a diversified portfolio of counterparties.

In order to estimate PEMEX's credit risk exposure to each financial counterparty, the potential future exposure is calculated by projecting the risk factors used in the valuation of each DFI in order to estimate the MtM value for different periods, taking into account any credit risk mitigation provisions.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Moreover, PEMEX has entered into various long-term cross-currency swaps agreements with "recouponing" provisions (pursuant to which the payments on the swaps are adjusted when the MtM exceeds the relevant threshold specified in the swap), thereby limiting the exposure with its counterparties to a specific threshold amount. The specified thresholds were reached in seven cross-currency swaps from the first to the fourth quarter of 2018, which were used to hedge the exchange rate exposure to the euro and to the Pound sterling, and in three cross-currency swaps during 2017, which were used to hedge the exchange rate exposure to the euro. This resulted in the cash settlement of such swaps and the resetting of swap terms to return their mark-to-market value to zero. During 2018, PEMEX did not enter into any cross-currency swap with these characteristics.

In addition, PEMEX has entered into long-term DFIs with mandatory early termination clauses (pursuant to which, at a given date and irrespective of the current MtM, the DFI will terminate and settle at the corresponding MtM, and PEMEX can either enter into a new DFI with the same counterparty or a new counterparty), which reduces the credit risk generated by the term of the DFI by bounding it to a specific date. As of December 31, 2018, PEMEX has entered into two Japanese yen Seagull Option structures, with termination clauses in 2021.

According to IFRS 13 "Fair Value Measurement," the fair value or MtM value of DFIs must reflect the creditworthiness of the parties. Consequently, the fair value of a DFI takes into account the risk that either party may default on its obligation. Due to the above, PEMEX applies the credit value adjustment ("CVA") method to calculate the fair value of its DFIs.

For each DFI, the CVA is calculated by determining the difference between the MtM and the estimated MtM adjusted for credit risk. In determining the credit risk, the CVA method takes into account the current market perception about the credit risk of both counterparties, using the following inputs: a) the MtM projection for each payment date based on forward yield curves; b) the implied default probability obtained from both, PEMEX and the counterparty's credit default swaps, at each payment date; and c) the default recovery rates of each counterparty.

The current and potential exposures, aggregated by credit rating, are as follows:

Maximum Credit Exposure by term in Petróleos Mexicanos

Rating	**Current**	**Less than 1 year**	**1-3 years**	**3-5 years**	**5-7 years**	**7-10 years**	**More than 10 years**
in thousands U.S. dollars							
A+	33,574	327,062	478,533	290,207	189,464	129,778	0
A	172,468	1,069,540	1,051,021	933,130	260,363	189,119	0
A-	54,288	143,584	9,780	0	0	0	0
BBB+	72,570	1,567,608	2,229,081	2,293,010	2,259,894	1,724,213	650,900
BBB-	(71,491)	33,290	127,099	151,033	156,401	160,631	0

PEMEX also faces credit risk derived from its investments. As of December 31, 2018, the notional amounts of investments in domestic currency, organized by the credit ratings of the issuances, were as follows:

(Figures stated in thousands, except as noted)

Credit rating of issuances*	Notional amount
mxAAA	Ps.100,344

* Minimum S&P, Moody's and Fitch credit rating.
National Credit Rating Scale.
Does not include investments in Mexican Government bonds.

The table above does not include domestic currency Mexican Government bonds since it is considered that, given the current credit rating, the default probability in this currency is zero.

Furthermore, by means of its credit guidelines for DFI operations, Pemex Industrial Transformation has significantly reduced its credit risk exposure related to the DFIs offered to its customers to assist them in mitigating the risk associated with the volatility of natural gas prices.

In order to qualify for these DFIs, Pemex Industrial Transformation’s customers must be party to a current natural gas supply contract and sign a domestic master derivative agreement.

Additionally, beginning on October 2, 2009, DFIs with these customers must be initially secured by cash deposits, letters of credit or other collateral provisions, as required. In accordance with these guidelines, in the event that a client does not meet its payment obligations, DFIs related to this client are terminated, rights to collateral are exercised and, if the collateral is insufficient to cover the fair value, natural gas supply is suspended until the payment is made.

On August 20, 2014, certain amendments to the credit guidelines were enacted, which allowed Pemex-Gas and Petrochemicals, and now Pemex Industrial Transformation, to offer to its clients with an adequate credit rating, based on an internal financial and credit assessment, DFIs with an exemption from collateral requirements up to certain amount through a credit line approved by the credit committee. Moreover, if the credit line is insufficient to cover each client’s exposure, the client is obligated to deposit collateral. If a client suffers an event of default, DFIs related to this client are terminated early and natural gas supply is suspended until the payment is made.

As of December 31, 2018, Pemex Industrial Transformation's DFIs had a fair value of Ps. 143 (deferred premiums included) for clients with exempted credit lines and Ps. 134 for clients with guaranteed credit lines. The total amount of exempt credit lines rose to Ps. 21,391, representing 1% usage of available exempt credit lines, while the total amount of guaranteed credit lines rose to Ps. 1,000 representing a 13% usage of available guaranteed credit lines.

As of December 31, 2018, the overdue accounts of natural gas customers in the industrial and distribution sectors accounted for less than 1% of the total sales of Pemex Industrial Transformation.

As of December 31, 2018, Pemex Industrial Transformation had open DFIs with two customers. Of the total volume (in millions of British thermal units or MMBtu) of DFIs, industrial customers represented 100%.

As of December 31, 2018 and 2017, Pemex Industrial Transformation had not provided any collateral for DFIs entered into to hedge its DFIs with customers. This was due to the following: (i) natural gas prices maintained levels below the strike price, which has kept the credit limits within the set limits; and (ii) when certain DFIs matured, Pemex-Gas and Basic Petrochemicals, and now Pemex Industrial Transformation, had used domestic customers' payments to meet its international obligations.

It is not considered necessary to disclose the potential future exposure of the DFIs' portfolio held by Pemex Industrial Transformation through Mex Gas Supply S. L., due to the fact that these instruments are collateralized, the current notional amount does not represent a significant amount and the maturity is less than one year.

PMI Trading's credit risk associated with DFI transactions is mitigated through the use of futures and standardized instruments that are cleared through CME-Clearport.

III. Liquidity Risk

PEMEX's main internal source of liquidity comes from its operations. Additionally, through its debt planning and the purchase and sale of U.S. dollars, PEMEX currently preserves a cash balance at a level of liquidity in domestic currency and U.S. dollars that is considered adequate to cover its investment and operating expenses, as well as other payment obligations, such as those related to DFIs.

In addition, as of December 31, 2018, PEMEX has acquired committed revolving credit lines in order to mitigate liquidity risk, three of which provide access to Ps. 3,500,000, Ps. 20,000,000 and Ps. 9,000,000 with expiration dates in June 2019, November 2019 and November 2023, respectively; and three others that each provide access to U.S. $1,500,000, U.S. $3,250,000 and U.S. $1,950,000 with expiration dates in December 2019, February 2020 and January 2021, respectively.

Finally, the investment strategies of PEMEX's portfolios are structured by selecting time horizons that consider each currency's cash flow requirements in order to preserve liquidity.

Certain PMI companies mitigate their liquidity risk through several mechanisms, the most important of which is the centralized treasury or "in-house bank," which provides access to a syndicated credit line for up to U.S. $ 700,000 and cash surplus capacity in the custody of the centralized structure. In addition, certain PMI companies have access to bilateral credit lines from financial institutions for up to U.S. $500,000.

(Continued)

These companies monitor their cash flow on a daily basis and protect their creditworthiness in the financial markets. Liquidity risk is mitigated by monitoring the maximum/minimum permissible financial ratios as set forth in the policies approved by each company's board of directors.

The following tables show the cash flow maturities as well as the fair value of PEMEX's debt and DFI portfolios as of December 31, 2018 and 2017. It should be noted that:

- For debt obligations, these tables present principal cash flow and the weighted average interest rates for fixed rate debt.
- For interest rate swaps, cross currency swaps, currency options and currency forwards, these tables present notional amounts and weighted average interest rates by expected (contractual) maturity dates.
- Weighted average variable rates are based on implied forward rates obtained from the interbank market yield curve at the reporting date.
- For natural gas DFIs, volumes are presented in millions of British thermal unit (MMBtu), and fixed average and strike prices are presented in U.S. dollars per MMBtu.
- For crude oil, volumes are presented in millions of barrels, and fixed average and strike prices are presented in U.S. dollars per barrel.
- A DFI's fair value includes CVA and is calculated based on market quotes obtained from market sources such as Bloomberg. Forward curves and implied volatilities for natural gas and crude oil are supplied by Bloomberg.
- For PMI Trading, the prices used in commercial transactions and DFIs are published by reputable sources that are widely used in international markets, such as CME-NYMEX, Platts and Argus, among others.
- Fair value is calculated internally, either by discounting cash flows with the corresponding zero-coupon yield curve in the original currency, or through other standard methodologies commonly used in financial markets for specific instruments.
- For all instruments, the tables are based on the contract terms in order to determine the future cash flows that are categorized by expected maturity dates.

This information is presented in thousands of pesos, except as noted.

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Quantitative Disclosure of Debt Cash Flow's Maturities as of December 31, 2018[(1)]

	Year of expected maturity date							
	2019	2020	2021	2022	2023	2024 thereafter	Total carrying value	Fair value
Liabilities								
Outstanding debt								
Fixed rate (U.S. dollars)	Ps 53,962,520	Ps 40,098,959	Ps 94,686,304	Ps 83,674,076	Ps 91,790,092	Ps 827,719,134	Ps 1,191,931,085	Ps. 1,084,252,622
Average interest rate (%)							5.8927%	
Fixed rate (Japanese yen)	-	-	-	-	5,379,000	14,317,126	19,696,126	16,603,524
Average interest rate (%)							1.3484%	
Fixed rate (Pound sterling)	-	-	-	8,763,410	-	11,205,575	19,968,985	20,257,139
Average interest rate (%)							5.7248%	
Fixed rate (pesos)	-	10,017,084	20,257,747	1,999,192	-	88,324,131	120,598,154	101,639,764
Average interest rate (%)							7.4872%	
Fixed rate (UDIs)	19,386,459	4,999,710	4,066,182	-	-	31,275,418	59,727,769	51,079,974
Average interest rate (%)							2.7362%	
Fixed rate (euros)	21,466,509	29,215,492	39,343,306	35,884,701	31,437,421	173,348,554	330,695,983	325,772,611
Average interest rate (%)							3.7123%	
Fixed rate (Swiss Francs)	5,991,035	11,966,770	3,001,116	-	7,264,850	-	28,223,771	27,916,889
Average interest rate (%)							1.8697%	
Total fixed rate debt	100,806,523	96,298,015	161,354,655	130,321,379	135,871,363	1,146,189,938	1,770,841,873	1,627,522,522
Variable rate (U.S. dollars)	23,231,281	63,823,350	14,517,807	32,878,778	11,136,784	17,616,801	163,204,801	169,873,202
Variable rate (Japanese yen)	-	11,475,200	-	-	-	-	11,475,200	11,264,120
Variable rate (euros)	-	-	-	-	14,601,014	-	14,601,014	16,093,157
Variable rate (pesos)	34,322,574	18,352,215	8,456,465	8,407,405	6,968,237	12,220,826	88,727,722	88,624,217
Total variable rate debt	57,553,855	93,650,765	22,974,272	41,286,183	32,706,035	29,837,627	278,008,737	285,854,697
Total debt	Ps.158,360,378	Ps. 189,948,780	Ps. 184,328,927	Ps. 171,607,562	Ps. 168,577,398	Ps. 1,176,027,565	Ps. 2,048,850,610	Ps. 1,913,377,218

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2018 of: Ps. 19.6829 = U.S. $1.00; Ps. 0.17930 = 1.00 Japanese yen; Ps. 25.0878 = 1.00 Pound sterling; Ps. 6.226631 = 1.00 UDI; Ps. 22.5054 = 1.00 euro; and Ps. 19.9762 = 1.00 Swiss Franc.

Source: PEMEX

(Continued)

(Figures stated in thousands, except as noted)

Quantitative Disclosure of Debt Cash Flow's Maturities as of December 31, 2017(1)

	Year of expected maturity date							
	2018	2019	2020	2021	2022	2023 thereafter	Total carrying value	Fair value
Liabilities								
Outstanding debt								
Fixed rate (U.S. dollars)	Ps 53,465,817	Ps 59,498,256	Ps 60,290,621	Ps 95,232,448	Ps 84,076,050	Ps 808,836,547	Ps 1,161,399,739	Ps. 1,213,404,769
Average interest rate (%)							5.7747%	
Fixed rate (Japanese yen)	-	-	-	-	-	19,296,607	19,296,607	18,040,398
Average interest rate (%)							1.3485%	
Fixed rate (Pound sterling)	-	-	-	-	9,345,839	11,952,816	21,298,655	24,381,394
Average interest rate (%)							5.7246%	
Fixed rate (pesos)	-	-	10,033,017	20,376,655	1,999,098	88,349,072	120,757,842	171,683,692
Average interest rate (%)							7.4876%	
Fixed rate (UDIs)	-	18,477,076	4,764,175	3,874,313	-	30,081,647	57,197,211	56,536,905
Average interest rate (%)							2.7458%	
Fixed rate (euros)	1,043	32,042,196	30,801,894	41,508,857	23,655,950	171,255,634	299,265,574	330,573,998
Average interest rate (%)							3.6736%	
Fixed rate (Swiss Francs)	4,565,075	6,088,686	12,149,953	3,046,567	-	-	25,850,281	26,957,785
Average interest rate (%)							1.8387%	
Total fixed rate debt	58,031,935	116,106,214	118,039,660	164,038,840	119,076,937	1,129,772,323	1,705,065,909	1,841,578,940
Variable rate (U.S. dollars)	58,364,536	15,302,101	62,289,546	12,809,666	31,289,725	18,379,557	198,435,131	206,254,219
Variable rate (Japanese yen)	-	-	11,244,800	-	-	-	11,244,800	11,361,079
Variable rate (pesos)	8,734,371	27,995,083	18,341,742	8,459,163	8,394,483	19,125,764	91,050,606	94,188,981
Total variable rate debt	67,098,907	43,297,184	91,876,088	21,268,829	39,684,208	37,505,321	300,730,537	311,804,280
Total debt	Ps. 25,130,842	Ps. 159,403,398	Ps. 209,915,748	Ps. 185,307,669	Ps. 158,761,145	Ps.1,167,277,644	Ps. 2,005,796,446	Ps.2,153,383,220

Note: Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2017 of: Ps. 19.7867 = U.S. $1.00; Ps. 0.1757 = 1.00 Japanese yen; Ps. 26.7724 = 1.00 Pound sterling; Ps. 5.934551 = 1.00 UDI; Ps. 23.7549 = 1.00 euro; and Ps. 20.2992 = 1.00 Swiss Franc.

Source: PEMEX

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Quantitative Disclosure of Cash Flow's Maturities from Derivative Financial Instruments Held or Issued for Purposes Other than Trading as of December 31, 2018[1] [2]

	Year of expected maturity date							
	2019	2020	2021	2022	2023	2024 Thereafter	Total Notional Amount	Fair Value[3]
Hedging instruments[2][4]								
Interest rate DFIs								
Interest rate swaps (U.S. dollars)								
Variable to fixed	Ps. 4,692,574	Ps. 4,706,039	Ps. 4,661,811	Ps. 4,546,095	Ps. 4,406,561	Ps. 5,683,437	Ps. 28,696,517	Ps. 644,746
Average pay rate	3.18%	3.20%	3.22%	3.25%	3.37%	3.74%	N.A.	N.A.
Average receive rate	4.22%	4.07%	3.94%	4.08%	4.40%	5.25%	N.A.	N.A.
Currency DFIs								
Cross-currency swaps								
Receive euros/Pay U.S. dollars	20,782,857	28,568,548	36,709,101	35,121,361	45,930,033	175,091,781	342,203,681	5,495,541
Receive Japanese yen/ Pay U.S. dollars	-	12,971,158	-	-	4,750,499	-	17,721,657	(1,112,629)
Receive Pounds sterling/ Pay U.S. dollars	-	-	-	9,819,995	-	11,645,585	21,465,580	(297,318)
Receive UDI/ Pay pesos	23,740,341	7,292,520	3,000,000	-	-	27,450,032	61,482,893	(4,392,093
Receive Swiss francs/ Pay U.S. dollars	6,466,978	11,488,074	2,978,666	-	7,184,259	-	28,117,977	486,310
Currency Options								
Buy Put, Sell Put and Sell Call on Japanese yen	-	-	-	-	-	14,355,685	14,355,685	222,491
Buy call, Sell call and Sell Put on euros	-	-	39,497,823	13,542,111	14,670,620	99,308,812	167,019,366	165,458
Sell Call on Pound sterling	-	-	-	-	-	11,296,695	11,296,695	(232,636)
Sell Call on Swiss Francs	-	-	-	-	7,315,424	-	7,315,424	(183,093)
Curency Forward								
Receive U.S. dollars / Pay pesos	-	-	-	-	-	-	-	-

N.A. = not applicable.

Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2018 of: Ps. 19.6829 = U.S. $1.00 and Ps. 22.5054 = 1.00 euro.
(2) PEMEX's management uses these DFIs to hedge market risk; however, these DFIs do not qualify for accounting purposes as hedges and are recorded in the financial statements as entered into for trading purposes.
(3) Positive numbers represent a favorable fair value to PEMEX.
(4) PMI's risk management policies and procedures establish that DFIs should be used only for hedging purposes; however, DFIs are not recorded as hedges for accounting purposes.

Source: PEMEX

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Quantitative Disclosure of Cash Flow's Maturities from Derivative Financial Instruments Held or Issued for Purposes Other than Trading as of December 31, 2017[1] [2]

	Year of expected maturity date							
	2018	2019	2020	2021	2022	2023 Thereafter	Total Notional Amount	Fair Value[3]
Hedging instruments[2][4]								
Interest rate DFIs								
Interest rate swaps (U.S. dollars)								
Variable to fixed	Ps. 4,704,170	Ps. 4,717,321	Ps. 4,730,857	Ps. 4,686,396	Ps 4,570,070	Ps 10,143,209	Ps. 33,552,022	Ps. 388,851
Average pay rate	3.16%	3.18%	3.20%	3.22%	3.26%	3.48%	N.A.	N.A.
Average receive rate	3.19%	3.44%	3.69%	3.81%	3.95%	4.48%	N.A.	N.A.
Interest rate swaps (pesos)								
Variable to fixed	-	-	-	-	-	-	-	-
Average pay rate	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Average receive rate	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Currency DFIs								
Cross-currency swaps								
Receive euros/Pay U.S. dollars	-	29,898,198	28,719,208	36,902,690	21,302,856	161,617,172	278,440,124	19,065,727
Receive Japanese yen/ Pay U.S. dollars	-	-	13,039,563	-	-	4,775,551	17,815,114	(1,670,533)
Receive Pounds sterling/ Pay U.S. dollars	-	-	-	-	10,310,216	11,706,999	22,017,215	1,151,096
Receive UDI/ Pay pesos	-	23,740,341	7,292,520	3,000,000	-	20,605,166	54,638,028	(4,720,592)
Receive Swiss francs/ Pay U.S. dollars	4,535,474	6,501,082	11,548,658	2,994,374	-	-	25,579,588	400,316
Currency Options								
Buy Put, Sell Put and Sell Call on Japanese yen	-	-	-	-	-	14,046,320	14,046,320	48,715
Buy Call, Sell call and Sell Put on euros	-	-	-	41,567,998	-	59,382,855	100,950,853	4,919,444
Sell Call on Pound sterling	-	-	-	-	-	12,031,728	12,031,728	(239,626)
Curency Forward								
Receive U.S. dollars / Pay pesos	59,360,100	-	-	-	-	-	59,360,100	(2,006,461)

N.A. = not applicable.

Numbers may not total due to rounding.

(1) The information in this table has been calculated using exchange rates at December 31, 2017 of: Ps. 19.7867 = U.S. $1.00 and Ps. 23.7549 = 1.00 euro.
(2) PEMEX's management uses these DFIs to hedge market risk; however, these DFIs do not qualify for accounting purposes as hedges and are recorded in the financial statements as entered into for trading purposes.
(3) Positive numbers represent a favorable fair value to PEMEX.
(4) PMI's risk management policies and procedures establish that DFIs should be used only for hedging purposes; however DFIs are not recorded as hedges for accounting purposes.

Source: PEMEX

B. Fair value of derivative financial instruments

PEMEX periodically evaluates its exposure to international hydrocarbon prices, interest rates and foreign currencies and uses derivative instruments as a mitigation mechanism when potential sources of market risk are identified.

PEMEX monitors the fair value of its DFI portfolio on a periodic basis. The fair value represents the price at which one party would assume the rights and obligations of the other, and is calculated for DFIs through models commonly used in the international financial markets, based on inputs obtained from major market information systems and price providers. Therefore, PEMEX does not have an independent third party to value its DFIs.

PEMEX calculates the fair value of its DFIs through the tools developed by its market information providers such as Bloomberg, and through valuation models implemented in software packages used to integrate all of PEMEX´s business areas and accounting, such as SAP (System Applications Products). PEMEX does not have policies to designate a calculation or valuation agent.

PEMEX's DFI portfolio is composed primarily of swaps, for which fair value is estimated by projecting future cashflows and discounting them with the corresponding discount factor; for currency options, this is done through the Black and Scholes Model, and for crude oil options, through the Levy model for Asian options.

According to IFRS 13 "Fair Value Measurement", the MtM value of DFIs must reflect the creditworthiness of the parties. Consequently, the fair value of a DFI takes into account the risk that either party may default on its obligation. Due to the above, PEMEX applies the credit value adjustment ("CVA") method to calculate the fair value of its DFIs.

Because PEMEX's hedges are cash flow hedges, their effectiveness is preserved regardless of the variations in the underlying assets or reference variables, thus asset flows are fully offset by liabilities flows. Therefore, it is not necessary to measure or monitor the hedges' effectiveness.

PEMEX's assumptions and inputs considered in the calculation of the fair value of its DFIs fall under Level 2 of the fair value hierarchy for market participant assumptions.

Embedded derivatives

In accordance with established accounting policies, PEMEX has analyzed the different contracts that PEMEX has entered into and has determined that according to the terms thereof none of these agreements meet the criteria to be classified as embedded derivatives. Accordingly, as of December 31, 2018 and 2017, PEMEX did not recognize any embedded derivatives (foreign currency or index).

As of December 31, 2018, PEMEX recognized a loss of Ps. 3,142,662 in the "Derivative financial instruments (cost) income, net" line item which resulted from changes in the fair value of the accounts receivable from the sale of hydrocarbons whose performance obligations have been met and whose determination of the final price is indexed to future prices of the hydrocarbons.

Accounting treatment

PEMEX enters into derivatives transactions with the sole purpose of hedging financial risks related to its operations, firm commitments, planned transactions and assets and liabilities recorded on its statement of financial position. Nonetheless, some of these transactions do not qualify for hedge accounting treatment because they do not meet the requirements of the accounting standards for designation as hedges. They are therefore recorded in the financial statements as instruments entered into for trading purposes, despite the fact that their cash flows are offset by the cash flows of the positions (assets or liabilities) to which they relate. As a result, the changes in their fair value are recognized in the "Derivative financial instruments (cost) income, net" line item in the consolidated statement of comprehensive income.

As of December 31, 2018 and 2017, the net fair value of PEMEX's DFIs (including both DFIs that have not reached maturity and those that have reached maturity but have not been settled), recognized in the consolidated statement of financial position, was Ps. 6,487,032 and Ps. 12,367,475, respectively. As of December 31, 2018 and 2017, PEMEX did not have any DFIs designated as hedges.

The following table shows the fair values and notional amounts of PEMEX's DFIs, including those with an open position and those that have matured but that have not been settled, which were designated as non-hedges for accounting purposes and entered into for trading purposes as of December 31, 2018 and 2017. It should be noted that:

- A DFI's fair value includes CVA and is calculated based on market quotes obtained from market sources such as Bloomberg. Forward curves and implied volatilities for natural gas and crude oil are supplied by Bloomberg.
- Fair value is calculated internally, either by discounting cash flows with the corresponding zero-coupon yield curve, in the original currency, or through other standard methodologies commonly used in the financial markets for certain specific instruments.
- The information is presented in thousands of pesos (except as noted).

(Continued)

(Figures stated in thousands, except as noted)

DFI	POSITION	December 31, 2018 Notional Amount	December 31, 2018 Fair Value	December 31, 2017 Notional Amount	December 31, 2017 Fair Value
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in 3-month U.S. dollar LIBOR + spread.	14,147,084	228,909	16,695,028	79,448
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in 6-month U.S. dollar LIBOR + spread.	13,433,579	420,029	15,433,626	332,273
Cross-currency swaps	PEMEX pays the 28-day TIIE + spread in pesos and receives fixed in UDI.	37,742,553	(237,428)	30,897,687	(216,441)
Cross-currency swaps	PEMEX pays fixed in pesos and receives notional in UDI.	23,740,341	(4,154,665)	23,740,341	(4,504,151)
Cross-currency swaps	PEMEX pays floating in 6-month U.S. dollar LIBOR + spread and receives floating in 6-month yen LIBOR + spread.	12,971,158	(1,532,612)	13,039,563	(1,804,993)
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in Japanese yen.	4,750,499	419,983	4,775,551	134,461
Cross-currency swaps	PEMEX pays floating in 3-month U.S. dollar LIBOR + spread and receives floating in 3-month euro LIBOR + spread.	15,073,938	(122,974)	-	-
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in euro.	327,129,743	5,618,515	278,440,124	19,065,727
Cross-currency swaps	PEMEX pays floating in 6-month U.S. dollar LIBOR + spread and receives fixed in Pound sterling.	9,819,995	(2,573)	10,310,216	560,982
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in Pound sterling.	11,645,585	(294,745)	11,706,999	590,113
Cross-currency swaps	PEMEX pays fixed in U.S. dollar and receives fixed in CHF.	28,117,976	486,310	25,579,588	400,316
Currency Options	PEMEX Buy Put, Sell Put and Sell Call on Japanese yen	14,355,685	222,491	14,046,320	48,715
Currency Options	PEMEX Buy Call, Sell Call and Sell Put on euro	95,923,285	2,708,534	100,950,853	4,919,444
Currency Options	PEMEX Sell Call on Pound sterling	11,296,695	(232,636)	12,031,728	(239,626)
Currency Options	PEMEX Sell Call on CHF	7,315,424	(183,093)	-	-
Currency Options	PEMEX Sell Call on euro	71,096,081	(2,543,075)	-	-
Currency Forward	PEMEX pays Pesos and receives U.S. dollar.	-	-	59,360,100	(2,006,461)
Natural gas swaps	PEMEX receives fixed.	(3,669)	136	(51,724)	6,934
Natural gas swaps	PEMEX receives floating.	3,622	(94)	50,846	(6,114)
Natural gas options	PEMEX Long Call.	989	4	18,625	398
Natural gas options	PEMEX Short Call.	(989)	(4)	(18,625)	(397)
Interest rate swaps	PEMEX pays fixed in U.S. dollar and receives floating in U.S. dollar LIBOR 1M.	1,115,854	(4,192)	1,423,368	(22,870)
Subtotal			**796,820**		**17,337,758**

(Figures stated in thousands, except as noted)

	December 31, 2018		December 31, 2017	
DFI	**Volume (MMb)**	**Fair Value**	**Volume (MMb)**	**Fair Value**
Crude Oil Options	111.68	5,690,212	153.56	Ps. (5,010,187)

		December 31, 2018		December 31, 2017	
DFI	**Market**	**Volume (MMb)**	**Fair value**	**Volume (MMb)**	**Fair value**
Futures	Exchange traded	2.6	Ps. 441,954	2.1	Ps. (141,693)
Petroleum Products Swaps	Exchange traded	4.9	Ps. 760,603	1.3	Ps. (99,680)

Notes: Numbers may not total due to rounding.

(1) The fair value of the Futures and the Petroleum Products Swaps, was recognized as "Cash and cash equivalents" in the statement of financial position because PEMEX considered these financial assets to be fully liquid.

The exchange rate for U.S. dollars as of December 31, 2018 and 2017 was Ps. 19.6829 and Ps. 19.7867 per U.S. dollar, respectively. The exchange rate for euros as of December 31, 2018 and 2017 was Ps. 22.5054 and Ps. 22.3109 per euro, respectively.

For the years ended December 31, 2018, 2017 and 2016, PEMEX recognized a net (loss) gain of Ps. (22,258,613), Ps. 25,338,324 and Ps. (14,000,987), respectively, in the "Derivative financial instruments (cost) income, net" line item with respect to DFIs treated as instruments entered into for trading purposes.

The following table presents the fair value of PEMEX's DFIs that are included in the consolidated statement of financial position in Derivative financial instruments (including both DFIs that have not reached maturity and those that have reached maturity but have not been settled), as of December 31, 2018 and 2017.

(Figures stated in thousands, except as noted)

	Derivatives assets Fair value	
	December 31, 2018	**December 31, 2017**
Derivatives not designated as hedging instruments		
Crude oil options	Ps. 5,690,212	Ps. 397,630
Currency options	2,931,025	4,968,159
Natural gas options	4	398
Cross-currency swaps	13,111,838	24,126,452
Natural gas swaps	260	7,003
Propane swaps	-	-
Interest rate swaps	648,938	411,721
Others	-	202,091
Total derivatives not designated as hedging instruments	22,382,277	30,113,454
Total assets	Ps.22,382,277	Ps.30,113,454

	Derivatives liabilities Fair value	
	December 31, 2018	**December 31, 2017**
Derivatives not designated as hedging instruments		
Forwards	Ps. -	Ps. (2,006,461)
Crude oil options	-	(5,407,817)
Currency options	-	-
Natural gas options	(4)	(397)
Cross-currency swaps	(15,890,830)	(10,301,983)
Natural gas swaps	(218)	(6,182)
Interest rate swaps	(4,193)	(22,870)
Others	-	(269)
Total derivatives not designated as hedging instruments	(15,895,245)	(17,745,979)
Total liabilities	**Ps. (15,895,245)**	**Ps. (17,745,979)**
Net total	Ps. 6,487,032	Ps. 12,367,475

The following tables presents the net gain (loss) recognized in income on PEMEX's DFIs for the years ended December 31, 2018, 2017 and 2016, in the consolidated statement of comprehensive income which is presented in the "Derivative financial instruments (cost) income, net" line item.

(Continued)

(Figures stated in thousands, except as noted)

Derivatives not designated as hedging instruments	Amount of gain (loss) recognized in the Statement of operations on derivatives		
	December 31, 2018	December 31, 2017	December 31, 2016
Embedded derivatives	Ps. (3,142,662)	Ps. -	Ps. -
Forwards	2,007,393	(1,976,241)	-
Futures	374,112	(779,950)	(1,925,969)
Crude oil options	2,329,051	(3,771,604)	-
Currency options	(2,210,301)	5,255,931	(298,789)
Natural gas options	185	673	(671)
Cross-currency swaps	(21,902,567)	27,747,290	(11,633,605)
Natural gas swaps	117	1,780	831
Propane swaps	-	-	(3,805)
Interest rate swaps	286,059	(34,306)	(138,979)
Others	-	(1,105,249)	-
Total	**Ps. (22,258,613)**	**Ps. 25,338,324**	**Ps. (14,000,987)**

NOTE 20. EMPLOYEE BENEFITS

Until December 31, 2015, Petróleos Mexicanos and Subsidiary Entities only had defined benefit pension plans for the retirement of its employees, to which only Petróleos Mexicanos and the Subsidiary Entities contribute. Benefits under these plans are based on an employee's salary and years of service completed at retirement. As of January 1, 2016, Petróleos Mexicanos and Subsidiary Entities also has a defined contribution pension plan, in which both Petróleos Mexicanos and Subsidiary Entities and the employee contribute to an employee's individual account.

Benefits under the defined benefit plan are mainly based on the years of service completed by the employee, and their remuneration at the date of retirement. The obligations and costs of these plans are recognized based on an actuarial valuation prepared by independent experts. Within the regulatory framework of plan assets, there are no minimum funding requirements. Petróleos Mexicanos and the Subsidiary Entities have established additional plans to cover post-employment benefits, which are based on actuarial studies prepared by independent experts and which include disability, post-mortem pension and the death of retired employees, as well as medical services for retired employees and beneficiaries.

As of December 31, 2018, Petróleos Mexicanos and Subsidiary Entities funded its employees benefits through Mexican trusts, the resources of which come from the retirement line item of PEMEX's annual budget (an operating expense), or any other line item that substitutes or relates to this line item, or that is associated to the same line item and the interests, dividends or capital gains obtained from the investments of the trusts.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

The following table show the amounts associated with PEMEX's labor obligations:

Defined Benefits Liabilities	December 31, 2018	December 31, 2017
Liability for defined benefits at retirement and post-employment at the end of the year	Ps. 1,067,317,120	Ps. 1,241,072,307
Liability for other long-term benefits	13,224,926	17,363,815
Total liability for defined benefits recognized in the consolidated statement of financial position at the end of the year	**Ps. 1,080,542,046**	**Ps. 1,258,436,122**

The following tables contain detailed information regarding PEMEX’s retirement and post-employment benefits:

Changes in the liability for defined benefits	December 31, 2018	December 31, 2017
Liability for defined benefits at the beginning of the year	Ps. 1,241,072,307	Ps. 1,202,624,665
Recognition of the modifications in pensions plan	-	8,327
Current Service cost	20,819,804	13,079,341
Net interest	97,571,478	95,402,917
Defined benefits paid by the fund	(5,547,170)	(5,105,669)
Actuarial (gains) losses in other comprehensive results due to:		
Change in financial assumptions	(214,105,342)	47,182,448
Change in demographic assumptions	(71,958,462)	(70,012,604)
For experience during the year	53,779,484	10,272,231
In plan assets during the year	646,318	(453,206)
Effect of the liability ceiling *	279,674	-
Transfer to Long-term Benefits*	410,775	-
Remeasurements	2,146	26,417
Contributions paid to the fund	(55,653,892)	(51,952,560)
Defined benefit liabilities at end of year	**Ps. 1,067,317,120**	**Ps. 1,241,072,307**

*PMI

(Figures stated in thousands, except as noted)

Changes in pension plan assets	December 31, 2018		2017	
Plan assets at the beginning of year	Ps.	8,485,692	Ps.	9,489,666
Return on plan assets		862,175		902,550
Payments by the pension fund		(56,834,688)		(54,312,270)
Company contributions to the fund		55,653,892		51,952,559
Actuarial (gains) losses in plan assets		(653,583)		453,187
Effect of the liability ceiling		(313,017)		-
Pension plan assets at the end of year	**Ps.**	**7,200,471**	**Ps.**	**8,485,692**

In 2018, the net actuarial gains recognized in other comprehensive income (loss) net of deferred income tax were Ps. (222,545,556), related to retirement and post-employment benefits. This result was due to the increase in the discount and return on plan assets rates, from 7.89% in 2017 to 9.29% in 2018, as well as to the modification in the assumptions of family composition to the retirement for active personnel, and to the modification in the mortality assumptions for retired personnel. Other factors influencing the changes were the obligations based on changes in population, age, seniority, wages, pensions and benefits, increased rates of gas, gasoline and basic basket benefits (from 3.75% to 4.00%). For retired employees, the increase in the wage rate (from 4.77% to 5.02%), as well as the long-term inflation assumption (from 3.75% to 4.00%) also influenced the changes.

In accordance with IFRS, the discount rate of labor liabilities has been estimated using as a reference the interest rates observed in Mexican Government bonds denominated in pesos (Cetes and M bonds). During 2018, the long-term interest rates of these bonds increased by an average of 100 basis points, as a consequence of the volatility registered in the Mexican financial markets towards the end of the year. The increase in these rates directly impacted the estimation of the discount rate of labor liabilities.

Contributions from Pemex to the Pemex Labor Fund include the promissory note matured on March 31, 2018 in the amount of Ps. 2,551,024, for the assumption by the Mexican Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its Subisidiary Entities (see Note 17-A).

The expected contribution to the Pemex Labor Fund for 2019 amounts to Ps. 63,235,620 and the expected payments are Ps. 68,387,355.

As of December 31, 2018 and 2017, the amounts and types of plan assets are as follows:

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Plan Assets	December 31, 2018	December 31, 2017
Cash and cash equivalents	Ps. 4,976,125	Ps. 135,757
Held-for-sale financial assets	-	1,034,178
Debt instruments	2,224,346	7,315,757
Total plan assets	**Ps. 7,200,471**	**Ps. 8,485,692**

Changes in Defined Benefit Obligations (DBO)	December 31, 2018	December 31, 2017
Defined benefit obligations at the beginning of the year	Ps. 1,249,557,999	Ps. 1,212,114,331
Service costs	18,365,156	19,762,661
Financing costs	98,759,209	96,331,015
Past service costs	(103,845)	-
Payments by the fund	(62,388,283)	(59,417,940)
Amount of (gains) and losses recognized through other comprehensive income [(1)]	(232,284,320)	(12,594,541)
Liquidated obligations	(457,168)	-
Modifications to the pension plan	2,782,151	(6,609,657)
Remeasurements	2,139	(1,471)
Reductions	-	(26,399)
Defined benefit obligations at the end of year	**Ps. 1,074,233,038**	**Ps. 1,249,557,999**

(1) These gains and losses are due to changes in financial assumptions, demographics and experience during the year.

The asset ceiling test was not applied because there was a deficit of labor liabilities at the beginning and end of the year.

The effect of an increase or decrease of one percentage point in the discount rate is a 10.56% increase or a 13.00% decrease in defined benefit obligations, respectively.

The effect of an increase or decrease of one percentage point in the increase rate in medical services with respect to the cost and obligations related to medical services point is a 2.15% increase or a -1.69% decrease in defined benefit obligations, respectively.

The effect of an increase or decrease of one percentage point in the inflation is 8.54% and -7.54%, respectively in defined benefit obligations.

(Continued)

(Figures stated in thousands, except as noted)

The effect of an increase or decrease of one percentage point in the wage is a 1.25% and -1.10%, respectively in defined benefit obligations.

The effects previously mentioned were determined using the projected unit credit method which was the same method used in the prior valuation.

Assumptions regarding future mortality are based on EMSSA2009 to Unique Circular of the Comisión Nacional de Seguros y Fianzas (National Commission of Insurance and Bonds) and include changes to the mortality rate established in 2018. For the December valuation, the mortality table for retired personnel was updated using an actuarial proposal based on the experience of Petróleos Mexicanos and its Subisidiary Entities. The mortality table for the incapacitated personnel is the EMSSInc-IMSS2012 and for the disabled personnel the EMSSInv-IMSS2012.

PEMEX's plan assets is held in the FOLAPE trust, which are managed by BBVA Bancomer, S. A. and a technical committee for each trust that is comprised of personnel from Petróleos Mexicanos and the trusts.

The following tables present additional fair value disclosure about plan assets and indicate their rank, in accordance with IFRS 13, as of December 31, 2018 and 2017:

	Fair value measurements as of December 31, 2018			
Plan assets	**Quoted prices in active markets for identical assets (level 1)**	**Significant observable inputs (level 2)**	**Significant unobservable inputs (level 3)**	**Total**
Cash and cash equivalents	Ps. 4,976,125	Ps. -	Ps. -	Ps. 4,976,125
Debt instruments	2,224,346	-	-	2,224,346
Total	**Ps. 7,200,471**	**Ps. -**	**Ps. -**	**Ps. 7,200,471**

	Fair value measurements as of December 31, 2017			
Plan assets:	**Quoted prices in active markets for identical assets (level 1)**	**Significant observable inputs (level 2)**	**Significant unobservable inputs (level 3)**	**Total**
Cash and cash equivalents	Ps. 135,757	Ps. -	Ps. -	Ps. 135,757
Held-for-sale financial assets	1,034,178	-	-	1,034,178
Debt instruments	7,315,757	-	-	7,315,757
Total	**Ps. 8,485,692**	**Ps. -**	**Ps. -**	**Ps.8,485,692**

(Continued)

(Figures stated in thousands, except as noted)

As of December 31, 2018 and 2017, the principal actuarial assumptions used in determining the defined benefit obligation for the plans are as follows:

	December 31,	
	2018	**2017**
Rate of increase in salaries	5.02%	4.77%
Rate of increase in pensions	4.00%	3.75%
Rate of increase in medical services	7.65%	7.65%
Inflation assumption	4.00%	3.75%
Rate of increase in basic basket for active personnel	5.00%	5.00%
Rate of increase in basic basket for retired personnel	4.00%	3.75%
Rate of increase in gas and gasoline	4.00%	3.75%
Discount and return on plan assets rate	9.29%	7.89%
Average length of obligation (years)	15.04	18.40

In accordance with IFRS, the discount rate of labor liabilities has been estimated using as a reference the interest rates observed in Mexican Government bonds denominated in pesos (Cetes and M bonds). During 2018, the long-term interest rates of these bonds increased by an average of 100 basis points, as a consequence of the volatility registered in the Mexican financial markets towards the end of the year. The increase in these rates directly impacted the estimation of the discount rate of labor liabilities.

Other long-term benefits

Petróleos Mexicanos and Subsidiary Entities has established other long-term benefit plans for its employees, to which employees do not contribute, which correspond to the seniority premiums payable for disability, death and survivor benefits (payable to the widow and beneficiaries of worker), medical service, gas and basic basket for beneficiaries. Benefits under these plans are based on an employee's salary and years of service completed at separation date. Obligations and costs of such plans are recorded in accordance with actuarial valuations performed by independent actuaries.

The amounts recognized for long-term obligations for the years ended December 31, 2018 and 2017 are as follows:

(Continued)

(Figures stated in thousands, except as noted)

Change in the liability for defined benefits		**December 31, 2018**		**2017**
Liabilities defined benefit at the beginning of year	Ps.	17,363,815	Ps.	17,784,771
Present cost services		(18,085)		-
Charge to income for the year		2,885,875		3,277,847
Actuarial (gains) losses recognized in income due to:				
Change in financial assumptions		(3,741,132)		878,516
Change in demographic assumptions		(751,052)		(1,015,274)
For experience during the year		(2,259,569)		(3,558,599)
Real interest, excluding earned interests		125,485		-
Effect of the liability ceiling		33,344		-
Benefits paid		(2,980)		(3,446)
Transfer to the post-employment benefit fund recognized in other comprehensive income		(410,775)		-
Liabilities defined benefit at the end of year	**Ps.**	**13,224,926**	**Ps.**	**17,363,815**

The expected long-term benefit payments amount to Ps.300,869.

The effects on liabilities for long-term benefits at the end of the period are:

- The effect of an increase or decrease of one percentage point in the discount rate is a -14.80% increase or a 19.25% decrease, respectively, in defined benefit obligations.

- The effect of an increase or decrease of one percentage point in the increase rate in medical services with respect to the cost and obligations related to medical services is a 4.64% increase or a -3.32% decrease, respectively, in defined benefit obligations.

- The effect of an increase or decrease of one percentage point in the inflation is a 0.48% increase or a 1.73% decrease, respectively, in defined benefit obligations.

- The effect of an increase or decrease of one percentage point in the wage is a 4.26% increase or a 3.88% decrease, respectively in defined benefit obligations.

The principal actuarial assumptions used in determining the defined benefit obligation for the plans are as follows.

(Figures stated in thousands, except as noted)

	December 31, 2018	December 31, 2017
Rate of increase in salaries	5.02%	4.77%
Inflation assumption	4.00%	3.75%
Rate of increase in basic basket for active personnel	5.00%	5.00%
Rate of increase in basic basket for retired personnel	4.00%	3.75%
Rate of increase in gas and gasoline	4.00%	3.75%
Discount and return on plan assets rate	9.29%	7.89%
Average length of obligation (years)	15.04	18.40

In accordance with IFRS, the discount rate of labor liabilities has been estimated using as a reference the interest rates observed in Mexican Government bonds denominated in pesos (Cetes and M bonds). During 2018, the long-term interest rates of these bonds increased by an average of 100 basis points, as a consequence of the volatility registered in the Mexican financial markets towards the end of the year. The increase in these rates directly impacted the estimation of the discount rate of labor liabilities.

NOTE 21. PROVISIONS FOR SUNDRY CREDITORS

At December 31, 2018 and 2017, the provisions for sundry creditors and others is as follows:

	2018	**2017**
Provision for plugging of wells (Note 15)	Ps. 84,050,900	Ps. 68,797,600
Provision for trails in process (Note 29)	6,483,078	7,812,689
Provision for environmental costs	11,219,278	11,067,134
	Ps. 101,753,256	**Ps. 87,677,423**

The following tables show the allowance account for plugging of wells, trials in progress and environmental costs:

	Plugging of wells 2018	**Plugging of wells 2017**
Balance at the beginning of the year	Ps. 68,797,600	Ps. 64,967,710
Increase (decrease) capitalized in fixed assets	22,313,529	(3,791,482)
Unwinding of discount against income	(6,953,200)	7,774,000
Amount used	(107,029)	(152,628)
Balance at the end of the year	**Ps. 84,050,900**	**Ps. 68,797,600**

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Trials in progress			
	2018		2017	
Balance at the beginning of the year	Ps.	7,812,689	Ps.	15,119,692
Additions against income		1,194,547		2,835,357
Provision cancellation		(2,502,807)		(1,973,153)
Amount used		(21,351)		(8,169,207)
Balance at the end of the year	**Ps.**	**6,483,078**	**Ps.**	**7,812,689**

	Environmental costs			
	2018		2017	
Balance at the beginning of the year	Ps.	11,067,134	Ps.	8,230,476
Additions against income		1,390,838		3,203,982
Provision cancellation		(1,106,693)		(312,937)
Amont used		(132,001)		(54,387)
Balance at the end of the year(1)	**Ps.**	**11,219,278**	**Ps.**	**11,067,134**

(1) PEMEX is subject to the provisions of the *Ley General del Equilibrio Ecológico y la Protección al Ambiente* (General Law on Ecological Equilibrium and Environmental Protection). To comply with this law, environmental audits of PEMEX's larger operating, storage and transportation facilities have been or are being conducted. Following the completion of such audits, PEMEX has signed various agreements with the *Procuraduría Federal de Protección al Ambiente* (Federal Attorney of Environmental Protection) to implement environmental remediation and improve environmental plans. Such plans contemplate remediation for environmental damages, as well as related investments for the improvement of equipment, maintenance, labor and materials.

Provision for plugging of wells

PEMEX records a provision at present value for the future plugging cost of an oil production facility or pipeline at the time that it is built.

The plugging provision represents the present value of plugging costs related to oil and gas properties. These provisions have been created based on internal estimates of PEMEX. PEMEX has made certain assumptions based on the current economic environment that PEMEX believes provide a reasonable basis on which to estimate the future liability. These estimates are reviewed regularly to take into account any material changes in the assumptions. However, actual plugging costs in the long run will depend on future market prices for the necessary plugging work, which reflect market conditions at the time the work is being performed.

Moreover, the time of plugging depends on when the fields cease to have economically viable production rates, which, in turn, depends on the inherently uncertain future prices of oil and gas.

(Continued)

(Figures stated in thousands, except as noted)

NOTE 22. DISCLOSURE OF CASH FLOW

The following items represent non-cash transactions and are presented for disclosure purposes:

	For the years ended December 31,		
	2018	2017	2016
Investing activities			
Available-for-sale financial assets[(1)]	-	5,564,130	207,817
Financing activities			
Financed Public Works Contracts	-	-	146,217,292
Currency translation effect[(2)]	846,191	6,096,459	21,386,903
Accrued interest not charged [(3)]	9,333,347	9,053,852	3,597,654
Accrued interest unpaid [(4)]	5,437,633	8,734,131	9,326,945

(1) Due to the change in fair value of shares of Repsol, S.A., this amount was reclassified from OCI to profit or loss.
(2) Represents the effect of valuation of the different subsidiaries of which the functional currency is different from the report currency.
(3) Represents mainly notes receivable from the Mexican Government.
(4) Represents unpaid interest accrued mainly from debt.

NOTE 23. INCOME TAXES AND DUTIES

The *Ley de Ingresos sobre Hidrocarburos* ("Hydrocarbons Revenue Law") was published in the Official Gazette of the Federation on August 11, 2014, and came into effect, on January 1, 2015. The Hydrocarbons Revenue Law sets forth the fiscal regime for Petróleos Mexicanos applicable to the assignments and the contracts that were established on such date. Likewise, every year the Federal Revenue Law is published in the Official Gazette of the Federation and includes specific regulations for Petroleos Mexicanos and the Subsidiary Entities.

Tax regime applicable to Assignments

The tax regime applicable to the exploration and production for the assignments granted to PEMEX by the Mexican Government includes the following taxes and duties:

a. Derecho por la Utilidad Compartida "DUC" (Profit-sharing Duty).

As of January 1, 2015, Pemex Exploration and Production is obligated to pay a Profit-sharing Duty.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

As of January 1, 2018 and 2017, the applicable rate of this duty was 66.25% and 67.50% respectively. The computation of this duty is based on the excess of the value of hydrocarbons produced during the fiscal year (including self-consumption, shrinkage and burning), minus certain permitted deductions by the Hydrocarbons Revenue Law, including part of the investments and some costs, expenses and duties. Pursuant to the Hydrocarbons Revenue Law, this duty has been decreased on an annual basis. As of January 1, 2019, this duty was set at 65%.

During 2018, this duty totaled Ps. 443,294,170 from annual payments presented on March 25, 2019 paid as follows: Ps. 443,785,240, in monthly installment payments and a payable balance amounting to Ps. 491,070, presented in accounts receivable, net line item in the statement of financial position.

During 2017, this duty totaled Ps. 372,902,629 from annual payments presented on March 31, 2018 paid as follows: Ps. 377,192,377, in monthly installment payments and a favorable balance amounting to Ps. 4,289,748, presented in accounts receivable, net line item in the statement of financial position.

The accounting result differs from the tax result mainly due to differences in depreciation, non-deductible expenses and others. Such differences generate a deferred DUC.

Total DUC and other as of December 31, 2018, 2017 and 2016 are integrated as follows:

	2018	2017	2016
DUC	Ps. 443,294,170	Ps. 372,902,629	Ps. 304,299,019
DUC from prior years	14,883	2,095,429	-
Other	446,464	260,775	514,356
Deferred DUC expense (benefit)	26,178,078	(37,214,624)	(27,651,571)
Total DUC and other	**Ps. 469,933,595**	**Ps. 338,044,209**	**Ps. 277,161,804**

The principal factors generating the deferred DUC are the next page.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	2018	2017
Deferred DUC asset:		
Tax credits	Ps. 577,278,473	Ps. 541,360,940
Deferred DUC asset	577,278,473	541,360,940
Deferred Profit-sharing duty liability:		
Wells, pipelines, properties, plant and equipment	(288,913,978)	(455,697,786)
Deferred DUC liability	(288,913,978)	(455,697,786)
Deferret DUC asset net	288,364,495	85,663,154
Unrecognized Deferred DUC	(249,676,378)	(20,796,959)
Net, deferred DUC asset	**Ps. 38,688,117**	**Ps. 64,866,195**

The expected expense for DUC is different from that which would result from applying the 65% rate to the tax base, as a result of the items mentioned below:

	2018	2017	2016
Expected expense:	Ps. 307,269,035	Ps. 127,436,912	Ps. 159,897,683
Increase (decrease) resulting from:			
Expected benefit contract	(5,797,144)	-	-
Duties from prior year	9,860	-	-
Non-cumulative profit	(593,158,584)	(514,780,219)	(423,761,673)
Non-deductible expenses	291,676,831	387,343,306	263,863,990
Production value	610,206,103	518,433,469	441,655,000
Deductible duties	(55,005,397)	(39,503,110)	(29,918,201)
Deferred DUC reserve	-	(48,689,612)	69,486,571
Deferred DUC expense	26,178,078	-	-
Deductions cap	(111,906,534)	(94,552,741)	(204,575,922)
DUC from prior years	14,883	2,095,429	-
Other	446,464	260,775	514,356
DUC-Profit-sharing duty expense	**Ps. 469,933,595**	**Ps. 338,044,209**	**Ps. 277,161,804**

On August 18, 2017, the Official Gazette of the Federation published a decree, granting tax benefits for extraction activities in assignments with mature and / or marginal fields, substantially increasing the percentage of costs, expenses and investments that PEMEX could deduct for purposes of calculating the DUC. As a result, PEMEX received a tax benefit of Ps. 11,170,076 and Ps. 7,769,915, as of December 31, 2018 and 2017, respectively.

On November 30, 2017, the *Acuerdo por el que se reforman y adicionan diversas disposiciones de las Reglas de carácter general para definir los métodos de ajuste del valor de los hidrocarburos de los derechos sobre hidrocarburos* (Agreement by which various provisions of the general rules are reformed and added to define the methods of adjusting the value of hydrocarbons and hydrocarbon rights)was published in the Official Gazette of the Federation, resulting in new calibrations and adjustments of existing formulas of calculating the value of hydrocarbons and hydrocarbon rights. As a result, PEMEX received an estimated tax benefit of Ps. 8,854,391.

The compensation of Ps. 2,186,963 was also authorized for the recognition of the fair economic value of the investments affected as a result of the allocation process for assignments to carry out hydrocarbon exploration and extraction activities, in accordance with the provisions of Transitory Article 21 of the Federation Income Law of 2017.

b. Derecho de Extracción de Hidrocarburos (Hydrocarbons Extraction Duty).

This duty is to be calculated using a rate based on a formula applicable to each type of hydrocarbon, the volume of production and utilizing the relevant market price for hydrocarbons in U.S. Dollars.

During 2018 Pemex Exploration and Production made payments of Ps. 83,027,015, which are included in the cost of sales line item.

c. Derecho de Exploración de Hidrocarburos (Exploration Hydrocarbons Duty).

The Mexican Government is entitled to collect a monthly payment of Ps.1,294.71 per square kilometer of non-producing areas. After 60 months, this tax increases to Ps.3,096.04 per square kilometer for each additional month that the area is not producing. These amounts will be updated on an annual basis in accordance with the national consumer price index.

During 2018, Pemex Exploration and Production made payments under this duty, totaling Ps. 1,027,058, which are included in the cost of sales line item.

d. Impuesto por la actividad de Exploración y Extracción de Hidrocarburos (Exploration and Extraction Hydrocarbons Duty).

The assignments granted by the Mexican Government create a tax on the exploration and extraction activities carried out in the corresponding area. The monthly tax paid during the exploration phase and until the extraction phase begins is Ps. 1,688.74 per square kilometer. During the extraction phase, the monthly tax from the start of the extraction phase and until the assignment ends is Ps. 6,754.99 per square kilometer. During 2018 payments for this tax amounted Ps. 4,114,450, which are included in the cost of sales line item.

(Continued)

Tax Regime applicable to contracts:

As of January 1, 2015, the tax regime applicable to Pemex Exploration and Production for contracts is set forth in the Hydrocarbons Revenue law which regulates, among other things, the fiscal terms applicable to the exploration and extraction contracts (license, profit sharing contracts, production sharing and services) and sets duties and other taxes paid to the Mexican Government.

The Hydrocarbons Revenue Law also establishes the following duties applicable to PEMEX in connection with assignments granted to it by the Mexican Government:

- ***Cuota Contractual para la Fase Exploratoria (Exploration Phase Contractual Fee)***

During the exploration phase of an exploration and extraction contract, the Mexican Government is entitled to collect a monthly payment of Ps. 1,294.71 per square kilometer of non-producing areas. After 60 months, this fee increases to Ps. 3,096.04 per square kilometer for each additional month that the area is not producing. The fee amount will be updated on an annual basis in accordance with the national consumer price index.

- ***Regalías (Royalties)***

Royalty payments to the Mexican Government are determined based on the "contractual value" of the relevant hydrocarbons, which is based on a variety of factors, including the type of underlying hydrocarbons (e.g., crude oil, associated natural gas, non-associated natural gas or condensates), the volume of production and the market price. Royalties are payable in connection with licensing contracts, production-sharing contracts and profit-sharing contracts.

- ***Pago del Valor Contractual (Contractual Value Payment)***

Licensing contracts require a payment to the Mexican Government calculated as a percentage of the "contractual value" of the hydrocarbons produced, as determined by the SHCP on a contract-by-contract basis.

- ***Porcentaje a la Utilidad Operativa (Operating Profit Payment)***

Production-sharing contracts and profit-sharing contracts require a payment equivalent to a specified percentage of operating profits. In the case of production-sharing contracts, this payment shall be made in-kind through delivery of the hydrocarbons produced. In the case of profit-sharing contracts, this payment shall be made in cash.

- ***Bono a la Firma (Signing Bonus)***

Upon execution of a licensing contract, a signing bonus is to be paid to the Mexican Government in an amount specified by the SHCP in the relevant bidding terms and conditions or in the contracts resulting from a migration.

(Continued)

- ***Impuesto por la actividad de Exploración y Extracción de Hidrocarburos (Hydrocarbons Exploration and Extraction Activities Tax)***

Contracts for exploration and extraction granted by the Mexican Government will include a specified tax on the exploration and extraction activities carried out in the relevant area. A monthly tax of Ps. 1,688.74 per square kilometer is payable during the exploration phase until the extraction phase begins. During the extraction phase of a project, a monthly tax of Ps. 6,754.99 per square kilometer is payable from the starting date until the relevant contract for exploration and extraction is terminated.

Other applicable taxes

The Subsidiary Entities are subject to the Income Tax Law and the Value Added Tax Law. Pemex Industrial Transformation is also subject to the Special Tax on Production and Services (IEPS Tax).

2018 indirect taxes are as listed below:

a. IEPS Tax

IEPS Tax on the sale of automotive fuels: This is a tax imposed on domestic sales of automotive fuels, including gasoline and diesel, which Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable quotas for 2018 were: 4.59 pesos per liter of Magna gasoline; 3.88 pesos per liter of Premium gasoline and 5.04 pesos per liter of diesel. This fee is updated annually according to inflation and adjusted monthly by the tax authorities.

IEPS Tax to benefit Mexican states and municipalities: This tax is a quota on domestic sales of automotive fuels, including gasoline and diesel, which Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable quotas for 2018 were 40.52 cents per liter of Magna gasoline, 49.44 cents per liter of premium gasoline and 33.63 cents per liter of diesel. This rate is updated annually with inflation. The funds raised by this quota are allocated to the states and municipalities as provided in the Tax Coordination Law.

IEPS Tax on Fossil Fuels: This tax is a quota on the internal sales of fossil fuels, which Pemex Industrial Transformation collects on behalf of the Mexican Government. The applicable quotas for 2018 were 6.93 cents per liter for propane, 8.98 cents per liter for butane, 12.17 cents per liter for jet and other fuel, 14.54 cents per liter for turbosine and other kerosene, 14.76 cents per liter for diesel, 15.76 cents per liter for fuel oil and Ps. 18.29 per ton for petroleum coke. This rate is updated annually according to inflation.

***b. Value Added Tax* (“VAT”)**

For VAT purposes, final monthly payments are determined based on PEMEX’s cash flow, in accordance with the provisions of the Value Added Tax Law, applicable to payers of this tax. The general rate to be applied is 16%. Certain activities with incentives will have the rate of 0%.

(Figures stated in thousands, except as noted)

The VAT is caused by the sales of goods, rendering of services, granting of the temporary use of goods in the national territory and by the importation of goods and services to the national territory. VAT taxpayers transfer VAT to their customers and are entitled to credit the VAT paid to their suppliers and on their imports. The net balance between VAT transferred to customers and paid to suppliers and on imports results each month in the VAT to be paid to the tax authorities or in an amount in favor of the taxpayer. The taxpayer has the right to credit VAT in favor against VAT payable in future months, to request a refund or to offset it against other payable federal taxes.

Taxes on Income are described below:

c. Income Tax

As of January 1, 2015, Petróleos Mexicanos, Subsidiary Entities and the subsidiary companies residing in Mexico for tax purposes are subject to the Income Tax Law.

This tax is calculated by applying a rate of 30% to the tax result. Tax result is the excess of total revenues over the allowed deductions and tax losses from previous years.

Accounting income differs from taxable income primarily due to the effects of inflation and differences between depreciation and other non-deductible expenses.

For the years ended December 31, 2018, 2017 and 2016, Petroleos Mexicanos and its Subsidiary Companies incurred the following income tax expense (benefit):

		2018		2017		2016
Current income tax	Ps.	3,109,971	Ps.	3,546,912	Ps.	6,201,842
Deferred income tax		(11,465,343)		(9,334,064)		(18,842,211)
Total	**Ps.**	**(8,355,372)**	**Ps.**	**(5,787,152)**	**Ps.**	**(12,640,369)**
Income tax REFIPRE (Preferent Fiscal Regime) from PMH HBV dividends	Ps.	-	Ps.	722,984	Ps.	-

As of December 31, 2018 and 2017, the deferred income tax asset net of Pemex Industrial Transformation and Pemex Exploration and Production has not been recognized because it is estimated that not enough taxable income will be generated in future periods.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	Tax effect	
	2018	**2017**
Assets		
Provisions	Ps. 161,103,132	Ps. 86,967,057
Well, pipelines, properties, plant and equipment	17,825,338	-
Tax loss carryforwards	489,166,032	566,055,701
Total assets	Ps. 668,094,502	Ps. 653,022,758
Liabilites		
Well, pipelines, properties, plant and equipment	Ps. 159,942,782	Ps. 152,028,015
Other	1,072,383	429,818
Total liabilities	161,015,165	152,457,833
Total assets, net	**Ps. 507,079,337**	**Ps. 500,564,925**

The principal factors generating the deferred income tax are the following:

	2017	**Recognized in profit and loss**	**Recognized in OCI**	**2018**
Deferred income tax asset:				
Provisions	Ps. 7,110,665	Ps. 1,726,028	Ps. -	Ps. 8,836,693
Employee benefits provision	47,086,457	2,181,696	(8,953,404)	40,314,749
Advance payments from clients	42,208	(6,401)	-	35,807
Accrued liabilities	744,865	(133,213)	-	611,652
Reserve due to depreciation of inventories	-	982,228	-	982,228
Non-recoverable accounts receivable	739,748	24,176	-	763,924
Derivative financial instruments	79,255	(49,581)	-	29,674
Wells, pipelines, properties and equipment	3,990,113	7,872,663	-	11,862,776
Tax loss carry-forwards[(1)]	21,532,979	(873,869)	-	20,659,110
Total deferred income tax asset	81,326,290	11,723,727	(8,953,404)	84,096,613
Deferred income tax liability:				
Wells, pipelines, properties, plant and equipment	(3,443,618)	813,021	-	(2,630,597)
Other	(810,310)	(1,071,405)	-	(1,881,715)
Total deferred income tax liability	(4,253,928)	(258,384)	-	(4,512,312)
Net long-term deferred income tax liability	**Ps. 77,072,362**	**Ps. 11,465,343**	**Ps. (8,953,404)**	**Ps. 79,584,301**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

	2016	Recognized in profit and loss	Recognized in OCI	2017
Deferred income tax asset:				
Provisions	Ps 4,626,602	Ps. 2,484,063	Ps. -	Ps 7,110,665
Employee benefits provision	44,859,222	3,027,519	(800,284)	47,086,457
Advance payments from clients	30,324	11,884	-	42,208
Accrued liabilities	2,198,664	(1,453,799)	-	744,865
Non-recoverable accounts receivable	778,179	(38,431)	-	739,748
Derivative financial instruments	223,518	(144,263)	-	79,255
Wells, pipelines, properties and equipment	1,390,952	2,599,161	-	3,990,113
Tax loss carry-forwards[1]	18,565,657	2,967,322	-	21,532,979
Total deferred income tax asset	72,673,118	9,453,456	(800,284)	81,326,290
Deferred income tax liability:				
Wells, pipelines, properties, plant and equipment	(3,632,294)	188,676	-	(3,443,618)
Other	(502,242)	(308,068)	-	(810,310)
Total deferred income tax liability	(4,134,536)	(119,392)	-	(4,253,928)
Net long-term deferred income tax liability	**Ps. 68,538,582**	**Ps. 9,334,064**	**Ps. (800,284)**	**Ps. 77,072,362**

(1) Tax loss carryforwards expire in 2028.

Expense attributable to the profit (loss) from continuing operations before income taxes was different from that which would result from applying the 30% rate to profit, as a result of the items listed below:

	For the years ended December 31,		
	2018	**2017**	**2016**
Expected income tax expense	Ps. (41,316,168)	Ps. (20,055,588)	Ps. (14,901,324)
Increase (decrease) resulting from:			
Tax effect of inflation-net	11,742,346	14,302,118	8,098,213
Difference between accounting and tax depreciation	(3,359,548)	(3,713,920)	(1,765,183)
Unrecognized Deferred tax asset[1]	21,885,731		
Non-deductible expenses	1,781,012	1,954,659	1,558,120
Others-net	911,255	1,725,579	(5,630,195)
Income tax expense	**Ps. (8,355,372)**	**Ps. (5,787,152)**	**Ps. (12,640,369)**

(1) Deferred income tax assets of Ps. 21,885,731 arising from outstanding tax losses which expire between 2025 and 2018 have not been recognized since there are unlikely to be future tax gains which would allow Pemex Logistcs to use the benefits.

(Continued)

(Figures stated in thousands, except as noted)

As of December 31, 2018 and 2017, the net accumulated effect of actuarial gains and losses on deferred tax was Ps. 8,734,628 and Ps. 17,688,032, respectively. In addition, as of December 31, 2018 and 2017, the deferred tax effect of actuarial gains and losses is presented in comprehensive (loss) income in the amounts of Ps. (8,953,404) and Ps. (800,824), respectively.

NOTE 24. EQUITY (DEFICIT)

a. Certificates of Contribution "A"

The capitalization agreement between Petróleos Mexicanos and the Mexican Government states that the Certificates of Contribution "A" constitute permanent capital.

On December 24, 2015, the Mexican Government, through the SHCP, issued a non-negotiable promissory note of Ps. 50,000,000 due December 31, 2050 for the assumption by the Mexican Government of the payment obligations related to pensions and retirement plans of Petróleos Mexicanos and its Subsidiary Entities (see Note 17-A).

On April 21, 2016, the Mexican Government made an equity contribution to Petróleos Mexicanos in the amount of Ps. 26,500,000 following the guidelines established in the Federal Budget and Fiscal Responsibility. This contribution was recognized as an increase in Certificates of Contribution "A."

On August 3, 2016, the Mexican Government issued Ps. 184,230,586 in exchange for the Ps. 50,000,000 non-negotiable promissory note issued to Petróleos Mexicanos on December 24, 2015, which was recognized as a Ps. 135,439,612 increase in equity. The Ps. 135,439,612 increase in equity was the result of the Ps. 184,230,586 value of the promissory notes as of June 29, 2016, minus the Ps. 50,000,000 promissory note received by Petróleos Mexicanos on December 24, 2015, plus a Ps. 1,209,026 increase in the value of the promissory notes from June 29, 2016 to August 15, 2016, the date on which Petróleos Mexicanos received the promissory notes (see Note 17-A).

PEMEX's Certificates of Contribution "A" are as follows:

		Amount
Certificates of Contribution "A" as of December 31, 2016	Ps.	356,544,447
Increase in Certificates of Contribution "A" during 2017		-
Certificates of Contribution "A" as of December 31, 2017		356,544,447
Increase in Certificates of Contribution "A" during 2018		-
Certificates of Contribution "A" as of December 31, 2018	**Ps.**	**356,544,447**

b. Mexican Government contributions

As of December 31, 2018 and 2017 there were no Mexican Government contibutions.

c. Legal reserve

Under Mexican law, each of the Subsidiary Companies is required to allocate a certain percentage of its net income to a legal reserve fund until the fund reaches an amount equal to a certain percentage of each Subsidiary Company's capital stock.

As of December 31, 2018 and 2017, there were no changes to the legal reserve.

d. Accumulated deficit from prior years

PEMEX has recorded negative earnings in the past several years. However, the *Ley de Concursos Mercantiles* ("Commercial Bankruptcy Law of Mexico") is not applicable to Petróleos Mexicanos and the Subsidiary Entities. Furthermore, the financing agreements to which PEMEX is a party do not provide for financial covenants that would be breached or events of default that would be triggered as a consequence of negative equity.

e. Uncertainty related to Going concern

The consolidated financial statements have been prepared on a going concern basis, which assumes that PEMEX can meet its payment obligations

Facts and conditions

PEMEX has recognized continuous net losses during 2018, 2017 and 2016 of Ps. 180,419,837 Ps. 280,850,619 and Ps. 191,144,342, respectively. Additionally, PEMEX had a negative equity of Ps. 1,459,405,432 and Ps. 1,502,352,385 as of December 31, 2018 and 2017, respectively, mainly due to continuous net losses; and a negative working capital of Ps. 54,666,333 and Ps. 25,600,895, as of December 31, 2018 and 2017, respectively.

PEMEX also has important debt, contracted mainly to finance investments needed to carry out its operations. Due to its heavy fiscal burden resulting from the payment of hydrocarbon extraction duties and other taxes, the cash flow derived from PEMEX's operations in recent years has not been sufficient to fund its operating and investment costs and other expenses, so that its indebtedness has increased significantly, and its working capital has decreased in part as a result of the drop in oil prices that began at the end of 2014 and the subsequent oil price fluctuation.

Additionally, at the beginning of 2019, some rating agencies downgraded PEMEX's credit rating, which could have an impact on the cost and terms of PEMEX's new debt, as well as contract renegotiations during 2019.

All these matters show the existence of substantial doubt about PEMEX's ability to continue as a going concern.

(Continued)

PEMEX has budget autonomy, and is subject to the financial balance, which represents the difference between its income and its total budgeted expenditures, including the financial cost of its debt, which, is proposed by the SHCP and approved by the Mexican Congress in the Federal Budget for 2019.

The Federal Budget for 2019 estimates that PEMEX's budgeted expenditures of Ps. 589,736,649 will exceed budgeted revenues of Ps. 524,291,649 by Ps. 65,445,000. The Federal Budget for 2019 also authorized PEMEX a net indebtedness up to Ps. 112,800,000 to cover its negative financial balance, which is considered as public debt by the Mexican Government.

On February 26, 2019, the Board of Directors of Petróleos Mexicanos authorized the Annual Operational and Financial Work Program (POFAT), which detailed the operational variables in the drilling, extraction and industrial transformation segments, as well as its projection of financial results based on the budget for Petróleos Mexicanos and its productive state-owned subsidiaries, through the Federal Annual Budget for Fiscal Year 2019. The credit profile of Petróleos Mexicanos and its Subsidiary Productive Companies was authorized on the same date.

PEMEX, in collaboration with the Mexican Government intends to meet its working capital needs and debt payment obligations by implementing a new business strategy focused on the financial strengthening of PEMEX through internal measures such as cost control austerity policies, debt reduction, crude oil hedges and the fight against fuel theft, as well as external measures, through the *Programa de Fortalecimiento de Petróleos Mexicanos* (Strengthening Program for Petroleos Mexicanos or the "Strengthening Program), through which the Mexican Government is expected to support PEMEX through capitalizations, a stable price policy, fiscal support, prepayment of promissory notes to PEMEX previously issued by the Mexican Government and additional support in the fight against fuel theft.

On February 15, 2019, the Mexican Government announced, as part of its Strengthening Program for Petróleos Mexicanos, a support program to help improve PEMEX´s financial position and increase PEMEX's production and, in turn, its profitability. This first stage includes contributions to PEMEX, which will be obtained, among others, as follows:

- Ps. 25,000,000 through a capitalization already contemplated in the capital expenditures budget for 2019, which will be received in five payments during 2019, and of which a total of Ps. 15,000,000 has been received as of the date of the issuance of these consolidated financial statements (see Note 30);

- an advance of payment of promissory notes during 2019 in the amount of Ps. 34,887,250, related to pensions and retirement plans of Petróleos Mexicanos and its productive state-owned subsidiaries, for which Ps. 28,063,511 have been received as of the date of these consolidated financial statements (see Note 30); and

- a gradual reduction of the tax burden starting in 2019 and up to 2024 through assignment and migration contracts and a subsequent increase in the limit for deduction and reimbursments of costs, expenses and investments related to extraction and exploration projects.

Petróleos Mexicanos and its Subsidiary Entities are not subject to the Ley de Concursos Mercantiles (the Bankruptcy Law) and none of PEMEX's existing financing agreements include any clause that could lead to the demand for immediate payment of debt due to having negative equity or as a result of non-compliance with financial ratios.

f. Non-controlling interest

Effective July 1, 2005, PEMEX entered into an option agreement with BNP Private Bank & Trust Cayman Limited; the option was not excercised and was terminated on July 20, 2015. On July 1, 2015, PEMEX also entered into a new option agreement with SML Trustees Limited to acquire 100% of the shares of Pemex Finance, Ltd, which allows PEMEX to have control over Pemex Finance Ltd. because of the potential voting rights. As of the date of these consolidated financial statements the option agreement has been exercised.

Until November 30, 2018, the financial results of Pemex Finance, Ltd. were included in the consolidated financial statements of PEMEX. Under IFRS, variations in income and equity from Pemex Finance, Ltd. were presented in the consolidated statements of changes in equity (deficit), net as "non-controlling interest", and as net income and comprehensive income for the year, attributable to non-controlling interest, in the consolidated statements of comprehensive income, due to the fact that PEMEX did not own any of the shares of Pemex Finance, Ltd.

On December 17, 2018, PEMEX exercised its option to purchase all shares of Pemex Finance Ltd., and as of December 31, 2018, this company is no longer presented as a "non-controlling interest".

Similarly, because PEMEX does not currently own all of the shares of PMI CIM, HJ BARRERAS and COMESA, variations in income and equity from these entities are also presented in the consolidated statements of changes in equity (deficit) as "non-controlling interest."

As of December 31, 2018 and 2017, non-controlling interest represented gains of Ps. 477,118 and Ps.965,107, respectively, in PEMEX's equity (deficit).

(Figures stated in thousands, except as noted)

NOTE 25. COST AND EXPENSES BY NATURE

Cost and expenses by nature for each of the years ended December 31, 2018, 2017 and 2016, was as follows:

	2018	2017	2016
Purchases	Ps. 756,867,203	Ps. 581,355,161	Ps.430,813,337
Depreciation and amortization	153,382,040	156,704,513	150,439,491
Net periodic cost of employee benefits	114,621,614	108,073,075	109,738,416
Personnel services	104,284,007	94,470,130	84,414,593
Exploration and Extraction Hydrocarbons			
Duty and taxes	88,145,519	63,900,374	48,424,861
Maintenance	42,075,043	40,224,754	45,390,282
Non-operating losses [1]	39,439,107	22,945,447	9,091,870
Auxiliary services with third-parties	23,675,019	21,924,327	25,471,260
Raw materials and spare parts	16,850,075	19,165,103	6,970,433
Other operating costs and expenses	16,672,534	1,755,170	25,102,485
Unsuccessful wells	15,443,086	6,164,624	29,106,084
Exploration expenses	13,048,078	6,562,463	4,585,859
Other operation taxes and duties	12,248,474	9,900,726	10,066,528
Integrated Contracts	8,015,606	15,378,544	4,551,876
Leases	6,487,493	7,786,282	6,482,902
Insurance	5,647,101	4,948,610	4,759,016
Freight	3,525,843	10,317,132	14,452,296
Inventory variations	(62,237,591)	(25,542,431)	(6,154,595)
Total cost of sales and general expenses	**Ps. 1,358,190,251**	**Ps.1,146,034,004**	**Ps. 1,003,706,994**

[1] In accordance with Resolution RES / 179/2017, issued by the ERC, non-operating losses are losses outside the scope of the contemplated operating costs as a result of various illicit actions, including the theft of and illicit market in fuels.

Pemex Logistics is responsible for distributing hydrocarbons through the pipelines, preserving their quality and delivering them from the point of reception to the user at the point of destination. Pemex Logistics determines the volume of missing hydrocarbons through monthly calculations.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

NOTE 26. OTHER REVENUES AND EXPENSES-NET

Other revenues and expenses-net for each of the years ended December 31, 2018, 2017 and 2016, was as follows:

	2018	2017	2016
Participation rights[1]	Ps. 14,165,042	Ps. -	Ps. -
Other	7,525,714	4,277,207	14,228,801
Claims recovery	3,979,698	16,386,250	3,695,217
Revenues from reinsurance premiums	3,615,907	1,986,568	3,694,026
Other income for services	3,786,253	4,720,546	4,266,854
Sale of fixed assets by bidding[2]	3,301,653	-	-
Gain on sale of fixed assets	1,850,052		2,687,652
Price of sale share	1,262,987	3,139,103	22,684,736
Franchise fees	1,125,339	917,934	1,059,333
Bidding terms, sanctions, penalties and other	630,365	825,956	3,223,437
Cash distributions	274,621	-	-
Fiscal support (Profit-sharing duty) [3]	-	-	28,439,379
Assets value transferred to CENAGAS	-	-	7,450,931
Total other revenues	Ps. 41,517,631	Ps. 32,253,564	Ps. 91,430,366
Transportation and distribution of natural gas	Ps. (12,600,191)	Ps. (8,447,031)	Ps. (2,140,943)
Other	(5,348,666)	(7,927,150)	(3,581,036)
Claims	(474,299)	(3,640,036)	(4,757,116)
Transportation and distribution of natural gas	(41,964)	(6,652,878)	(8,830,967)
Loss in the sale of associates	-	(412,393)	(7,473,698)
Loss in the Assets value transferred to CENAGAS	-	-	(35,333,411)
Impairment of goodwill	-	-	(4,007,018)
Services provided	-	-	(2,656,571)
Total other expenses	Ps. (18,465,120)	Ps. (27,079,488)	Ps. (68,780,760)
Total other revenues and expenses, net	**Ps. 23,052,511**	**Ps. 5,174,076**	**Ps. 22,649,606**

(1) Relates to rights receivable of EECs, for which the operators of the EECs guarantee their participation in such contracts.
(2) Relates mainly to exploration and production fixed assets.
(3) Fiscal incentive from the Mexican Government to mitigate the impact of international oil prices during 2016.

(Continued)

(Figures stated in thousands, except as noted)

NOTE 27. RELATED PARTIES

The balances and transactions with related parties are mainly due to: (i) the sale and purchase of products, (ii) the billing of administrative services, and (iii) financial loans between related parties. The transactions between PEMEX entities were carried out in prices and market conditions.

Directors and employees of Petróleos Mexicanos and the Subsidiary Entities are subject to regulations related conflict of interest such as the Petróleos Mexicanos Law, *Ley Federal de Responsabilidades Administrativas de los Servidores Públicos* (Federal Law of Administrative Responsibilities of Public Officials) and the *Políticas y Lineamientos Anticorrupción para Petróleos Mexicanos, sus Empresas Productivas Subsidiarias y, en su caso, Empresas Filiales (*Anticorruption Policies and Guidelines for Petróleos Mexicanos, its Subsidiary Productive Companies and, where applicable, Subsidiary Companies). Under these provisions, PEMEX's directors and employees are obligated to "recuse themselves from intervening in any way in the attention to, processing or resolution of matters in which they might have personal, family or business interest, including those where some benefit can result for themselves, their spouse, blood or affinity relatives up to the fourth degree, or civil relatives, or for third parties with which they have professional, labor or business relations, or for partners or partnerships where the public officials or the persons referred above are or have been members thereof."

Related parties include individuals and companies that do not form part of PEMEX, but that could take advantage of being in a privileged position as a result of their relation with PEMEX. Also included are situations in which PEMEX could take advantage of a special relationship in order to benefit its financial position or results of operations.

Mr. Manuel Bartlett Díaz, Chief Executive Officer of CFE, was appointed member of the Board of Directors of Petróleos Mexicanos in December 2018. CFE has executed several purchase agreements with Pemex Industrial Transformation. During 2018, CFE acquired the following products from Pemex Industrial Transformation:

Product	**2018**
Heavy fuel oil	Ps. (38,499,999)
Comercial condition	135,667
Industrial diesel	(6,148,283)
Freights	(154,115)
Natural Gas	(3,760,115)
87 octane gasoline	(707)
Total	**Ps. (48,427,552)**

As of December 31, 2018, CFE owed Pemex Industrial Transformation a total amount of Ps. 4,635,514.

a. Compensation of Directors and Officers

For the years ended December 31, 2018, 2017 and 2016, the aggregate compensation of executive officers of Petróleos Mexicanos and the Subsidiary Entities paid or accrued in that year for services in all capacities was approximately Ps. 51,188, Ps. 50,749 and Ps. 49,165, respectively. Retirement and former employee benefits are granted as described in Note 20. Except in the case of the professional members, with respect to the previous Board of Directors of Petróleos Mexicanos and the boards of directors of the existing Subsidiary Entities, and the independent members, with respect to the new Board of Directors of Petróleos Mexicanos, members of the Boards of Directors of Petróleos Mexicanos and the Subsidiary Entities do not receive compensation for their services.

The compensation paid or accrued during 2018, 2017 and 2016 to the professional members of the previous Board of Directors of Petróleos Mexicanos and boards of directors of the existing Subsidiary Entities was approximately Ps. 8,878, Ps. 7,525, and Ps. 8,339, respectively.

b. Salary Advances

As an employee benefit, PEMEX offers salary advances to all of its eligible Petroleum Workers' Union and non-union workers, including executive officers, pursuant to the programs set forth in the collective bargaining agreement and in the *Reglamento de Trabajo del Personal de Confianza de Petróleos Mexicanos y Empresas Productivas Subsidiarias* (Employment Regulation of White Collar Employees of Petróleos Mexicanos and Subsidiary Entities), respectively. The salary advances, which are non-interest bearing, are offered to each eligible employee in an amount up to a maximum of four months' salary and are repaid through salary deductions in equal installments over a period of either one or two years, as elected by the employee. Most employees take advantage of this benefit. The amount of salary advances outstanding to executive officers at December 31, 2018 was Ps. 2,069 and at December 31, 2017 was Ps. 3,466. The amount of salary advances outstanding to executive officers at March 31, 2019 was Ps. 283.

NOTE 28. COMMITMENTS

a. PMI CIM has entered into several contracts for the sale of crude oil on the international market to foreign companies. The terms and conditions of these contracts are specific to each client, and their durations may be indefinite (evergreen contracts) or they may contain a minimum obligatory period (long-term contracts).

b. PEMEX has entered into a nitrogen supply contract for the pressure maintenance program at the Cantarell complex. During 2007, an additional contract was entered into with the purpose of supplying nitrogen to the Ku-Maloob-Zap complex and extending the original contract until 2027. At December 31, 2018 and 2017, the value of the nitrogen to be supplied during the term of the contract was approximately Ps42,295,796 and Ps. 46,877,149, respectively. In the event of the annulment of the contract and depending on the circumstances, PEMEX has the right or the obligation to acquire the vendor's nitrogen plant under the terms of the contract.

(Figures stated in thousands, except as noted)

Estimated future payments under this contract for upcoming fiscal years are as follows:

2019	Ps.	4,691,340
2020		4,956,568
2021		4,988,985
2022		4,999,063
2023		5,017,388
2024 and thereafter		17,642,452
Total	**Ps.**	**42,295,796**

c. As of December 31, 2018, PEMEX had entered into FPWCs by means of which the contractor manages and is responsible for financing performance of the work to be undertaken.

As of December 31, 2018 and 2017, the estimated value of these contracts was as follows:

Maturity	2018		2017	
Up to 1 year	Ps.	4,461,048	Ps.	5,533,174
1 to 3 years		1,525,043		1,891,557
4 to 5 years		1,496,380		1,856,006
More than 5 years		2,518,017		3,123,173
Total	**Ps.**	**10,000,488**	**Ps.**	**12,403,910**

d. As of December 31, 2018 and 2017, the estimated value of the contracts that PEMEX has entered into with several contractors for the development of various infrastructure and services works was as follows:

Maturity	2018		2017	
Up to 1 year	Ps.	105,856,669	Ps.	229,738,368
1 to 3 years		192,105,937		196,335,411
4 to 5 years		15,811,930		123,159,215
More than 5 years		65,810,305		149,672,236
Total	**Ps.**	**379,584,841**	**Ps.**	**698,905,230**

(Figures stated in thousands, except as noted)

e. Estimated future payments for leases are:

Maturity	Payments
Up t to 1 year	Ps. 4,180,192
1 to 3 years	19,485,821
More than 5 years	39,057,896
Total	**Ps. 62,723,909**

NOTE 29. CONTINGENCIES

In the ordinary course of business, PEMEX is named in a number of lawsuits of various types. PEMEX evaluates the merit of each claim and assesses the likely outcome. PEMEX has not recorded provisions related to ongoing legal proceedings due to the fact that an unfavorable resolution is not expected in such proceedings, with the exception of the proceeding described in further detail in this Note.

PEMEX is involved in various civil, tax, criminal, administrative, labor and commercial lawsuits and arbitration proceedings. The results of these proceedings are uncertain as of the date of these consolidated financial statements. As of December 31, 2018, and December 31, 2017, PEMEX had accrued a reserve of Ps. 6,483,078, and Ps. 7,812,689, respectively, for these contingent liabilities.

As of December 31, 2018, the current status of the principal lawsuits in which PEMEX is involved is as follows:

- On April 4, 2011, Pemex Exploration and Production was summoned before the Séptima Sala Regional Metropolitana ("Seventh Regional Metropolitan Court") of the Tribunal Federal de Justicia Fiscal y Administrativa ("Tax and Administrative Federal Court") in connection with an administrative claim (No. 4957/1117071) filed by EMS Energy Services de México, S. de R.L. de C.V. and Energy Maintenance Services Group I. LLC requesting that Pemex Exploration and Production's termination of the public works contract be declared null and void. In a concurrent proceeding, the plaintiffs also filed an administrative claim (No. 13620/15-17-06) against Pemex Exploration and Production before the Sexta Sala Regional Metropolitana ("Sixth Regional Metropolitan Court") of the Tax and Administrative Federal Court in Mexico City seeking damages totaling U.S. $193,713 related to the above-mentioned contract. Pemex Exploration and Production filed a response requesting the two administrative claims be joined in a single proceeding, which was granted on May 10, 2016 by the Seventh Regional Metropolitan Court. On May 3, 2017, the proceeding was closed for a judgment to be issued. As of the date of these financial statements, a resolution from the Second Section of the Superior Court of the Tax and Administrative Federal Court is still pending.

- On June 11, 2015, the Segunda Sala Regional del Noreste ("Second Regional Northeast Court") notified Pemex Industrial Transformation of an administrative claim (file no. 2383/15-06-02-4) filed by Severo Granados Mendoza, Luciano Machorro Olvera and Hilario Martínez Cerda, as President, Secretary and Treasurer of the Ejido Tepehuaje, seeking Ps. 2,094,232 in damages due to a hydrocarbon spill on their land. Pemex Industrial Transformation filed a response to this claim and the plaintiffs were given time to amend their claim. The defendant filed a motion against this. Each party filed its expert's environmental opinion and Second Regional Northeast Court appointed an independent expert, who issued his opinion on June 6, 2018 stating that no damages were caused. On June 22, 2018, the pleadings stage was opened. On August 31, 2018, pleadings were filed. On September 11, 2018, the proceeding was closed and the file was sent to the Superior Court and, on October 11, 2018, it was accepted for a judgment to be issued.

- On July 8, 2011, Pemex Exploration and Production was summoned in connection with an administrative claim (no. 4334/1111026) filed by Compañía Petrolera La Norma, S.A., against the Chief Executive Officer of Petróleos Mexicanos and the Chief Executive Officer of Pemex-Exploration and Production before the Segunda Sala Regional Hidalgo-México ("Hidalgo-Mexico Second Regional Court") of the Tax Administrative Federal Court in Tlalnepantla, Estado de México. The plaintiff is seeking compensation for the cancellation of its alleged petroleum rights concessions and damages for up to Ps.1,552,730. On August 20, 2014, the proceeding was sent to the Segunda Sección de la Sala Superior ("Second Section of The Superior Court") of the Tax and Administrative Federal Court (4334/11-11-02-6/1337/14-s2-07-04).On September 7, 2017, a motion was filed questioning a signature's authenticity. On December 4 and 5, 2017, a documentary expert's opinion was filed by the plaintiff and a new expert was designated by Pemex Exploration and Production to issue his opinion. On April 18, 2018, each party filed its pleadings and the claim was sent to the Second Section of the Superior Court. On September 20, 2018, the Superior Court ruled that the plaintiff did not provide evidence to support its claim. The plaintiff filed an amparo against this resolution and Pemex Exploration and Production filed its response. As of the date of these financial statements, a final resolution is still pending.

- On December 12, 2017, Pemex Exploration and Production was summoned in connection with an arbitration claim (no. 23217/JPA) filed by SUBSEA 7 de México, S. de R. L. de C.V. ("SUBSEA 7") seeking U.S.$153,000 related to additional expenses in connection with a pipelines construction contracts (No. 420832856 and 420833820). On January 5, 2018 Pemex Exploration and Production filed a response to this claim. The appointment of the chairperson of the arbitration trial is still pending. On September 14, 2018, the defendant received the claim briefs including documentation and related evidence and the amount sought under this claim was increased to U.S.$ 310,484. On January 4, 2019 a response was filed by the defendant. As of the date of these financial statements a final resolution is still pending.

- On August 1, 2017, Pemex Exploration and Production was summoned in connection with an administrative claim (no. 11590/17-17-06-2) filed by Proyectos y Cimentaciones Industriales, S.A. de C.V. before the Sixth Regional Metropolitan Court seeking Ps. 800,000 and U.S.$ 12.82 and to have the settlement certificate dated March 22, 2017 related to services agreement declared null and void. On September 25, 2017 Pemex Exploration and Production filed a response to this claim. On September 4, 2018, the parties filed their pleadings. The claim was submitted to the Superior Court. As of the date of these financial statements, a final judgment is still pending.

- In March 2018, Pemex Drilling and Services was summoned before the International Centre for Dispute Resolution of the American Arbitration Association in connection with an arbitration claim (No. 01-18-0001-1499) filed by Loadmaster Universal Rigs, Inc., Loadmaster Drilling Technologies, LLC, Ulterra Drilling Technologies Mexico, S.A. de C.V. and Kennedy Fabricating, LLC seeking U.S. $139,870 in connection with the construction and acquisition of modular drilling equipment. On June 6, 2018, the plaintiffs responded to the counterclaim filed by Pemex Drilling and Services. On September 28, 2018, Pemex Drilling and Services filed a motion rejecting the arbitration jurisdiction. On December 19, 2018, the parties exchanged documentation. As of the date of these financial statements, the appointment of the chairperson of the arbitration court is still pending. Once the arbitration court is formed, the schedule for the proceeding will be determined.

The results of these proceedings are uncertain until their final resolutions are issued by the appropriate authorities. PEMEX has recorded liabilities for loss contingencies when it is probable that a liability has been incurred and the amount thereof can be reasonably estimated. When a reasonable estimation could not be made, qualitative disclosure was provided in the notes to these consolidated financial statements. PEMEX does not disclose amounts accrued for each individual claim because such disclosure could adversely affect PEMEX's legal strategy, as well as the outcome of the related litigation.

Pursuant to an ordinary session held by the Board of Directors on August 23, 2013, Petróleos Mexicanos established policies for the granting of mutual guarantees, loans or any type of credit in favor of the Subsidiary Entities and Subsidiary Companies; in accordance with these policies, the Corporate Finance Department issues an opinion with its risk analysis, financial valuation, budget sufficiency, accounting treatment and conclusions.

Additionally, Pemex Logistics has granted the following corporate guarantees in connection with the exploration and extraction contracts entered into Pemex Exploration and Production, as required by the NHC:

- Exploration and extraction of hydrocarbons under the deep-water license modality, Trión field (Tender CNH-A1-TRION / 2016), of US $ 4,000,000.
- Exploration and extraction of the contract area 3 Cinturón plegado perdido (Tender CNHR01- L04 / 2015), of US $ 3,333,000.
- Extraction of hydrocarbons under shared production contract of the Ek-Balam fields, of U.S. $5,000,000.
- Extraction of hydrocarbons in contractual area Santuario and El Golpe 3 field, of U.S. $320,000.
- Exploration and extraction of hydrocarbons under shared production contract, contractual area 2 Tampico-Misantla, of U.S. $ 1,750,000.
- Exploration and extraction of hydrocarbons under shared production contract, contractual area 8 Cuencas del Sureste, of U.S. $ 1,250,000.

- Exploration and extraction of hydrocarbons shared production contract, assignment AE-0398-Mission of U.S. $ 255,000.

- Extraction of hydrocarbons under license agreement, Ogarrio field of U.S. $ 250,000.

- Extraction of hydrocarbons under license agreement, Cárdenas and Mora fields, of U.S. $250,000.

- Exploration and extraction of hydrocarbons under the deep-water license modality, contractual area 2 Perdido, of U.S.$ 2,500,000.

- Exploration and extraction of hydrocarbons under the deep-water license modality, contractual area 5 Perdido, of U.S.$ 5,000,000.

- Exploration and extraction of hydrocarbons under the deep-water license modality, contractual area 18 Cordilleras Mexicanas, of U.S.$ 5,000,000.

- Exploration and extraction of hydrocarbons under shared production contract contractual area 22 Cuenca Salina, of U.S. $ 1,375,000.

- Contractual area 16 Tampico-Misantla, Veracruz, of U.S.$ 1,000,000.

- Contractual area 17 Tampico-Misantla, Veracruz, of U.S.$ 1,000,000.

- Contractual area 18 Tampico-Misantla, Veracruz, of U.S.$ 2,000,000.

- Contractual area 29 Cuencas del Sureste, of U.S.$ 2,500,000.

- Contractual area 32 Cuencas del Sureste, of U.S.$ 1,250,000.

- Contractual area 33 Cuencas del Sureste, of U.S.$ 1,250,000.

- Contractual area 35 Cuencas del Sureste, of U.S.$ 1,250,000.

- Contractual area Ébano, of U.S.$ 225,000.

- Contractual area AE-0388-M-Miquetla (for conventional and non-conventional on-shore license en zonas) of U.S.$ 245,000.

- Contractual area AE-0392-M-Pánuco (shared-production) by U.S.$ 225,000.

Certain other Subsidiary Entities have also granted guarantees and other contingencies.

Total guarantees granted to Pemex Exploration and Production amounted to U.S.$ 41,228,000, equivalent to Ps. 811,486,601 as of December 31, 2018.

(Figures stated in thousands, except as noted)

PEMEX considers the probability it needs to make a disbursement of cash, for the garantees granted and in effect as of December 31, 2018 remote.

NOTE 30. SUBSEQUENT EVENTS

At the beginning of 2019, some rating agencies downgraded PEMEX's credit rating, which could have an impact on the cost and terms of PEMEX's new debt, as well as contract renegotiations during 2019.

Between January 1 to April 17, 2019, PMI HHS obtained U.S. $ 4,275,000 and repaid U.S. $ 4,933,000 in financing from its revolving credit lines. As of January 1, 2019, the outstanding amount was U.S. $ 700,000. As of April 17, 2019, the outstanding amount under these revolving credit lines was U.S. $ 42,000.

As of April 17, 2019, the Mexican peso-U.S. dollar exchange rate was Ps. 18.8489 per U.S. dollar, which represents a 4.24% appreciation of the value of the peso in U.S. dollar terms as compared to the exchange rate as of December 31, 2018, which was Ps. 19.6829 per U.S. dollar.

As of April 17, 2019, the weighted average price of the crude oil exported by PEMEX was U.S. $ 63.03 per barrel. This represents a price increase of approximately 41.04% as compared to the average price as of December 31, 2018, which was U.S. $44.69 per barrel.

As of April 17, 2019, PEMEX received in advance five promissory notes issued by the Mexican Government as part of the payment obligation related to pensions and retirements plans for a total amount of Ps.28,063,511. This amount is part of Strengthening Program to PEMEX, announced by the Mexican Government on February 15, 2019.

Date	Number of promissory note	Amount	Original maturity
January 25, 2019	25	Ps. 5,550,217	March, 2041
January 25, 2019	26A	3,836,615	March 2042
February 20, 2019	24	5,912,165	March 2040
March 20, 2019	23	6,232,546	March 2039
April 17, 2019	22	6,531,968	March 2038

On January 31, 2019 the Board of Directors of Petróleos Mexicanos was notified of the payments from the Mexican Government through the Ministry of Energy related to the Strengthening Program in the amount of Ps. 25,000,000. As of April 22, 2019, PEMEX received the payments as follows:

Date	Amount
March 8, 2019	Ps. 10,000,000
April 11, 2019	5,000,000

On April 2, 2019, PEMEX received payment of promissory note No. 3, with maturity on March 31, 2019 of Ps. 3,815,055.

The Board of Directors of Petróleos Mexicanos, at its meeting held on March 26, 2019, approved, among others, the following resolutions:

- Instructed Petróleos Mexicanos, Pemex Exploration and Production and Pemex Industrial Transformation management to present to the Board of Directors of Petróleos Mexicanos for its authorization, proposals for the merger of Pemex Drilling and Services into Pemex Exploration and Production and of Pemex Ethylene into Pemex Industrial Transformation.

- Presented, for authorization of the Board of Directors of Petróleos Mexicanos, modifications to the creation resolutions of Pemex Exploration and Production and Pemex Industrial Transformation, as well as the declarations of extinction of Pemex Drilling and Services and Pemex Ethylene.

- Authorized the modifications to the basic organic structures of Petróleos Mexicanos, Pemex Exploration and Production, Pemex Industrial Transformation and Pemex Logistics, which will become effective at the same time as the corresponding organic statute, which will be approved by their respective Boards of Directors. The deputy directions that will assume the activities of Pemex Drilling and Services and of Pemex Ethylene, respectively in the basic organic structures of Pemex Exploration and Production and Pemex Industrial Transformation, will become effective once the corresponding mergers take effect.

On February 6, 2019, the Sala Regional del Golfo Norte (North Gulf Regional Court) of Federal Court of Justice for Tax and Administrative Matters summoned Pemex Drilling and Services in connection with a claim (752/17-18-01-7) filed by Micro Smart System of Mexico, S. de R.L. de C.V., challenging a settlement statement dated March 14, 2017 related to a works contract number 424049831 dated December 9, 2009, seeking the payment of: U.S.$ 240,448 for work performed and U.S.$284 for work estimates. On February 22, 2019, Pemex Drilling and Services filed a motion against the resolution that admitted this claim. On March 13, 2019, two resolutions were notified: 1) On February 19, 2019, a judgment issued on November 15, 2018 related to an amparo filed was issued (No. 179/2018); and 2) on February 26, 2019, a complaint motion filed by Pemex Drilling and Services was admitted against the resolution admitting this claim, which was notified to the plaintiff on March 19, 2019. On March 28, 2019, through the jurisdictional bulletin, a statement dated March 27, 2019 was released notifying the parties that a response to this claim was filed by the defendant. However, it was not admitted since the complaint motion was filed. A resolution is pending until such motion is solved.

NOTE 31. NEW STANDARDS RECENTLY ISSUED

The IASB issued amendments and new IFRS that are not effective as of the issuance date of these consolidated financial statements but could have an impact on PEMEX's future financial information.
The new standards will be effective for periods beginning in 2019.

a) IFRS 16, "Leases" ("IFRS 16")

In January 2016, the IASB published a new accounting standard IFRS 16 "Leases" ("IFRS 16), which replaces IAS 17, "Leases and Guide interpretations."

PEMEX is required to adopt IFRS 16 beginning January 1, 2019. PEMEX has assessed the estimated impact that initial application of IFRS 16 will have on its consolidated financial statements, as described below. The expected impact of adopting the standard on January 1, 2019 may change due to the fact that:

- PEMEX is still determining the effects of the adoption, as well as the design and evaluation of controls; and
- The new accounting policies are subject to change until PEMEX presents its first financial statements that include the date of initial application.

PEMEX considers the significant impacts due to adoption are the following:

- The recognition of new right-of-use assets and lease liabilities on the balance sheet for its operating leases;
- Providing significant new disclosures about its leasing activities.

IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low-value assets. Lessor accounting remains similar to the current standard – i.e. lessors continue to classify leases as finance or operating leases.

IFRS 16 replaces existing leases guidance, including IAS 17 Leases (IAS 17), IFRIC 4 Determining whether an Arrangement contains a Lease (IFRIC 4), SIC-15 Operating Leases – Incentives (SIC-15) and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease (SIC 27).

i. Leases in which PEMEX is a lessee

PEMEX will recognize new assets and liabilities for its operating leases mainly of transportation and railway equipment, docks, hydrogen supply plants, electric power and steam gas storage. The nature of expenses related to those leases will change because PEMEX will recognize a depreciation charge for right-of-use assets and interest expense on lease liabilities.

Previously, PEMEX recognized operating lease expense on a straight-line basis over the term of the lease, and recognized assets and liabilities only to the extent that there was a timing difference between actual lease payments and the expense recognized.

Based on the information currently available, PEMEX estimates that it will recognize additional lease liabilities as of January 1, 2019 corresponding to the right-of-use of assets based on the present value of the remaining minimum rental payments under the current leasing standards for existing operating leases. PEMEX does not expect the adoption of IFRS 16 will impact its ability to comply with rights contained in loans because there are no covenants derived from these type of operations.

(Continued)

ii. Transition

PEMEX will apply IFRS 16 initially on January 1, 2019, using the modified retrospective approach. Therefore, the cumulative effect of adopting IFRS 16 will be recognized as an adjustment to the opening balance of retained earnings at January 1, 2019, with no restatement of comparative information.

PEMEX will apply the option of recognizing the right-of-use asset of each lease to an amount equal to its liability, without considering other elements within the asset measurement by right-of-use, such as direct initial costs and payments made before or after at the beginning of the lease.

PEMEX will apply the practical expedient to adopt the definition of lease at the time of transition. This means that it will apply IFRS 16 to all contracts entered into before January 1, 2019 and identified as leases in accordance with IAS 17 and IFRIC 4.

PEMEX will apply the short-term lease recognition exemption for all leases with a remaining lease term at the date of initial application of 12 months or less. PEMEX also currently expects to elect the practical expedient to not separate lease and non-lease components for leases where the non-lease component is not significant.

b) IFRIC 23 – Uncertainty over Income Tax Treatments

In June 2017, the IASB published a new accounting interpretation to be applied to the determination of taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, when there is uncertainty over income tax treatments under IAS 12.

In order to make these tax assessments, an entity must consider whether it is probable that the relevant taxing authority will accept each tax treatment, or group of tax treatments, that the entity has used or plans to use in its next income tax filing:

- If the entity concludes that it is probable that a particular tax treatment will be accepted by the relevant taxing authority, that entity must determine taxable profit (tax loss), tax bases, unused tax losses, unused tax credits or tax rates consistently with the tax treatment included in its income tax filings.

- If the entity concludes that it is not probable that a particular tax treatment is accepted by the relevant taxing authority, the entity must use the most likely amount or the expected value of the tax treatment when determining taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates. That calculation should be based on which method provides better predictions of the resolution of the uncertainty.

IFRIC 23 is effective for annual reporting periods beginning on or after January 1, 2019. Earlier application is permitted.

PEMEX does not anticipate being impacted by IFRIC 23 because all tax positions are discussed and agreed with SHCP prior to releasing quarterly or annual financial statements.

(Continued)

c) Annual improvements – 2015-2017 Cycle

In December 2017, the IASB published "the Annual Improvements to the IFRS of the 2015-2017 Cycle" through which it clarifies the following IFRS:

- IFRS 3 Business Combinations and IFRS 11 Joint ventures

IFRS 3 Business Combinations clarifies how an entity should recognize an increase of its interest in a joint operation:

- When a party to a joint arrangement obtains control of a business that was a part of that joint arrangement, and where that party had assumed a portion of the rights to the assets and obligations to the liabilities of that business prior to the acquisition date, the acquisition will be considered a business combination that is achieved in stages. The acquiring entity must therefore apply the requirements for a business combination achieved in stages, including by measuring its previously held interest in the joint arrangement.

- When a party participates in, but does not share in the control of a joint operation, and subsequently takes joint control of that joint operation, this will constitute the acquisition of a business and previously held interest in the joint operation are not measured.

- IAS 12 Income Tax

All income tax consequence of dividends (including payments on financial instruments classified as equity) are recognized consistently with the transactions that generated the distributable profits (i.e., in profit or loss, OCI or equity basis).

- IAS 23 Borrowing Costs

With respect to the treatment of costs for loans subject to capitalization:

- To the extent that an entity borrows funds generally and uses them for the purpose of obtaining a qualifying asset, that entity shall determine the amount of borrowing costs eligible for capitalization by applying a capitalization rate to the expenditures on that asset. The capitalization rate shall be the weighted average of the borrowing costs applicable to all borrowings of the entity that are outstanding during the period.

- However, an entity shall exclude from this calculation borrowing cost applicable to borrowing made specifically for the purpose of obtaining a qualifying asset until substantially all the activities necessary to prepare that asset for its intended used or sale are complete.

The amount of borrowing costs that an entity capitalizes during a period shall not exceed the amount of borrowing costs it incurred during that period.

The amendments are effective for annual periods beginning on or after January 1, 2019.

(Continued)

PEMEX is in the process of evaluating the impact that these amendments will have on its consolidated financial statements.

The new standards will be effective for periods beginning in 2020.

d) Amendments to definition of business in IFRS 3

In October 2018, the IASB issued amendments to the definition of a business in IFRS 3. The amendments are intended to assist entities to determine whether a transaction should be accounted for as a business combination or as an assets acquisition.

The amendments:

(a) mean that, to be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.
(b) removed the assessment of whether market participants can replace any missing inputs or processes and continuing to produce outputs.
(c) add guidance and illustrative examples to assist entities to assess whether a substantial process has been acquired.
(d) narrowed the definition of business and of outputs by focusing on goods and services provided to customers. The reference to an ability to reduce costs is removed
(e) introduced an optional concentration test that permits a simplified assessment of whether an acquired set of activities and assets is not a business.

The amendments to IFRS 3 must be applied to transactions that are either a business combination or asset acquisition for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after January 1, 2020. Consequently, entities do not have to revisit such transactions that occurred on prior periods. Earlier application is permitted and must be disclosed.

e) Definition of material – amendments to IAS 1 Presentation of financial statements (IAS 1) and IAS 8 Accounting policies, changes in accounting estimates and errors (IAS 8).

The IASB observed that the inappropriate application of "materiality" is one of the factors that affects disclosures to financial statements, causing entities to disclose irrelevant information, omit or obscure important information, reducing the usefulness of financial statements. Therefore, in October 2018, the IASB issued amendments to IAS 1 and IAS 8 (the amendments) to align the definition of material across the standards and clarify aspects of definition.

New definition of material

The new definition states that “information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general-purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity.”

(Continued)

The amendments clarify that materiality will depend on the nature or magnitude of information. An entity will need to assess whether the information, either individually or in combination with other information, is material in the context of the financial statements. A misstatement of information is material if it could reasonably be expected to influence decisions made by the primary users. The amendments clarify that, in assessing whether an information could reasonably be expected to influence decisions of the primary users, an entity must consider the characteristics of those users as well as its own circumstances.

Obscuring information

The information is obscured if it is communicated in a way that would have a similar effect as omitting or misstating the information. The following are examples of circumstances that may result in material information being obscured:

- Material information may be obscured if information regarding a material item, transaction or other event is scattered throughout the financial statements or disclosed using language that is vague or unclear.
- Material information can also be obscured if dissimilar items, transactions or other events are inappropriately aggregated, or conversely, if similar items are inappropriately disaggregated. In addition, the understandability of the financial statements is reduced if material information is hidden because of immaterial information.

Primary users of the financial statements

The current definition refers to 'users' but does not specify their characteristics, which can be interpreted to imply that an entity is required to consider all possible users of the financial statements when deciding what information to disclose. Consequently, the IASB decided to refer to primary users in the new definition to help respond to concerns that the term users may be interpreted too widely.

The amendments explain that many existing and potential investors, lenders and other creditors cannot require reporting entities to provide them with information directly and, as such, they rely on general purpose financial statements for much of the financial information they need. Therefore, these groups are the primary users to whom general purpose financial statements are directed.

Effective date and transition

The amendments to IAS 1 and IAS 8 are required to be applied for annual periods beginning on or after January 1, 2020. The amendments must be applied prospectively and earlier application is permitted.

NOTE 32. SUBSIDIARY GUARANTOR INFORMATION

The following consolidating information presents: (i) condensed consolidated statements of financial position at December 31, 2018 and 2017 and condensed consolidated statements of comprehensive income and cash flows for the years ended December 31, 2018, 2017 and 2016 of Petróleos Mexicanos, the Subsidiary Guarantors and the Non-Guarantor Subsidiaries (as defined below).

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

These condensed consolidated statements were prepared in conformity with IFRS, with one exception: for the purposes of the presentation of the subsidiary guarantor information, the Subsidiary Entities and Subsidiary Companies have been accounted for as investments under the equity method by Petróleos Mexicanos. Earnings of subsidiaries are therefore reflected in Petróleos Mexicanos' investment account and earnings. The principal elimination entries eliminate Petróleos Mexicanos' investment in subsidiaries and inter-company balances and transactions. Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (in the case of Pemex Cogeneration and Services, until July 27, 2018 (see Note 1)) (collectively, the "Subsidiary Guarantors") and Pemex Ethylene and Pemex Fertilizers are 100%-owned subsidiaries of the Mexican Government. The guaranties by the Subsidiary Guarantors of Petróleos Mexicanos' payment obligations under this indebtedness are full, unconditional, joint and several. Pemex Ethylene, Pemex Fertilizers, Pemex Finance, Ltd. and the Subsidiary Companies collectively comprise the non-guarantor subsidiaries (the "Non-Guarantor Subsidiaries").

The Pemex Project Funding Master Trust (the "Master Trust"), which was a trust formed for the purpose of financing PEMEX's projects, was dissolved effective December 20, 2011 and is no longer consolidated in the financial statements of PEMEX as of December 31, 2011 and thereafter.

The following table sets forth, as of December 31, 2018, the principal amount outstanding of the registered debt securities originally issued by the Master Trust. As noted above, Petróleos Mexicanos has assumed, as primary obligor, all of the obligations of the Master Trust under these debt securities. The obligations of Petróleos Mexicanos are guaranteed by the Subsidiary Guarantors:

Table 1: Registered Debt Securities originally issued by the Master Trust and Assumed by Petróleos Mexicanos

Security	Primary obligor	Guarantors	Principal amount outstanding (U.S. $)
6.625% Guaranteed Bonds due 2035	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,750,000
6.625% Guaranteed Bonds due 2038	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	491,175

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Security	Primary obligor	Guarantors	Principal amount outstanding (U.S. $)
8.625% Bonds due 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	160,245
8.625% Guaranteed Bonds due 2023	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	106,507
9.50% Guaranteed Bonds due 2027	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	219,217

The following table sets forth, as of December 31, 2018, the principal amount outstanding of the registered debt securities issued by Petróleos Mexicanos, and guaranteed by Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services (in the case of Pemex Cogeneration and Services, until July 27, 2018 (see Note 1)).

Table 2: Registered Debt Securities originally issued by Petróleos Mexicanos

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
8.00% Notes due 2019	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,220,195

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
9.50% Global Guaranteed Bonds due 2027	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	102,149
6.000% Notes due 2020	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	813,073
5.50% Notes due 2021	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,962,047
3.500% Notes due 2023	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,099,730
4.875% Notes due 2024	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,499,136
6.625% Notes due 2035	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	999,000

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
6.500% Bonds due 2041	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	3,000,000
4.875% Bonds 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,097,055
3.125% Notes due 2019	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	187,595
3.500% Notes due 2020	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	678,722
5.50% Bonds due 2044	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,703,456

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
6.375% Bonds due en 2045	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,999,980
5.625% Bonds due 2046	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,975,199
4.500% Notes due 2026	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,497,918
4.250% Notes due 2025	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	999,030
6.375% Notes due 2021	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,247,668

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
6.875% Notes due 2026	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,970,334
4.625% Notes due 2023	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,055,845
6.750% Notes due 2047	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	5,997,558
5.350% Bonds due 2028	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	2,479,583
6.350% Bonds due 2048	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	3,323,470

(Continued)

(Figures stated in thousands, except as noted)

Security	Issuer	Guarantors	Principal amount outstanding (U.S. $)
6.500% Bonds due 2029	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,977,163
5.375% Notes due 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	1,490,682
Floating Rate Notes due 2022	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	986,171
6,250% Notes due 2027	Petróleos Mexicanos	Pemex Exploration and Production, Pemex Industrial Transformation, Pemex Drilling and Services, Pemex Logistics and Pemex Cogeneration and Services	5,145,205

Petróleos Mexicanos is the only PEMEX entity that had debt securities registered with the SEC outstanding as of December 31, 2018 and as of the date of these consolidated financial statements, and all guaranteed debt is issued by Petróleos Mexicanos. The guaranties of the Subsidiary Guarantors are full and unconditional and joint and several. PEMEX's management has not presented separate financial statements for the Subsidiary Guarantors, because it has determined that such information is not material to investors.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF FINANCIAL POSITION
As of December 31, 2018

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Assets					
Current assets					
Cash and cash equivalents	Ps. 25,187,488	Ps. 16,471,298	Ps. 40,253,622	Ps. -	Ps. 81,912,409
Accounts receivable and other, net, and derivative financial instruments	63,513,279	111,325,430	52,837,198	-	227,675,907
Accounts receivable—inter-company	573,128,107	1,190,513,209	90,294,160	(1,853,935,476)	-
Inventories	418,497	55,152,479	26,451,592	-	82,022,568
Equity instruments	-	-	245,440	-	245,440
Available-for-sale financial assets	-	1,253,638	-	-	1,253,638
Total current assets	662,247,371	1,374,716,054	210,082,012	(1,853,935,476)	393,109,961
Long-term receivables—intercompany	1,833,526,496	285	5,409,802	(1,838,936,583)	-
Investments in joint ventures and associates	(423,086,576)	135,726	16,693,715	423,098,680	16,841,545
Wells, pipelines, properties, plant and equipment-net	10,857,719	1,344,851,372	46,776,993	-	1,402,486,084
Long-term notes receivables	118,834,477	994,121	-	-	119,828,598
Deferred taxes	59,010,975	61,009,660	2,764,095	-	122,784,730
Intangible assets	318,342	11,865,660	1,536,538	-	13,720,540
Other assets	54,272	3,174,097	3,197,441	-	6,425,810
Total assets	**Ps. 2,261,763,076**	**Ps. 2,796,746,975**	**Ps. 286,460,596**	**Ps.(3,269,773,379)**	**Ps. 2,075,197,268**
Liabilities					
Current liabilities					
Current portion of long-term debt	Ps. 171,880,315	Ps. 4,289,361	Ps. 15,626,033	Ps. -	Ps. 191,795,709
Accounts payable—inter-company	1,439,442,811	325,901,335	88,582,648	(1,853,926,794)	-
Other current liabilities	20,837,163	194,303,145	40,840,277	-	255,980,585
Total current liabilities	1,632,160,289	524,493,841	145,048,958	(1,853,926,794)	447,776,294
Long-term debt	1,835,071,170	36,863,242	18,555,994	-	1,890,490,407
Long-term payables—inter-company	-	1,838,285,585	659,680	(1,838,945,265)	-
Employee benefits, provisions for sundry creditors, other liabilities and deferred taxes	254,041,839	929,431,425	12,862,735	-	1,196,335,999
Total liabilities	3,721,273,298	3,329,074,093	177,127,368	(3,692,872,059)	3,534,602,700
Equity (deficit), net	(1,459,510,222)	(532,327,118)	109,333,228	423,098,680	(1,459,405,432)
Total liabilities and equity	**Ps. 2,261,763,076**	**Ps. 2,796,746,975**	**Ps. 286,460,596**	**Ps.(3,269,773,379)**	**Ps. 2,075,197,268**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF FINANCIAL POSITION
As of December 31, 2017

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Assets					
Current assets					
Cash and cash equivalents	Ps. 46,959,103	Ps. 18,815,345	Ps. 32,077,306	Ps. -	Ps. 97,851,754
Accounts receivable and other, net, and derivative financial instruments	83,119,394	38,105,354	79,533,940	-	200,758,688
Accounts receivable—inter-company	311,148,593	1,380,100,592	86,354,837	(1,777,604,022)	-
Inventories	509,375	32,357,125	30,992,430	-	63,858,930
Available-for-sale financial assets	-	-	1,056,918	-	1,056,918
Total current assets	441,736,465	1,469,378,416	230,015,431	(1,777,604,022)	363,526,290
Long-term receivables—intercompany	1,823,276,758	285	3,597,880	(1,826,874,923)	-
Investments in joint ventures and associates	(465,832,399)	82,668	16,611,681	465,845,414	16,707,364
Wells, pipelines, properties, plant and equipment-net	12,444,376	1,370,974,060	53,090,890	-	1,436,509,326
Long-term notes receivables	147,286,367	1,206,542	-	-	148,492,909
Deferred taxes	59,691,528	84,443,897	2,057,060	-	146,192,485
Intangible assets	-	9,088,563	-	-	9,088,563
Other assets	2,209,579	4,846,078	4,429,520	-	11,485,177
Total assets	**Ps. 2,020,812,674**	**Ps. 2,940,020,509**	**Ps. 309,802,462**	**Ps.(3,138,633,531)**	**Ps. 2,132,002,114**
Liabilities					
Current liabilities					
Current portion of long-term debt	Ps. 137,947,110	Ps. 5,386,564	Ps. 13,875,793	Ps. -	Ps. 157,209,467
Accounts payable—inter-company	1,240,490,891	434,556,688	93,140,905	(1,768,188,484)	-
Other current liabilities	23,435,614	157,589,107	50,892,997	-	231,917,718
Total current liabilities	1,401,873,615	597,532,359	157,909,695	(1,768,188,484)	389,127,185
Long-term debt	1,824,829,579	40,262,391	15,573,634	-	1,880,665,604
Long-term payables—inter-company	-	1,830,150,615	6,139,845	(1,836,290,460)	-
Employee benefits, provisions for sundry creditors, other liabilities and deferred taxes	297,028,436	1,057,191,286	10,341,988	-	1,364,561,710
Total liabilities	3,523,731,630	3,525,136,651	189,965,162	(3,604,478,944)	3,634,354,499
Equity (deficit), net	(1,502,918,956)	(585,116,142)	119,837,300	465,845,413	(1,502,352,385)
Total liabilities and equity	**Ps. 2,020,812,674**	**Ps. 2,940,020,509**	**Ps. 309,802,462**	**Ps.(3,138,633,531)**	**Ps. 2,132,002,114**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF COMPREHENSIVE INCOME
For the year ended December 31, 2018

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Net sales	Ps. -	Ps. 1,941,467,663	Ps. 912,726,857	Ps. (1,181,748,372)	Ps. 1,672,446,148
Services income	75,979,835	113,113,024	5,960,807	(186,380,664)	8,673,002
Total sales revenues	75,979,835	2,054,580,687	918,687,664	(1,368,129,036)	1,681,119,150
(Reversal) impairment of wells, pipelines, properties, plant and equipment	-	(25,384,888)	3,965,891	-	(21,418,997)
Cost of sales	1,905,865	1,536,120,030	910,525,715	(1,249,040,049)	1,199,511,561
Gross income	74,073,970	543,845,545	4,196,058	(119,088,987)	503,026,586
Other revenues (expenses), net	73,183	(26,020,067)	8,710,216	40,289,179	23,052,511
General expenses:					
Transportation, distribution and sale expenses	-	26,805,854	1,013,719	(3,462,364)	24,357,209
Administrative expenses	69,479,218	132,159,683	9,234,320	(76,551,740)	134,321,481
Total general expenses	69,479,218	158,965,537	10,248,039	(80,014,104)	158,678,690
Operating income	4,667,935	358,859,941	2,658,235	1,214,296	367,400,407
Financing income	140,114,346	103,186,750	3,100,917	(214,844,891)	31,557,122
Financing cost	(200,842,909)	(130,246,541)	(3,959,079)	214,321,507	(120,727,022)
Derivative financial instruments income (cost), net	(3,497,813)	(19,143,363)	382,563	-	(22,258,613)
Foreign exchange income , net	(3,832,933)	26,526,563	965,850	-	23,659,480
Profit (loss) sharing in joint ventures and associates	(125,246,527)	53,058	2,164,868	124,555,613	1,527,012
Income (loss) before taxes, duties and other	(188,637,901)	339,236,408	5,313,354	125,246,525	281,158,386
Total taxes, duties and other	(8,272,851)	466,788,123	3,062,951	-	461,578,223
Net (loss) income for the year	(180,365,050)	(127,551,715)	2,250,403	125,246,525	(180,419,837)
Total other comprehensive result	47,357,316	176,174,564	(140,133)	-	223,391,747
Total comprehensive result for the year	**Ps. (133,007,734)**	**Ps. 48,622,849**	**Ps.2,110,270**	**Ps.125,246,525**	**Ps.42,971,910**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF COMPREHENSIVE INCOME
For the year ended December 31, 2017

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Net sales	Ps. -	Ps. 1,713,914,703	Ps. 1,096,752,930	Ps. (1,424,768,483)	Ps. 1,385,899,150
Services income	50,399,983	140,934,022	2,646,144	(182,849,580)	11,130,569
Total sales revenues	50,399,983	1,854,848,725	1,099,399,074	(1,607,618,063)	1,397,029,719
Impairment of wells, pipelines, properties, plant and equipment	-	145,302,407	6,142,153	-	151,444,560
Cost of sales	2,007,814	1,447,640,131	1,083,297,610	(1,528,740,675)	1,004,204,880
Gross income	48,392,169	261,906,187	9,959,311	(78,877,388)	241,380,279
Other revenues (expenses), net	(341,521)	(12,443,660)	(4,664,096)	22,623,353	5,174,076
General expenses:					
Transportation, distribution and sale expenses	-	26,136,674	1,297,558	(5,544,562)	21,889,670
Administrative expenses	59,141,391	105,920,390	5,883,200	(51,005,527)	119,939,454
Total general expenses	59,141,391	132,057,064	7,180,758	(56,550,089)	141,829,124
Operating income	(11,090,743)	117,405,463	(1,885,543)	296,054	104,725,231
Financing income	143,676,367	134,401,598	3,185,195	(265,097,307)	16,165,853
Financing cost	(236,929,035)	(141,900,236)	(3,616,530)	264,801,253	(117,644,548)
Derivative financial instruments income (cost), net	27,670,991	(1,608,039)	(724,628)	-	25,338,324
Foreign exchange income , net	6,837,171	15,807,988	538,963	-	23,184,122
Profit (loss) sharing in joint ventures and associates	(211,567,169)	409,955	(49,515)	211,567,169	360,440
Income (loss) before taxes, duties and other	(281,402,418)	124,516,729	(2,552,058)	211,567,169	52,129,422
Total taxes, duties and other	(557,520)	331,001,261	2,536,300	-	332,980,041
Net (loss) income for the year	(280,844,898)	(206,484,532)	(5,088,358)	211,567,169	(280,850,619)
Total other comprehensive result	4,728,640	6,841,586	(63,845)	-	11,506,381
Total comprehensive result for the year	**Ps. (276,116,258)**	**Ps. (199,642,946)**	**Ps. (5,152,203)**	**Ps. 211,567,169**	**Ps. (269,344,238)**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF COMPREHENSIVE INCOME
For the year ended December 31, 2016

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Net sales	Ps. -	Ps. 1,361,538,624	Ps. 828,143,332	Ps. (1,124,563,366)	Ps. 1,065,118,590
Services income	46,330,245	98,959,131	1,970,055	(138,284,789)	8,974,642
Total sales revenues	46,330,245	1,460,497,755	830,113,387	(1,262,848,155)	1,074,093,232
(Reversal) Impairment of wells, pipelines, properties, plant and equipment	-	(330,037,834)	(1,276,509)	-	(331,314,343)
Cost of sales	1,236,921	1,244,388,072	809,156,778	(1,188,959,550)	865,822,221
Gross income	45,093,324	546,147,517	22,233,118	(73,888,605)	539,585,354
Other revenues (expenses), net	(312,611)	20,713,184	2,915,837	(666,804)	22,649,606
General expenses:					
Transportation, distribution and sale expenses	-	50,948,771	945,489	(26,663,020)	25,231,240
Administrative expenses	57,437,455	96,884,031	7,050,271	(48,718,224)	112,653,533
Total general expenses	57,437,455	147,832,802	7,995,760	(75,381,244)	137,884,773
Operating income	(12,656,742)	419,027,899	17,153,195	825,835	424,350,187
Financing income	123,266,281	67,542,768	3,526,378	(180,586,172)	13,749,255
Financing cost	(160,824,632)	(114,271,762)	(3,602,868)	179,854,798	(98,844,464)
Derivative financial instruments (cost) income, net	(12,052,200)	3,172	(1,951,959)	-	(14,000,987)
Foreign exchange loss, net	(20,531,005)	(232,714,446)	(767,292)	-	(254,012,743)
Profit (loss) sharing in joint ventures and associates	(117,347,803)	628,357	1,507,488	117,347,803	2,135,845
Income (loss) before taxes, duties and other	(200,146,101)	140,215,988	15,864,942	117,442,264	73,377,093
Total taxes, duties and other	(8,834,626)	266,155,181	7,200,880	-	264,521,435
Net (loss) income for the year	(191,311,475)	(125,939,193)	8,664,062	117,442,264	(191,144,342)
Total other comprehensive result	10,126,560	96,032,433	21,713,488	-	127,872,481
Total comprehensive result for the year	**Ps.(181,184,915)**	**Ps. (29,906,760)**	**Ps. 30,377,550**	**Ps. 117,442,264**	**Ps.(63,271,861)**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF CASH FLOWS
For the year ended December 31, 2018

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Operating activities:					
Net (loss) income for the year	Ps.(180,365,050)	Ps.(127,551,718)	Ps. 2,305,189	Ps. 125,191,742	Ps. (180,419,837)
Adjustments to reconcile net loss to cash provided by operating activities:					
Depreciation and amortization	1,274,179	149,747,232	2,360,629	-	153,382,040
Amortization of intangible assets	2,446,445	86,332	110,549	-	2,643,326
Impairment of wells, pipelines, properties, plant and equipment	-	(25,384,888)	3,965,891	-	(21,418,997)
	-		-	-	
Unsuccessful wells		15,443,086			15,443,086
Exploration costs	-	(2,171,218)	-	-	(2,171,218)
Disposal of wells, pipelines, properties, plant and equipment	872,527	12,226,128	3,786,609	-	16,885,264
Gain on sale of share in joint ventures and associates	-	(10,257)	(690,914)	-	(701,171)
Effects of net present value of reserve for well abandonment	-	(6,953,200)	-	-	(6,953,200)
Profit (loss) sharing in investments	125,246,527	(538,281)	(1,473,955)	(124,761,303)	(1,527,012)
Unrealized foreign exchange loss (gain)	(19,726,271)	446,523	(482,460)	-	(19,762,208)
Interest expense	109,697,028	9,577,370	1,452,624	-	120,727,022
Interest income	(9,520,962)	-	-	-	(9,520,962)
Funds (used in) from operating activities:					
Accounts receivable, accounts payable, derivative financial instruments and accrued liabilities	51,460,407	(70,278,499)	26,118,293	-	7,300,201
Taxes	(8,881,300)	38,071,896	(157,861)	-	29,032,735
Other assets and other liabilities	559,449	(12,071,857)	(3,244,955)	-	(14,757,363)
Employee benefits	10,519,603	44,858,697	(1,773,416)	-	53,604,884
Inter-company charges and deductions	(14,527,177)	81,240,429	(21,516,287)	(45,196,965)	-
Cash flows (used in) from operating activities	69,055,405	106,737,775	10,759,936	(44,766,526)	141,786,590
Investing activities:					
Acquisition of wells, pipelines, properties, plant and equipment and intangible assets	(1,162,685)	(103,408,759)	(4,389,245)	-	(108,960,689)
Proceeds from sale of assets	-	14,568	4,063,776	-	4,078,344
Other assets	3,586,010	212,421	-	-	3,798,431
(Increase) decrease due to Inter-company investing	(47,454,385)	-	-	47,454,385	-
Cash flows used in investing activities	(45,031,060)	(103,181,770)	(325,469)	47,454,385	(101,083,914)
Financing activities:					
Loans obtained from financial institutions	510,871,366	-	388,897,646	-	899,769,012
Debt payments, principal only	(450,353,531)	(6,662,318)	(384,017,543)	-	(841,033,392)
Interest paid	(106,313,795)	(7,857,926)	(1,117,668)	-	(115,289,389)
Inter-company increase (decrease) financing	-	8,620,192	(5,932,333)	(2,687,859)	-
Cash flows provided by financing activities:	(45,795,960)	(5,900,052)	(2,169,898)	(2,687,859)	(56,553,769)
Net (decrease) increase in cash and cash equivalents	(21,771,615)	(2,344,047)	8,264,569	-	(15,851,093)
Effects of change in cash value	-	-	(88,252)	-	(88,252)
Cash and cash equivalents at the beginning of the year	46,959,103	18,815,345	32,077,306	-	97,851,754
Cash and cash equivalents at the end of the year	**Ps. 25,187,488**	**Ps. 16,471,298**	**Ps. 40,253,623**	**Ps. -**	**Ps. 81,912,409**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF CASH FLOWS
For the year ended December 31, 2017

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Operating activities:					
Net (loss) income for the year	Ps.(280,844,898)	Ps.(206,484,532)	Ps. (5,082,639)	Ps. 211,561,450	Ps.(280,850,619)
Adjustments to reconcile net loss to cash provided by operating activities:					
Depreciation and amortization	1,155,881	152,607,943	2,940,689	-	156,704,513
Impairment of wells, pipelines, properties, plant and equipment	-	145,302,407	6,142,153	-	151,444,560
Unsuccessful wells	-	6,164,624	-	-	6,164,624
Exploration costs	-	(1,447,761)	-	-	(1,447,761)
Disposal of wells, pipelines, properties, plant and equipment	433,391	14,687,229	1,943,051	-	17,063,671
Gain on sale of share in joint ventures and associates	-	(3,139,103)	-	-	(3,139,103)
Disposal of held—for—sale current non—financial assets	-	2,808,360	-	-	2,808,360
Dividends	-	-	(180,675)	-	(180,675)
Effects of net present value of reserve for well abandonment	-	7,774,000	-	-	7,774,000
Profit (loss) sharing in investments	211,567,169	(409,955)	49,515	(211,567,169)	(360,440)
Decrease on available–for-sale financial assets	-	-	1,360,205	-	1,360,205
Net loss on available-for-sale financial assets	-	-	3,523,748	-	3,523,748
Unrealized foreign exchange loss (gain)	(13,526,153)	(1,585,910)	(1,573,376)	-	(16,685,439)
Interest expense	100,545,114	15,736,420	1,363,014	-	117,644,548
Funds (used in) from operating activities:					
Accounts receivable, accounts payable and derivative financial instruments	(88,496,967)	(14,214,566)	(20,789,692)	-	(123,501,225)
Inventories	(62,421)	(3,086,181)	(14,818,268)	-	(17,966,870)
Other assets	(7,091,867)	(483,389)	551,233	-	(7,024,023)
Employee benefits	18,829,768	31,489,785	(254,157)	-	50,065,396
Inter-company charges and deductions	7,284,124	(114,968,213)	514,270	107,169,819	-
Cash flows (used in) from operating activities	(50,206,859)	30,751,158	(24,310,929)	107,164,100	63,397,470
Investing activities:					
Acquisition of wells, pipelines, properties, plant and equipment	(1,436,926)	(87,274,561)	(3,147,978)	-	(91,859,465)
Resources from sale available-for-sale financial assets	-	-	8,026,836	-	8,026,836
Proceeds from the sale of assets	-	3,863,072	(721,362)	-	3,141,710
(Increase) decrease due to Inter-company investing	25,611,359	-	-	(25,611,359)	-
Cash flows used in investing activities	24,174,433	(83,411,489)	4,157,496	(25,611,359)	(80,690,919)
Financing activities:					
Loans obtained from financial institutions	401,947,349	-	302,768,119	-	704,715,468
Debt payments, principal only	(327,703,729)	(7,981,937)	(306,374,153)	-	(642,059,819)
Interest paid	(93,755,698)	(13,991,633)	(1,163,086)	-	(108,910,417)
Inter-company increase (decrease) financing	-	83,716,743	(2,164,002)	(81,552,741)	-
Cash flows provided by financing activities:	(19,512,078)	61,743,173	(6,933,122)	(81,552,741)	(46,254,768)
Net (decrease) increase in cash and cash equivalents	(45,544,504)	9,082,842	(27,086,555)	-	(63,548,217)
Effects of change in cash value	-	-	(2,132,542)	-	(2,132,542)
Cash and cash equivalents at the beginning of the year	92,503,607	9,732,503	61,296,403	-	163,532,513
Cash and cash equivalents at the end of the year	**Ps. 46,959,103**	**Ps. 18,815,345**	**Ps. 32,077,306**	**Ps. -**	**Ps. 97,851,754**

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

SUPPLEMENTAL CONDENSED CONSOLIDATING FINANCIAL INFORMATION

STATEMENT OF CASH FLOWS
For the year ended December 31, 2016

	Petróleos Mexicanos	Subsidiary guarantors	Non-guarantor subsidiaries	Eliminations	PEMEX consolidated
Operating activities:					
Net (loss) income for the year	Ps.(191,311,476)	Ps.(139,410,398)	Ps.22,160,755	Ps.117,416,777	Ps.(191,144,342)
Adjustments to reconcile net loss to cash provided by operating activities:					
Depreciation and amortization	1,066,033	146,545,307	2,828,151	-	150,439,491
(Reversal) Impairment of wells, pipelines, properties, plant and equipment	-	(330,037,834)	(1,276,509)	-	(331,314,343)
Unsuccessful wells	-	29,106,084	-	-	29,106,084
Exploration costs	-	(2,022,826)	-	-	(2,022,826)
Disposal of wells, pipelines, properties, plant and equipment	320,599	2,658,625	792,063	-	3,771,287
Loss in sale of fixed assets	-	27,882,480	-	-	27,882,480
Gain on sale of share in joint ventures and associates	-	(15,211,039)	-	-	(15,211,039)
Profit (loss) sharing in joint ventures and associates	117,249,643	(628,356)	(1,507,489)	(117,249,643)	(2,135,845)
Impairment of goodwill	-	-	4,007,018	-	4,007,018
Dividends	-	-	(293,397)	-	(293,397)
Effects of net present value of reserve for well abandonment	-	11,968,966	-	-	11,968,966
Unrealized foreign exchange loss (gain)	231,191,646	6,754,046	5,237,072	-	243,182,764
Interest expense	91,044,541	5,687,502	2,112,421	-	98,844,464
Funds (used in) from operating activities:					
Accounts receivable, accounts payable and derivative financial instruments	23,636,331	(158,449,370)	45,028,534	-	(89,784,505)
Inventories	83,317	3,508,494	(4,950,690)	-	(1,358,879)
Other assets	(2,405,412)	(22,600,504)	(122,614)	-	(25,128,530)
Employee benefits	2,591,000	136,354,337	(91,652,268)	-	47,293,069
Inter-company charges and deductions	(393,835,932)	(83,049,125)	48,435,633	428,449,424	-
Cash flows (used in) from operating activities	(120,369,710)	(380,943,611)	30,798,680	428,616,558	(41,898,083)
Investing activities:					
Acquisition of wells, pipelines, properties, plant and equipment	(2,172,586)	(147,786,686)	(1,449,208)	-	(151,408,480)
Proceeds from the sale of assets	-	23,611,009	(365,608)	-	23,245,401
Business acquisition	-	-	(4,329,769)	-	(4,329,769)
(Increase) decrease due to Inter-company investing	(39,612,699)	-	-	39,612,699	-
Cash flows used in investing activities	(41,785,285)	(124,175,677)	(6,144,585)	39,612,699	(132,492,848)
Financing activities:					
Increase in equity due to Certificates of Contributions "A"	73,500,000	-	-	-	73,500,000
Loans obtained from financial institutions	571,944,209	34,483,348	235,564,210	-	841,991,767
Debt payments, principal only	(372,809,166)	(6,414,441)	(235,763,722)	-	(614,987,329)
Interest paid	(82,008,347)	(4,706,946)	(2,038,848)	-	(88,754,141)
Inter-company increase (decrease) financing	-	464,488,030	3,741227	(468,229,257)	-
Cash flows provided by financing activities:	190,626,696	487,849,991	1,502,867	(468,229,257)	211,750,297
Net (decrease) increase in cash and cash equivalents	28,471,701	(17,269,297)	26,156,962	-	37,359,366
Effects of change in cash value	5,570,892	20,371,126	(9,137,751)	-	16,804,267
Cash and cash equivalents at the beginning of the year	58,461,014	6,630,674	44,277,192	-	109,368,880
Cash and cash equivalents at the end of the year	Ps. 92,503,607	Ps. 9,732,503	Ps. 61,296,403	Ps. -	Ps. 163,532,513

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

NOTE 33. SUPPLEMENTARY INFORMATION ON OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITIES (UNAUDITED)

Under the Mexican Constitution, all crude oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. In August 2014, through the Round Zero process, the Mexican Government granted PEMEX the right to extract, but not own, certain petroleum and other hydrocarbon reserves in Mexico through assignment deeds.

This note provides supplementary information on the oil and gas exploration, development and production activities of Pemex Exploration and Production in compliance with the U.S. Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 932 10-5 "Extractive Activities—Oil and Gas" ("ASC Topic 932") and Accounting Standards Update 2010-03 (see Note 3-G).

As of the date of these consolidated financial statements, all exploration and production activities of Pemex Exploration and Production are conducted in Mexico. The supplemental data presented herein reflect information for all of Pemex Exploration and Production's oil and gas producing activities.

A. Capitalized costs for oil and gas producing activities (unaudited):

	As of December 31,		
	2018	**2017**	**2016**
Proved reserves	Ps. 2,505,307,260	Ps.2,363,336,481	Ps.2,476,535,503
Construction in progress	51,033,968	35,381,089	60,720,261
Accumulated depreciation and amortization	(1,572,649,381)	(1,444,962,317)	(1,355,402,150)
Net capitalized costs	Ps. 983,691,846	Ps. 953,755,253	Ps.1,181,853,614

B. Costs incurred for oil and gas property exploration and development activities (unaudited):

	As of December 31,	
	2018	**2017**
Exploration	Ps. 36,208,481	Ps. 32,480,801
Development	56,040,685	53,460,364
Total costs incurred	**Ps. 92,249,166**	**Ps. 85,941,165**

There are no property acquisition costs because PEMEX exploits oil reserves owned by the Mexican nation.

Exploration costs include costs for geological and geophysical studies of fields amounting to Ps. 15,510,327 and Ps. 8,828,809, for 2018 and 2017, respectively, that, in accordance with the successful efforts method of accounting, are accounted for as geological and geophysical exploration expenses.

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Development costs include costs incurred in obtaining access to proved reserves and providing facilities for extracting, treating, gathering and storing oil and gas.

C. Results of operations for oil and gas producing activities (unaudited):

	2018	2017	2016
Revenues from sale of oil and gas	Ps. 910,433,244	Ps. 762,637,362	Ps. 616,380,608
Hydrocarbon duties	443,491,451	375,156,405	304,299,019
Production costs (excluding taxes)	273,695,691	248,957,950	171,194,337
Other revenues and expenses	(10,109,114)	(3,954,222)	61,359,271
Exploration expenses	30,953,413	14,993,433	39,693,273
Depreciation, depletion, amortization and accretion	28,845,604	240,672,906	(150,891,739)
	766,877,047	875,826,472	425,654,161
Results of operations for oil and gas producing activities	**Ps. 143,556,198**	**Ps. (113,189,111)**	**Ps. 190,726,447**

Note: Numbers may not total due to rounding.

D. Sales prices (unaudited)

The following table summarizes average sales prices in U.S. dollars for each of the years ended December 31 (excluding production taxes):

	2018	2017	2016
Weighted average sales price per barrel of oil equivalent (boe)[(1)]	US$ 50.89	US$ 38.63	US$ 29.18
Crude oil, per barrel	62.99	48.71	36.55
Natural gas, per thousand cubic feet	5.57	4.32	3.01

[(1)] To convert dry gas to barrels of oil equivalent, a factor of 5.201 thousand cubic feet of dry gas per barrel of oil equivalent is used.

E. Crude oil and natural gas reserves (unaudited)

Under the Mexican Constitution, all oil and other hydrocarbon reserves located in the subsoil of Mexico are owned by the Mexican nation and not by PEMEX. Under the Petróleos Mexicanos Law, Pemex Exploration and Production has the right to extract, but not own, these reserves, and to sell the resulting production. The exploration and development activities of Petróleos Mexicanos and the Subsidiary Entities are limited to reserves located in Mexico.

Proved oil and natural gas reserves are those estimated quantities of crude oil, natural gas and natural gas liquids which geological and engineering data demonstrate with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods and government regulations.

Proved reserves estimates as of December 31, 2018 were prepared by the exploration and production segment and were reviewed by the Independent Engineering Firms (as defined below), which audit its estimates of its hydrocarbon reserves. As of the date of these consolidated financial statements, the proved reserves estimates as of December 31, 2018 have not been approved by the NHC.

Pemex Exploration and Production estimates reserves based on generally accepted petroleum engineering and evaluation methods and procedures, which are based primarily on applicable SEC regulations and, as necessary, the SPE's publication entitled Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information, dated February 19, 2007 and other SPE publications, including the SPE's publication entitled Petroleum Resources Management System, as well as other technical sources, including Estimation and Classification of Reserves of Crude Oil, Natural Gas, and Condensate, by Chapman Cronquist, and Determination of Oil and Gas Reserves, Petroleum Society Monograph Number 1, published by the Canadian Institute of Mining and Metallurgy & Petroleum. The choice of method or combination of methods employed in the analysis of each reservoir is determined by:

- Experience in the area
- Stage of development
- Quality and completeness of basic data
- Production and pressure histories

Reserves data set forth herein represents only estimates. Reserves valuation is a subjective process of estimating underground accumulations of crude oil and natural gas that cannot be measured in an exact manner. The accuracy of any reserves estimate depends on the quality of available data, engineering and geological interpretation and professional judgment. As a result, estimates of different engineers may vary. In addition, the results of drilling, testing and producing subsequent to the date of an estimate may lead to the revision of an estimate.

During 2018, PEMEX did not record any material increase in PEMEX's hydrocarbons reserves as a result of the use of new technologies.

In order to ensure the reliability of PEMEX's reserves estimation efforts, it has undertaken the internal certification of its estimates of reserves since 1996. PEMEX has established certain internal controls in connection with the preparation of its proved reserves estimates. Initially, teams of geoscientists from Pemex Exploration and Production's exploration and exploitation business units (with each of these units covering several projects) prepare the reserves estimates, using distinct estimation processes for valuations relating to new discoveries and developed fields, respectively. Subsequently, the regional reserves offices collect these reserves estimates from the units and request that the Gerencia de Recursos y Certificación de Reservas (Office of Resources and Reserves Certification), the central hydrocarbon reserves management body of Pemex Exploration and Production, review and certify such valuations and the booking of the related reserves. This internal certification process is undertaken in accordance with internal guidelines for estimating and classifying hydrocarbon reserves, which are based on the SEC's rules and definitions. The Office of Resources and Reserves Certification, which additionally oversees and conducts an internal audit of the above process, consists entirely of professionals with geological, geophysical, petrophysical and reservoir engineering backgrounds. The engineers who participate in PEMEX's reserves estimation process are experienced in the following areas: reservoir numerical simulation; well drilling and completion; pressure, volume and temperature (PVT) analysis; analytical tools used in forecasting the performance of the various elements comprising the production system; and design strategies in petroleum field development. Furthermore, all of PEMEX's personnel have been certified by the Secretaría de Educación Pública (Ministry of Public Education), most have earned master's degrees in areas of study such as petroleum engineering, geology and geophysical engineering and they possess an average of over fifteen years of professional experience.

In addition to this internal review process, Pemex Exploration and Production's final reserves estimates are audited by independent engineering firms. Three independent engineering firms audited Pemex Exploration and Production's estimates of proved reserves as of December 31, 2018: DeGolyer and MacNaughton (“DeGolyer”), Netherland, Sewell International, S. de R.L. de C.V. “Netherland Sewell”) and GLJ Petroleum Consultants LTD. (“GLJ”), the "Independent Engineering Firms". The reserves estimates reviewed by the Independent Engineering Firms totaled 97.0% of PEMEX's estimated proved reserves. The remaining 3.0% of PEMEX's estimated proved reserves consisted of reserves located in certain areas which have been shared with third parties. Under such agreements, the corresponding third party is responsible of assessing the volume of reserves.

Netherland Sewell audited the reserves in the Cantarell, Ku-Maloob-Zaap, Cinco Presidentes and Macuspana-Muspac business units, DeGolyer audited the reserves in the Aceite Terciario de Golfo, Poza Rica-Altamira, Abkatún-Pol-Chuc and Litoral de Tabasco business units and GLJ audited the reserves in the Burgos, Veracruz, Bellota-Jujo and Samaria-Luna business units. The audits conducted by the Independent Engineering Firms consisted primarily of: (1) analysis of historical static and dynamic reservoir data provided by Pemex-Exploration and Production; (2) construction or updating of the Independent Engineering Firms' own static and dynamic reservoir characterization models of some of the fields; (3) economic analysis of the fields; and (4) review of Pemex Exploration and Production's production forecasts and reserves estimates.

Since reserves estimates are, by definition, only estimates, they cannot be reviewed for the purpose of verifying exactness. Instead, the Independent Engineering Firms conducted a detailed review of Pemex Exploration and Production's reserves estimates so that they could express an opinion as to whether, in the aggregate, the reserves estimates that Pemex Exploration and Production furnished were reasonable and had been estimated and presented in conformity with generally accepted petroleum engineering and evaluation methods and procedures.

All questions, including any suggested modifications to proved reserves estimates, that arose during the Independent Engineering Firms' review process were resolved by Pemex Exploration and Production to the satisfaction of the Independent Engineering Firms. The Independent Engineering Firms have concluded that PEMEX's estimated total proved oil and natural gas reserve volumes set forth in this report are, in the aggregate, reasonable and have been prepared in accordance with Rule 4-10(a) are consistent with international reserves reporting practice and are in accordance with the revised oil and gas reserves disclosure provisions of ASC Topic 932.

PEMEX's total proved developed and undeveloped reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from field processing plants decreased by 10.0% in 2018, from 6,427 million barrels at December 31, 2017 to 5,787 million barrels at December 31, 2018. PEMEX's proved developed reserves of crude oil, condensates and liquefiable hydrocarbons recoverable from processing plants decreased by 14.0% in 2018, from 4,166 million barrels at December 31, 2017 to 3,588 million barrels at December 31, 2018. These decreases were principally due to oil production in 2018, a decrease in field development activities and field behavior and the transfer to third parties, who were awarded with contracts, of certain fields such as Cardenas-Mora and Ogarrio, Misión, Miquetla and Ebano, of which PEMEX is assigned approximately 50% of their reserves. The amount of crude oil, condensate and liquefiable hydrocarbon reserves added in 2018 was insufficient to offset the level of production in 2018, which amounted to 743 million barrels of crude oil, condensates and liquefiable hydrocarbons.

PEMEX's proved developed and undeveloped dry gas reserves decreased by 3% in 2018, from 6,593 billion cubic feet at December 31, 2017 to 6,370 billion cubic feet at December 31, 2018. PEMEX's proved developed dry gas reserves decreased by 25 % in 2018, from 4,513 billion cubic feet at December 31, 2017 to 3,380 billion cubic feet at December 31, 2018. These decreases were principally due to oil production in 2018, a decrease in field development activities and field behavior and the transfer to third parties, who were awarded with contracts, of certain fields such as Cardenas-Mora and Ogarrio, Misión, Miquetla and Ebano, of which PEMEX is assigned approximately 50% of their reserves. The amount of dry gas reserves added in 2018 was insufficient to offset the level of production in 2018, which amounted to 887 billion cubic feet of dry gas. PEMEX's proved undeveloped dry gas reserves increased by 16% in 2018, from 2,567 billion cubic feet at December 31, 2017 to 2,990 billion cubic feet at December 31, 2018.

During 2018, our exploratory activity in the deep and shallow waters of the Gulf of Mexico and onshore regions resulted in new discoveries of gas and condensate in the deep water and crude oil discoveries in the offshore fields. These discoveries, together with the successful delineation of the deep water Doctus field with light crude oil and the onshore Ixachi field, led to the incorporation of approximately 1,100 million barrels of oil equivalent in three fields.

The following three tables of crude oil and dry gas reserves set forth PEMEX's estimates of its proved reserves determined in accordance with Rule 4-10(a).

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Summary of oil and gas [(1)] proved reserves as of December 31, 2018
based on average fiscal year prices

	Crude oil and Condensates [(2)] (in millions of barrels)	Dry Gas [(3)] (in billions of cubic feet)
Proved developed and un-developed reserves:		
Proved developed reserves	3,488	3,380
Proved undeveloped reserves	2,198	2,990
Total proved reserves	**5,787**	**6,370**

Note: Numbers may not total due to rounding.

(1) PEMEX does not currently produce synthetic oil or synthetic gas, or other natural resources from which synthetic oil or synthetic gas can be produced.
(2) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.
(3) Reserve volumes reported in this table are volumes of dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

Crude oil and condensate reserves
(including natural gas liquids) [(1)]

	2018	2017	2016
	(in millions of barrels)		
Proved developed and undeveloped reserves:			
At December 31	6,427	7,219	7,977
Revisions [(2)]	22	(95)	189
Extensions and discoveries	140	147	(55)
Production	(743)	(805)	(891)
Farm outs & transfer of fields due to NHC bidding process	(59)	(38)	-
At December 31	**5,787**	**6,427**	**7,219**
Proved developed reserves at December 31	3,488	4,166	4,886
Proved undeveloped reserves at December 31	2,198	2,261	2,333

Note: Numbers may not total due to rounding.

(1) Crude oil and condensate reserves include the fraction of liquefiable hydrocarbons recoverable in natural gas processing plants located at fields.

(Continued)

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

(2) Revisions include positive and negative changes due to new data from well drilling, revisions made when actual reservoir performance differs from expected performance and changes in hydrocarbon prices.

Source: Pemex Exploration and Production.

Dry gas reserves

	2018	**2017**	**2016**
	(in billions of cubic feet)		
Proved developed and undeveloped reserves:			
At December 31	6,593	6,984	8,610
Revisions [1]	3	169	(183)
Extensions and discoveries	809	468	(308)
Production [2]	(887)	(999)	(1,134)
Farm outs & transfer of fields due to NHC bidding process	(148)	(29)	-
At December 31	**6,370**	**6,593**	**6,984**
Proved developed reserves at December 31	3,380	4,026	4,513
Proved undeveloped reserves at December 31	2,990	2,567	2,471

Note: Numbers may not total due to rounding.

(1) Revisions include positive and negative changes due to new data from well drilling, revisions made when actual reservoir performance differs from expected performance and changes in hydrocarbon prices.

(2) Production refers here to dry gas, although natural gas production reported in other tables refers to sour wet gas. There is a shrinkage in volume when natural gas liquids and impurities are extracted to obtain dry gas. Therefore, reported natural gas volumes are greater than dry gas volumes.

Source: Pemex Exploration and Production.

Pemex Exploration and Production's reserve-replacement ratio, or RRR, for a given period is calculated by dividing the sum of proved reserves additions due to discoveries, developments, delineations and revisions by that period's total production. During 2018, we obtained an increase of 318 million barrels of oil equivalent of proved reserves as aggregated from discoveries, revisions, delimitations and development and production, which represents a RRR of 35%. PEMEX's 2018 RRR is an improvement as compared to 2017, when the RRR was 17%. PEMEX expects continued improvements in its RRR in subsequent years.

PEMEX's reserves production ratio, which is presented in terms of years, is calculated by dividing the estimated remaining reserves at the end of the relevant year by the total production of hydrocarbons for that year. As of December 31, 2018, this ratio stayed constant with 2017 levels and was equal to 7.7 years for proved reserves.

F. Standardized measure of discounted future net cash flows related to proved oil and gas reserves (unaudited)

The standardized measure tables presented below relate to proved oil and gas reserves excluding proved reserves scheduled to be produced after the year 2042. This measure is presented in accordance with ASC Topic 932.

Estimated future cash inflows from production are computed by applying average prices of oil and gas on the first day of each month of 2018. Future development and production costs are those estimated future expenditures needed to develop and produce the year-end estimated proved reserves after a net cash flows discount factor of 10%, assuming constant year-end economic conditions.

Future tax expenses are computed by applying the appropriate year-end statutory tax rates with consideration of the tax rates of the new fiscal regime for Pemex Exploration and Production already legislated for 2018 to the future pre-tax net cash flows related to PEMEX's proved oil and gas reserves.

The estimated future payment of taxes was calculated based on fiscal regime applicable by decree to Pemex Exploration and Production effective January 1, 2015 and by the tax benefits published in the Official Gazette of the Federation on April 18, 2016.

The standardized measure provided below represents a comparative benchmark value rather than an estimate of expected future cash flows or fair market value of PEMEX's production rights. There are numerous uncertainties inherent in estimating quantities of proved reserves and in projecting future rates of production and timing of development expenditures, including many factors beyond the control of the producer. Accordingly, reserve estimates may be materially different from the quantities of crude oil and natural gas that are ultimately recovered.

Standardized measure of discounted future net cash flows as of December 31

	2018	**2017**	**2016**
	(in millions of **U.S.** dollars)		
Future cash inflows	US$321,065	US$269,489	US$ 228,196
Future production costs (excluding profit taxes)	(103,498)	(114,369)	(87,942)
Future development costs	(22,224)	(26,229)	(25,515)
Future cash flows before tax	195,343	128,891	114,738
Future production and excess gains taxes	(156,691)	(129,377)	(108,960)
Future net cash flows	38,652	(487)	5,779
Effect of discounting net cash flows by 10%	(12,434)	(4,600)	(937)
Standardized measure of discounted future net cash flows	**US$26,218**	**US$4,113**	**US$ 4,841**

Note: Table amounts may not total due to rounding.

To comply with ASC Topic 932, the following table presents the aggregate standardized measure changes for each of the last three years and significant sources of variance:

Petróleos Mexicanos
Productive State-Owned Subsidiaries and Subsidiary Companies

Notes to the consolidated financial statements

(Figures stated in thousands, except as noted)

Changes in standardized measure of discounted future net cash flows

	2018	2017	2016
	(in millions of U.S. dollars)		
Sales of oil and gas produced, net of production costs	US$ (31,279)	US$ (25,076)	US$ (19,411)
Net changes in prices and production costs	62,902	26,355	(53,278)
Extensions and discoveries	4,323	3,639	1,105
Development cost incurred during the year	2,984	2,699	4,124
Changes in estimated development costs	(2,146)	2,744	1,763
Reserves revisions and timing changes	1,511	(1,353)	6,366
Accretion of discount of pre-tax net cash flows	6,628	5,891	11,094
Net changes in production and excess gains taxes	(22,817)	(15,628)	37,537
Aggregate change in standardized measure of discounted future net cash flows	**US$ 22,105**	**US$ (728)**	**US$ (10,700)**

	2018	2017	2016
	(in millions of U.S. dollars)		
Standardized measure:			
As of January 1	US$ 4,113	US$ 4,841	US$ 15,541
As of December 31	26,218	4,113	4,841
Change	**US$ 22,105**	**US$ (728)**	**US$ (10,700)**

Note: Table amounts may not total due to rounding.

In computing the amounts under each factor of change, the effects of variances in prices and costs are computed before the effects of changes in quantities. Consequently, changes in reserves are calculated at December 31 prices and costs.

The change in computed taxes includes taxes effectively incurred during the year and the change in future tax expense.