

PETROBRAS - PETROLEO BRASILEIRO SA

Form 20-F

April 18, 2018

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**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, D.C. 20549**

**FORM 20-F**

**ANNUAL REPORT**

**PURSUANT TO SECTION 13 OR 15(D)**

**OF THE SECURITIES EXCHANGE ACT OF 1934**

**for the fiscal year ended December 31, 2017**

**Commission File Number 001-15106**

**Petróleo Brasileiro S.A. Petrobras**

**(Exact name of registrant as specified in its charter)**

**Brazilian Petroleum Corporation Petrobras**

**(Translation of registrant's name into English)**

**The Federative Republic of Brazil**

**(Jurisdiction of incorporation or organization)**

**Avenida República do Chile, 65**

**20031-912 Rio de Janeiro RJ Brazil**

**(Address of principal executive offices)**

**Ivan de Souza Monteiro**

**Chief Financial Officer and Chief Investor Relations Officer**

**(55 21) 3224-4477 ivanmonteiro@petrobras.com.br Avenida República do Chile, 65 23 Floor 20031-912 Rio de Janeiro RJ Brazil**

**(Name, telephone, e-mail and/or facsimile number and address of company contact person)**

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

<b>Title of each class:</b>	<b>Name of each exchange on which registered:</b>
Petrobras Common Shares, without par value* Petrobras American Depositary Shares, or ADSs  (evidenced by American Depositary Receipts, or ADRs), each representing two Common Shares	New York Stock Exchange*
Petrobras Preferred Shares, without par value* Petrobras American Depositary Shares  (as evidenced by American Depositary Receipts), each representing two Preferred Shares	New York Stock Exchange New York Stock Exchange*
5.750% Global Notes due 2020, issued by PGF (successor to PifCo)	New York Stock Exchange
5.375% Global Notes due 2021, issued by PGF (successor to PifCo)	New York Stock Exchange
6.875% Global Notes due 2040, issued by PGF (successor to PifCo)	New York Stock Exchange
6.750% Global Notes due 2041, issued by PGF (successor to PifCo)	New York Stock Exchange
4.375% Global Notes due 2023, issued by PGF	New York Stock Exchange
5.625% Global Notes due 2043, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2019, issued by PGF	New York Stock Exchange
4.875% Global Notes due 2020, issued by PGF	New York Stock Exchange
6.250% Global Notes due 2024, issued by PGF	New York Stock Exchange
7.250% Global Notes due 2044, issued by PGF	New York Stock Exchange
Floating Rate Global Notes due 2020, issued by PGF	New York Stock Exchange
6.850% Global Notes due 2115, issued by PGF	New York Stock Exchange
8.375% Global Notes due 2021, issued by PGF	New York Stock Exchange
8.750% Global Notes due 2026, issued by PGF	New York Stock Exchange
6.125% Global Notes due 2022, issued by PGF	New York Stock Exchange

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7.375% Global Notes due 2027, issued by PGF

New York Stock Exchange

5.750% Global Notes due 2029, issued by PGF

New York Stock Exchange

\* Not for trading, but only in connection with the registration of American Depositary Shares pursuant to the requirements of the New York Stock Exchange.

**Securities registered or to be registered pursuant to Section 12(g) of the Act: None**

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None**

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The number of outstanding shares of each class of stock as of December 31, 2017 was:

7,442,454,142 Petrobras Common Shares, without par value

5,602,042,788 Petrobras Preferred Shares, without par value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act.

Yes No

If this report is an annual or transitional report, indicate by check mark if the registrant is not required to file reports pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

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

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

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

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

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

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

**Item 17      Item 18**

**If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).**

**Yes      No**

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**FORWARD-LOOKING STATEMENTS**

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or Exchange Act, that are not based on historical facts and are not assurances of future results. The forward-looking statements contained in this annual report, which address our expected business and financial performance, among other matters, contain words such as believe, expect, estimate, anticipate, intend, plan, aim, will, would, likely, potential and similar expressions.

**Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. There is no assurance that the expected events, trends or results will actually occur.**

We have made forward-looking statements that address, among other things:

our marketing and expansion strategy;

our exploration and production activities, including drilling;

our activities related to refining, import, export, transportation of oil, natural gas and oil products, petrochemicals, power generation, biofuels and other sources of renewable energy;

our projected and targeted Capital Expenditures According to Our Plan Cost Assumptions, commitments and revenues;

our liquidity and sources of funding;

our pricing strategy and development of additional revenue sources; and

the impact, including cost, of acquisitions and divestments.

Our forward-looking statements are not guarantees of future performance and are subject to assumptions that may prove incorrect and to risks and uncertainties that are difficult to predict. Our actual results could differ materially from those expressed or forecast in any forward-looking statements as a result of a variety of assumptions and factors. These factors include, but are not limited to, the following:

our ability to obtain financing;

general economic and business conditions, including crude oil and other commodity prices, refining margins and prevailing exchange rates;

global economic conditions;

our ability to find, acquire or gain access to additional reserves and to develop our current reserves successfully;

uncertainties inherent in making estimates of our oil and gas reserves, including recently discovered oil and gas reserves;

competition;

technical difficulties in the operation of our equipment and the provision of our services;

changes in, or failure to comply with, laws or regulations, including with respect to fraudulent activity, corruption and bribery;

receipt of governmental approvals and licenses;

international and Brazilian political, economic and social developments;

natural disasters, accidents, military operations, acts of sabotage, wars or embargoes;

the cost and availability of adequate insurance coverage;

our ability to successfully implement assets sales under our divestment program;

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the outcome of ongoing corruption investigations and any new facts or information that may arise in relation to the Lava Jato investigation;

the effectiveness of our risk management policies and procedures, including operational risk; and

litigation, such as class actions or enforcement or other proceedings brought by governmental and regulatory agencies.

For additional information on factors that could cause our actual results to differ from expectations reflected in forward-looking statements, see **Risk Factors** in this annual report.

All forward-looking statements attributed to us or a person acting on our behalf are qualified in their entirety by this cautionary statement. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events or for any other reason.

The crude oil and natural gas reserve data presented or described in this annual report are only estimates, and our actual production, revenues and expenditures with respect to our reserves may materially differ from these estimates.

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Unless the context indicates otherwise, the following terms have the meanings shown below:

ADR	American Depositary Receipt.
ADS	American Depositary Share.
AMS	Our health care plan ( <i>Assistência Multidisciplinar de Saúde</i> ).
ANP	The <i>Agência Nacional de Petróleo, Gás Natural e Biocombustíveis</i> (National Petroleum, Natural Gas and Biofuels Agency), or ANP, is the federal agency that regulates the oil, natural gas and renewable fuels industry in Brazil.
API	Standard measure of oil density developed by the American Petroleum Institute.
Assignment Agreement	An agreement under which the Brazilian federal government assigned to us the right to explore and produce oil, natural gas and other fluid hydrocarbons in specified pre-salt areas in Brazil. See Item 10. Additional Information Material Contracts Assignment Agreement.
B3	The São Paulo Stock Exchange.
Bahiagás	Companhia de Gás da Bahia, the natural gas distribution company for the State of Bahia.
Banco do Brasil	Banco do Brasil S.A.
Bank of New York Mellon	The Bank of New York Mellon, which serves as depositary for both our common and preferred ADSs.
Barrels	Standard measure of crude oil volume.
Braskem	Braskem S.A.
Brent Crude Oil	A major trading classification of light crude oil that serves as a major benchmark price for commercialization of crude oil worldwide.
BNDES	The <i>Banco Nacional de Desenvolvimento Econômico e Social</i> (the Brazilian Development Bank).
<i>Câmara de Arbitragem do Mercado</i>	An arbitration chamber governed and maintained by B3.
Capital Expenditures According to Our Plan Cost Assumptions	Capital expenditures based on the cost assumptions and financial methodology adopted in our 2018-2022 Plan, which include items that do not necessarily qualify as cash flows used in investing activities, primarily geological and geophysical expenses, research and development expenses, pre-operating charges, purchase of property, plant and equipment on credit, borrowing costs directly attributable to works in progress and investments in investees.
CCEE	The <i>Câmara de Comercialização de Energia Elétrica</i> (Electric Energy Trading Chamber).
CDB	China Development Bank.
CEG Rio	<i>Gas Natural Fenosa</i> , the natural gas distribution company for the State of Rio de Janeiro.
<i>Central Depositária</i>	The <i>Central Depositária de Ativos e de Registro de Operações do Mercado</i> , which serves as the custodian of our common and preferred shares (including those represented by ADSs) on behalf of our shareholders.

CMN	The <i>Conselho Monetário Nacional</i> (National Monetary Council), or CMN, is the highest authority of the Brazilian financial system, responsible for the formulation of the Brazilian currency, exchange and credit policy, and for the supervision of financial institutions.
CNODC	CNODC Brasil Petróleo e Gás Ltda.
CNOOC	CNOOC Petroleum Brasil Ltda.

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Condensate	Hydrocarbons that are in the gaseous phase at reservoir conditions but condense into liquid as they travel up the wellbore and reach separator conditions.
COMPERJ	The <i>Complexo Petroquímico do Rio de Janeiro</i> (Petrochemical Complex of Rio de Janeiro).
CONAMA	The <i>Conselho Nacional do Meio Ambiente</i> (National Council for the Environment in Brazil).
COSO	Committee of Sponsoring Organizations of the Treadway Commission.
COSO-ERM	Committee of Sponsoring Organizations of the Treadway Commission Enterprise Risk Management Integrated Framework.
CNPE	The <i>Conselho Nacional de Política Energética</i> (National Energy Policy Council), or CNPE, is an advisory body of the President of the Republic assisting in the formulation of energy policies and guidelines.
CVM	The <i>Comissão de Valores Mobiliários</i> (Brazilian Securities and Exchange Commission), or CVM.
D&M	DeGolyer and MacNaughton.
Deepwater	Between 300 and 1,500 meters (984 and 4,921 feet) deep.
Distillation	A process by which liquids are separated or refined by vaporization followed by condensation.
DoJ	The U.S. Department of Justice.
Eletrobras	Centrais Elétricas Brasileiras S.A. Eletrobras.
ERP	Enterprise Resource Planning.
EWT	Extended well test.
Exploration area	A region under a regulatory contract without a known hydrocarbon accumulation or with a hydrocarbon accumulation that has not yet been declared commercial.
Fitch	Fitch Ratings Inc., a credit rating agency.
FPSO	Floating production, storage and offloading unit.
Gaspetro	Petrobras Gás S.A.
GSA	Long-term Gas Supply Agreement entered into with the Bolivian state-owned company Yacimientos Petrolíferos Fiscales Bolivianos.
GTB	Gas Transboliviano S.A.
HSE	Health, Safety and Environmental.
IASB	International Accounting Standards Board.
IBAMA	The <i>Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis</i> (Brazilian Institute of the Environment and Renewable Natural Resources).
IBGC	The <i>Instituto Brasileiro de Governança Corporativa</i> (Brazilian Institute of Corporate Governance).
IBGE	The <i>Instituto Brasileiro de Geografia e Estatística</i> (Brazilian Institute of Geography and Statistics).
IOF	<i>Imposto sobre Operações Financeiras</i> (Brazilian taxes over financial transactions).
IPCA	The <i>Índice Nacional de Preços ao Consumidor Amplo</i> (National Consumer Price Index).
ISO	The International Organization for Standardization.

Lava Jato investigation	See Item 3. Key Information Risk Factors Compliance, Legal and Regulatory Risks and Item 8. Financial Information Legal Proceedings Lava Jato Investigation.
LFTs	<i>Letras Financeiras do Tesouro</i> (Brazilian federal government bonds).
LNG	Liquefied natural gas.

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LPG	Liquefied petroleum gas, which is a mixture of saturated and unsaturated hydrocarbons, with up to five carbon atoms, used as domestic fuel.
Mitsui	Mitsui Gás e Energia do Brasil Ltda.
MME	The <i>Ministério de Minas e Energia</i> (Ministry of Mines and Energy) of Brazil.
Moody's	Moody's Investors Service, Inc., a credit rating agency.
MPDM	<i>The Ministério do Planejamento, Desenvolvimento e Gestão</i> (Ministry of Planning, Development and Management) of Brazil.
MT-CGU	The <i>Ministério da Transparência e Controladoria Geral da União</i> (General Federal Inspector's Office), or MT-CGU, is an advisory body of the Brazilian Presidency, responsible for assisting in matters related to the protection of federal public property ( <i>patrimônio público</i> ) and the improvement of transparency in the Brazilian executive branch, through internal control activities, public audits, and the prevention and combat of corruption, among others.
NGLs	The liquid resulting from the processing of natural gas and containing the heavier gaseous hydrocarbons.
NYSE	The New York Stock Exchange.
NTS	Nova Transportadora do Sudeste S.A.
OHSAS	Occupational Health and Safety Management Systems.
Oil	Crude oil, including NGLs and condensates.
ONS	The <i>Operador Nacional do Sistema Elétrico</i> (National Electric System Operator) of Brazil.
OPEC	Organization of the Petroleum Exporting Countries.
OSRL	The Oil Spill Response Limited.
PESA	Petrobras Argentina S.A.
Petros	Petrobras employee pension fund.
Petros 2	Petrobras sponsored pension plan.
PFC Energy	A global energy research and consultancy group.
PGF	Petrobras Global Finance B.V.
PifCo	Petrobras International Finance Company S.A.
PLSV	Pipe laying support vessel.
PO&G	Petrobras Oil & Gas.
Post-salt reservoir	A geological formation containing oil or natural gas deposits located above a salt layer.
PPSA	Pré-Sal Petróleo S.A.
Pre-salt reservoir	A geological formation containing oil or natural gas deposits located beneath a salt layer.



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Proved reserves	<p>Consistent with the definitions in Rule 4-10(a) of Regulation S-X, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated 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. Existing economic conditions include prices and costs at which economic producibility from a reservoir is to be determined. The price is the average price during the 12-month period prior to December 31, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. The project to extract the hydrocarbons must have commenced or we must be reasonably certain that we will commence the project within a reasonable time.</p> <p>Reserves which can be produced economically through application of improved recovery techniques (such as fluid injection) are included in the proved classification when successful testing by a pilot project, or the operation of an installed program in the reservoir, provides support for the engineering analysis on which the project or program was based.</p>
Proved developed reserves	<p>Reserves that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or for which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserve estimate if the extraction is by means not involving a well.</p>
Proved undeveloped reserves	<p>Reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required. Reserves on undrilled acreage are limited to those directly offsetting development spacing areas that are reasonably certain of production when drilled, unless evidence using reliable technology exists that establishes reasonable certainty of economic producibility at greater distances.</p> <p>Undrilled locations are classified as having undeveloped reserves only if a development plan has been adopted indicating that they are scheduled to be drilled within five years, unless the specific circumstances justify a longer time. Proved undeveloped reserves do not include reserves attributable to any acreage for which an application of fluid injection or other improved recovery technique is contemplated, unless such techniques have been proved effective by actual projects in the same reservoir or an analogous reservoir or by other evidence using reliable technology establishing reasonable certainty.</p>

PTAX	The reference exchange rate for the purchase and sale of U.S. dollars in Brazil, as published by the Brazilian Central Bank.
PwC	PricewaterhouseCoopers Auditores Independentes.
RNEST	The <i>Refinaria Abreu e Lima</i> (Abreu e Lima Refinery).
S&P	Standard & Poor's Financial Services LLC, a credit rating agency.
SDNY	The United States District Court for the Southern District of New York.
SEC	The United States Securities and Exchange Commission.
SELIC	The Brazilian Central Bank base interest rate.
Sete Brasil	Sete Brasil Participações, S.A.
Suape Petrochemical Complex	The <i>Complexo Industrial Petroquímica Suape</i> , an industrial complex with facilities owned by Companhia Petroquímica de Pernambuco PetroquímicaSuape and Companhia Integrada Têxtil de Pernambuco Citepe.

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Shell	Shell Brasil Petróleo Ltda.
SPE	The Society of Petroleum Engineers.
SS	Semi-submersible unit.
Synthetic oil and synthetic gas	A mixture of hydrocarbons derived by upgrading (i.e., chemically altering) natural bitumen from oil sands, kerogen from oil shales, or processing of other substances such as natural gas or coal. Synthetic oil may contain sulfur or other non-hydrocarbon compounds and has many similarities to crude oil.
TAG	Transportadora Associada de Gás S.A.
TCU	The <i>Tribunal de Contas da União</i> (Federal Auditor's Office), or TCU, is an advisory body of the Brazilian Congress, responsible for assisting it in matters related to the supervision of the Brazilian executive branch with respect to accounting, finance, budget, operational and public property ( <i>patrimônio público</i> ) matters.
TBG	Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG).
TLWP	Tension Leg Wellhead Platform.
Total	Total E&P do Brasil Ltda.
Total depth	Total depth of a well, including vertical distance through water and below the mudline.
Transfer of Rights Agreement	An agreement under which a concessionaire sells, assigns or transfers by any means, in whole or in part, indivisible rights and obligations provided for in the concession agreement to a new third-party concessionaire, provided that the new concessionaire meets technical, economic and legal requirements established by the ANP.
Transpetro	Petrobras Transporte S.A.
Ultra-deepwater	Over 1,500 meters (4,921 feet) deep.
YPFB	Yacimientos Petroliferos Fiscales Bolivianos.

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1 acre	=	43,560 square feet	=	0.004047 km <sup>2</sup>
1 barrel	=	42 U.S. gallons	=	Approximately 0.13 t of oil
1 boe	=	1 barrel of crude oil equivalent	=	6,000 cf of natural gas
1 m <sup>3</sup> of natural gas	=	35.315 cf	=	0.0059 boe
1 km	=	0.6214 miles		
1 meter	=	3.2808 feet		
1 t of crude oil	=	1,000 kilograms of crude oil	=	Approximately 7.5 barrels of crude oil (assuming an atmospheric pressure index gravity of 37° API)

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bbbl	Barrels
bcf	Billion cubic feet
bn	Billion (thousand million)
bnbbbl	Billion barrels
bncf	Billion cubic feet
bnm3	Billion cubic meters
boe	Barrels of oil equivalent
bnboe	Billion barrels of oil equivalent
bbbl/d	Barrels per day
cf	Cubic feet
GWh	One gigawatt of power supplied or demanded for one hour
km	Kilometer
km2	Square kilometers
m3	Cubic meter
mbbl	Thousand barrels
mbbl/d	Thousand barrels per day
mboe	Thousand barrels of oil equivalent
mboe/d	Thousand barrels of oil equivalent per day
mcf	Thousand cubic feet
mcf/d	Thousand cubic feet per day
mm3	Thousand cubic meters
mm3/d	Thousand cubic meters per day
mm3/y	Thousand cubic meter per year
mmbbl	Million barrels
mmbbl/d	Million barrels per day
mmboe	Million barrels of oil equivalent
mmboe/d	Million barrels of oil equivalent per day
mmcf	Million cubic feet
mmcf/d	Million cubic feet per day
mmm3	Million cubic meters
mmm3/d	Million cubic meters per day
mmt	Million metric tons
mmt/y	Million metric tons per year
MW	Megawatts
MWavg	Amount of energy (in MWh) divided by the time (in hours) in which such energy is produced or consumed
MWh	One megawatt of power supplied or demanded for one hour
ppm	Parts per million
R\$	Brazilian <i>reais</i>
t	Metric ton
Tcf	Trillion cubic feet
US\$	United States dollars
/d	Per day

/y

Per year

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**PRESENTATION OF FINANCIAL AND OTHER INFORMATION**

This is the annual report of Petróleo Brasileiro S.A. Petrobras, or Petrobras. Unless the context otherwise requires, the terms Petrobras, we, us, and our refer to Petróleo Brasileiro S.A. Petrobras and its consolidated subsidiaries, operations and structured entities.

We currently issue notes in the international capital markets through our wholly-owned finance subsidiary Petrobras Global Finance B.V., or PGF, a private company with limited liability incorporated under the law of The Netherlands. We fully and unconditionally guarantee the notes issued by PGF. In the past, we used our former wholly-owned subsidiary, Petrobras International Finance Company S.A., or PifCo, as a vehicle to issue notes that we fully and unconditionally guaranteed. On December 29, 2014, PifCo merged into PGF, and PGF assumed PifCo's obligations under all outstanding notes originally issued by PifCo (together with the notes issued by PGF, the PGF notes), which continue to benefit from our full and unconditional guarantee. PGF is not required to file periodic reports with the U.S. Securities and Exchange Commission, or SEC. See Note 36 to our audited consolidated financial statements.

In this annual report, references to *real*, *reais* or R\$ are to Brazilian *reais* and references to U.S. dollars or US\$ are to United States dollars. Certain figures included in this annual report have been subject to rounding adjustments; accordingly, figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures that precede them.

Our audited consolidated financial statements as of and for each of the three years ended December 31, 2017, 2016 and 2015 and the accompanying notes contained in this annual report have been presented in U.S. dollars and prepared in accordance with International Financial Reporting Standards, or IFRS, issued by the International Accounting Standards Board, or IASB. See Item 5. Operating and Financial Review and Prospects and Note 2 to our audited consolidated financial statements. We apply IFRS in our statutory financial statements prepared in accordance with Brazilian Corporate Law and regulations promulgated by the CVM.

Our IFRS financial statements filed with the CVM are presented in *reais*, while the presentation currency of the audited consolidated financial statements included herein is the U.S. dollar. Our functional currency and that of all our Brazilian subsidiaries is the *real*. The functional currency of most of our other entities that operate internationally, such as PGF, is the U.S. dollar. As described more fully in Note 2.2 to our audited consolidated financial statements, the U.S. dollar amounts for the periods presented have been translated from the *real* amounts in accordance with the criteria set forth in IAS 21 The effects of changes in foreign exchange rates. Based on IAS 21, we have translated all assets and liabilities into U.S. dollars at the exchange rate as of the date of the balance sheet, all accounts in the statement of income, other comprehensive income and statement of cash flows at the average rates prevailing during the corresponding year. Equity items are translated at the exchange rates prevailing at the dates of the transactions. All exchange differences arising from the translation are recognized as cumulative translation adjustments (CTA) within consolidated shareholders' equity.

Unless the context otherwise indicates:

data contained in this annual report regarding capital expenditures, investments and other expenditures during the corresponding year that were not derived from the audited consolidated financial statements have been translated from *reais* at the average rates prevailing during such corresponding year;

historical data contained in this annual report regarding balances of investments, commitments or other related expenditures that were not derived from the audited consolidated financial statements have been translated from *reais* at the period-end exchange rate;

forward-looking amounts, including estimated future capital expenditures and investments, have all been based on our 2018-2022 Business and Management Plan, as approved in December 2017 ( 2018-2022 Plan ), and have been projected on a constant basis. Future calculations involving an assumed price of crude oil have been calculated using an average Brent crude oil price of US\$53 per barrel for 2018, US\$58 per barrel for 2019, US\$66 per barrel for 2020, US\$70 per barrel for 2021 and US\$73 per barrel for 2022. In addition, in accordance with our 2018-2022 Plan, we have used an estimated average nominal exchange rate of R\$3.44 to US\$1.00 for 2018, R\$3.55 to US\$1.00 for 2019, R\$3.62 for US\$1.00 for 2020, R\$3.69 to US\$1.00 for 2021 and R\$3.80 to US\$1.00 for 2022. For further information on our 2018-2022 Plan, see Item 4. Information on the Company 2018-2022 Plan and Strategic Monitoring Process. ; and

information related to oil and gas reserves and production includes our participation in consortia and joint operations agreements in which we don t own 100% working interest. For refining activities, the information presented in this document refers to total production, as we currently hold 100% of refining capacity.



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**PRESENTATION OF INFORMATION CONCERNING RESERVES**

We apply the SEC rules for estimating and disclosing oil and natural gas reserve quantities included in this annual report. In accordance with those rules, we estimate reserve volumes considering for the economics the average prices calculated as the unweighted arithmetic average of the first-day-of-the-month price for each month within the 12-month period prior to the end of the reporting period, except for reserves in certain fields for which volumes have been estimated using gas prices as set forth in our contractual arrangements for the sale of gas. Reserve volumes of non-traditional reserves, such as synthetic oil and gas, are also included in this annual report in accordance with SEC rules.

DeGolyer and MacNaughton (D&M) used our reserve estimates to conduct a reserves audit of 95% of our net proved crude oil, condensate and natural gas reserves as of December 31, 2017 in Brazil. In addition, D&M used our reserve estimates to conduct a reserves audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2017 in properties we operate in the United States. D&M also used our reserve estimates to conduct a reserves audit of 93% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2017 in our total proved reserves. See Item 4. Information on the Company Additional Reserves and Production Information. The reserve estimates were prepared in accordance with the reserves definitions in Rule 4-10(a) of Regulation S-X. All reserve estimates involve some degree of uncertainty. See Item 3. Key Information Risk Factors Risks Relating to Our Operations for a description of the risks relating to our reserves and our reserve estimates.

On January 31, 2018, we filed proved reserve estimates for Brazil with the ANP, in accordance with Brazilian rules and regulations, totaling net volumes of 10.4 bnbbbl of crude oil, condensate and synthetic oil and 11.1 tcf of natural gas and synthetic gas. The reserve estimates filed with the ANP were approximately 28% higher than those provided herein in terms of oil equivalent. This difference is due to: (i) the fact that the ANP permits the estimation of proved reserves through the technical-economical abandonment of production wells, as opposed to limiting reserve estimates to the life of the concession contracts as required by Rule 4-10 of Regulation S-X; and (ii) different technical criteria for booking proved reserves, including the use of our projected future oil prices as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.

We also file reserve estimates from our international operations with various governmental agencies under the guidelines of the SPE. The aggregate reserve estimates from our international operations, under SPE guidelines, amounted to 0.2 bnbbbl of crude oil and condensate and 0.2 tcf of natural gas as of December 31, 2017, which is approximately 2% higher than the reserve estimates calculated under Regulation S-X, as provided herein. This difference is due to different technical criteria for booking proved reserves, including the use of our projected future oil prices as opposed to the SEC requirement that the 12-month average price be used to determine the economic producibility of the reserves.

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**PART I**

**Item 1. Identity of Directors, Senior Management and Advisers**

Not applicable.

**Item 2. Offer Statistics and Expected Timetable**

Not applicable.

**Item 3. Key Information**

**Selected Financial Data**

This section contains selected consolidated financial data presented in U.S. dollars and prepared in accordance with IFRS as of and for each of the five years ended December 31, 2017, 2016, 2015, 2014, and 2013, derived from our audited consolidated financial statements. The selected consolidated financial data as of and for the year ended December 31, 2017 derive from our year-end financial statements audited by KPMG Auditores Independentes and the selected consolidated financial data as of and for the years ended December 31, 2016, 2015, 2014 and 2013 derive from the respective year-end financial statements audited by PricewaterhouseCoopers Auditores Independentes ( PwC ).

The information below should be read in conjunction with, and is qualified in its entirety by reference to, our audited consolidated financial statements and the accompanying notes and Item 5. Operating and Financial Review and Prospects.

**Table of Contents****STATEMENT OF FINANCIAL POSITION****IFRS Summary Financial Data**

	2017	As of December 31,			2013
		2016	2015	2014	
		(US\$ million)			
<b>Assets:</b>					
Cash and cash equivalents	22,519	21,205	25,058	16,655	15,868
Marketable securities	1,885	784	780	9,323	3,885
Trade and other receivables, net	4,972	4,769	5,554	7,969	9,670
Inventories	8,489	8,475	7,441	11,466	14,225
Assets classified as held for sale	5,318	5,728	152	5	2,407
Other current assets	3,948	3,808	4,194	5,414	6,600
Long-term receivables	21,450	20,420	19,426	18,863	18,782
Investments	3,795	3,052	3,527	5,753	6,666
Property, plant and equipment	176,650	175,470	161,297	218,730	227,901
Intangible assets	2,340	3,272	3,092	4,509	15,419
<b>Total assets</b>	<b>251,366</b>	<b>246,983</b>	<b>230,521</b>	<b>298,687</b>	<b>321,423</b>
<b>Liabilities and equity:</b>					
Total current liabilities	24,948	24,903	28,573	31,118	35,226
Non-current liabilities(1)	42,871	36,159	24,411	30,373	30,839
Non-current finance debt(2)	102,045	108,371	111,482	120,218	106,235
<b>Total liabilities</b>	<b>169,864</b>	<b>169,433</b>	<b>164,466</b>	<b>181,709</b>	<b>172,300</b>
<b>Equity</b>					
Share capital (net of share issuance costs)	107,101	107,101	107,101	107,101	107,092
Reserves and other comprehensive income (deficit)(3)	(27,299)	(30,322)	(41,865)	9,171	41,435
Shareholders' equity attributable to the shareholders of Petrobras	79,802	76,779	65,236	116,272	148,527
Non-controlling interests	1,700	771	819	706	596
<b>Total equity</b>	<b>81,502</b>	<b>77,550</b>	<b>66,055</b>	<b>116,978</b>	<b>149,123</b>
<b>Total liabilities and equity</b>	<b>251,366</b>	<b>246,983</b>	<b>230,521</b>	<b>298,687</b>	<b>321,423</b>

(1) Excludes non-current finance debt.

(2) Excludes current portion of long-term finance debt.

(3) Capital transactions, profit reserve and accumulated other comprehensive income (deficit).



**Table of Contents****STATEMENT OF INCOME DATA****IFRS Summary Financial Data**

	<b>For the Year Ended December 31,</b>				
	<b>2017(1)</b>	<b>2016(1)</b>	<b>2015 (1)</b>	<b>2014 (1)</b>	<b>2013</b>
	<b>(US\$ million, except for share and per share data)</b>				
Sales revenues	88,827	81,405	97,314	143,657	141,462
Net income (loss) before finance income (expense), results in equity-accounted investments and income taxes	11,219	4,308	(1,130)	(7,407)	16,214
Net income (loss) attributable to the shareholders of Petrobras	(91)	(4,838)	(8,450)	(7,367)	11,094
Weighted average number of shares outstanding:					
Common	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142	7,442,454,142
Preferred	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788	5,602,042,788
Net income (loss) before finance income (expense), results in equity-accounted investments and income taxes per:					
Common and Preferred shares	0.86	0.33	(0.09)	(0.57)	1.24
Common and Preferred ADS	1.72	0.66	(0.18)	(1.14)	2.48
Basic and diluted earnings (losses) per:					
Common and Preferred shares	(0.01)	(0.37)	(0.65)	(0.56)	0.85
Common and Preferred ADS	(0.02)	(0.74)	(1.30)	(1.12)	1.70
Cash dividends per(2):					
Common shares					0.22
Preferred shares					0.41
Common ADS					0.44
Preferred ADS					0.82

(1) In 2014, we wrote-off US\$2,527 million of incorrectly capitalized overpayments. In 2017, 2016, 2015 and 2014, we recognized impairment losses of US\$1,191 million, US\$6,193 million, US\$12,299 million and US\$16,823 million, respectively. See Notes 3 and 14 to our audited consolidated financial statements for further information. In 2017, we recognized US\$3,449 as other expenses, due to the provision for

legal proceedings relating to the agreement to settle the Consolidated Securities Class Action (as defined in Note 30.4.1 to our audited consolidated financial statements and in Item 8. Financial Information Legal Proceedings Class Action ) before the United States District Court for the Southern District of New York..

(2) Pre-tax interest on capital and/or dividends proposed for the year. Amounts were translated from the original amounts in *reais* considering the balance sheet date exchange rate.

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**RISK FACTORS**

**Risks Relating to Our Operations**

*We are exposed to risks of health, environment and safety in our operations, which may lead to accidents, significant losses, administrative proceedings and legal liabilities.*

Some of our main activities, operated by us or our partners, present risks capable of leading to accidents, such as oil spills, product leaks, fires and explosions. In particular, deepwater and ultra-deepwater activities present various risks, such as oil spills and explosions in drilling or production units. These events may occur due to technical failures, human errors or natural events, among other factors. The occurrence of one of these events, or other related incidents, may result in various damages such as death, serious environmental damage and related expenses (including, for example, cleaning and repairing expenses), may have an impact on the health of our workforce or on communities, and may cause environmental or property damage, loss of production, financial losses and, in certain circumstances, judicial liability in civil, labor, criminal and administrative lawsuits. As a consequence, we may incur expenses to repair or remediate damages caused. Further, we may face difficulties in obtaining or maintaining operating licenses and may suffer damages to our reputation.

Our insurance policies do not cover all types of risks and liabilities associated with our activities. There can be no guarantee that incidents will not occur in the future, that there will be insurance to cover the damages or that we will not be held responsible for these events, all of which may negatively impact our results. See Item 4. Information on the Company Health, Safety and Environmental Initiatives and Insurance, as well as Note 33.7 to our audited consolidated financial statements for further information.

*We rely on suppliers and service providers to operate and expand our business and, as a result, we are susceptible to performance risks, product quality deterioration and the financial condition of those suppliers and service providers.*

We rely upon various key third party suppliers, vendors and service providers to provide us with parts, components, services and critical resources, which we need to operate and expand our business. We are susceptible to the risks of performance, product quality and financial condition of our key suppliers, vendors and service providers. If these key suppliers, vendors and service providers critically fail to deliver, or are delayed in delivering, equipment, service or critical resources to our major projects, we may not meet our operating targets in the timeframe we expected. We may ultimately need to delay one or more of our major projects, which could have an adverse effect on our results of operations and financial condition.

In addition, we are subject to minimum local content requirements in some of our concession agreements, in the Assignment Agreement and in the Production Sharing Agreements. Although there has been occasional flexibility in certain large projects it is difficult to meet the full range of requirements in the domestic market in an economically feasible way, adding risk to contracting processes, which has the potential to impact our operating and financial results.

*We are not insured against business interruption for our Brazilian operations, and most of our assets are not insured against war or sabotage.*

We generally do not maintain insurance coverage for business interruptions of any nature for our Brazilian operations, including business interruptions caused by labor disputes. If, for instance, our workers or those of our key third-party suppliers, vendors and service providers were to strike, the resulting work stoppages could have an adverse effect on

us. In addition, we do not insure most of our assets against war or sabotage. See Risks Relating to Our Operations Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors could adversely affect our results of operations and our business , Item 4. Information of the Company Insurance and Note 33.7 to our audited consolidated financial statements. Therefore, an attack or an operational incident causing an interruption of our business could have a material adverse effect on our results of operations and financial condition.

***Strikes, work stoppages or labor unrest by our employees or by the employees of our suppliers or contractors, as well as potential shortages of skilled personnel, could adversely affect our results of operations and our business.***

Approximately 42% of our employees are represented by labor unions. Disagreements on issues involving divestments or changes in our business strategy, reductions in our personnel, as well as potential employee contributions to a Petros shortfall, could lead to labor unrest. Strikes, work stoppages or other forms of labor unrest at any of our major suppliers, contractors or their facilities could impair our ability to complete major projects and impact our ability to achieve our long-term objectives.



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In addition, we could experience potential shortages of skilled personnel. In the past, we announced a voluntary separation incentive program open to all of our employees. For further information on this program, see Item 6.

Directors, Senior Management and Employees Employees and Labor Relations Voluntary Separation Incentive Program PIDV. If the voluntary separation incentive program is successfully implemented, and we are unable to timely replace the key skilled personnel that decide to enroll in such program, there could be an adverse effect on our results of operations and our business. Our success also depends on our ability to continue to successfully train and qualify our personnel so they can assume qualified senior positions in the future. We cannot assure you that we will be able to properly train, qualify or retain senior management personnel, or do so without costs or delays, nor can we assure you that we will be able to find new qualified senior managers, should the need arise. Any such failure could adversely affect our results of operations and our business.

***The mobilization and demobilization of our employees as a result of our partnership and divestment program may adversely affect the results of our business and operations.***

Our 2018-2022 Plan includes, among other initiatives, a divestment program that contemplates partnerships and the sale of approximately US\$21 billion in assets during the period 2017-2018, with the goal of improving our short-term liquidity position and allowing us to deleverage. For further information on our divestments, see Item 4. Information on the Company Overview of the Group. Many of the assets that we have sold, or expect to sell, utilize our employees, that could be relocated to other areas and projects and we may have to train these employees to perform other tasks. Potential difficulties could arise from the need to relocate portions of our employees related to these assets and may generate additional costs, judicial inquiries related to labor lawsuits, strikes and may negatively impact our reputation.

***Failures in our information technology systems, information security (cybersecurity) systems and telecommunications systems and services can adversely impact our operations and reputation.***

Our operations are heavily dependent on information technology and telecommunication systems and services. Interruptions in these systems, caused by obsolescence, technical failures or intentional acts, can disrupt or even paralyze our business and adversely impact our operations and reputation. In addition, security failures related to sensitive information due to intentional or unintentional actions, such as cyberterrorism, or internal actions, including negligence or misconduct of our employees, may have a negative impact on our reputation, our relationship with external entities (government, regulators, partners and suppliers, among others), our strategic positioning with relation to our competitors, and our results, due to the leakage of information or unauthorized use of such information.

## **Financial Risks**

***We have substantial liabilities and may be exposed to significant liquidity constraints in the near and medium term, which could materially and adversely affect our financial condition and results of operations.***

We have incurred a substantial amount of debt in order to finance the capital expenditures needed to meet our long-term objectives, 48% of which (principal), or US\$53 billion, will mature in the next five years. For more information about our debt, see Item 5. Operating and Financial Review and Prospects Liquidity and Capital Resources. Since there may be liquidity restrictions on the debt market to finance our planned investments and the principal and interest obligations under the terms of our debt, any difficulty in raising significant amounts of debt capital in the future may impact our results of operations and the ability to fulfill our 2018-2022 Business Plan.

Between 2015 and mid-2016, we lost our investment grade ratings. Our Moody's, S&P and Fitch ratings have fluctuated substantially over the past three years. The loss of our investment grade credit rating and any further

lowering of our credit ratings has had, and may continue to have, adverse consequences on our ability to obtain financing in the market for our debt and equity securities, or may impact our cost of financing, also making it more difficult or costly to refinance maturing obligations. The impact on our ability to obtain financing and the cost of financing may adversely affect our results of operations and financial condition. For further information on our rating, see Item 5 Operating and Financial Review and Prospects Liquidity and Capital Resources Rating.

In addition, despite the fact that the Brazilian federal government (as our controlling shareholder) is not responsible or liable for any of our liabilities, any further lowering of the Brazilian federal government's credit ratings may have additional adverse consequences on our ability to obtain financing or the cost of our financing, and consequently, on our results of operations and financial condition.

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***We are vulnerable to increased debt service resulting from depreciation of the real in relation to the U.S. dollar and increases in prevailing market interest rates.***

As of December 31, 2017, 80% of our financial debt was denominated in currencies other than the *real* (73% was denominated in U.S. dollars). A substantial portion of our indebtedness is, and is expected to continue to be, denominated in or indexed to the U.S. dollar and other foreign currencies. A further depreciation of the *real* against these other currencies will increase our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt will increase with this depreciation. See Item 5. Operating and Financial Review and Prospects Inflation and Exchange Rate Variation Exchange Rate Variation for further information.

Foreign exchange variations may have an immediate impact on our reported income, except for a portion of our obligations denominated in U.S. dollars that are designated as hedging instruments in cash flow hedging relationships. According to our cash flow hedge accounting policy, hedging relationships are designated for the existing natural hedge between our U.S. dollar denominated future exports that are considered to be highly probable (hedged item) and U.S. dollar denominated financial debt (hedging instruments). See Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates for further information.

Following a devaluation of the *real*, some of our operating expenses, capital expenditures, investments and import costs will increase. As most of our revenues are denominated in *reais*, unless we increase the prices of our products to reflect the depreciation of the *real*, our cash generation relative to our capacity to service debt may decline.

Additionally, we have a substantial amount of debt maturing during the next five years, a portion of which may be refinanced by issuing new debt. To the extent we refinance our maturing obligations with newly contracted debt, we may incur additional interest expense.

As of December 31, 2017, 49% of our total indebtedness consisted of floating rate debt. We generally do not enter into derivative contracts or similar financial instruments or make other arrangements with third parties to hedge against the risk of an increase in interest rates. To the extent that such floating rates rise, we may incur additional expenses. Additionally, as we refinance our existing debt in the coming years, the mix of our indebtedness may change, specifically as it relates to the ratio of fixed to floating interest rates, the ratio of short-term to long-term debt, and the currencies in which our debt is denominated or to which it is indexed. Changes that affect the composition of our debt and cause rises in short- or long-term interest rates may increase our debt service payments, which could have an adverse effect on our results of operations and financial condition.

***Our commitment to meet the obligations of our pension plan ( Petros ) and health care benefits ( AMS ) may be higher than what is currently anticipated, and we may be required to make additional contributions of resources to Petros.***

The criteria used for determining commitments relating to pension and health care plan benefits are based on actuarial and financial estimates and assumptions with respect to (i) the calculation of projected short-term and long-term cash flows and (ii) the application of internal and external regulatory rules. Therefore, there are uncertainties inherent in the use of estimates that may result in differences between the predicted value and the actual realized value. For further information on Petros and AMS, see Item 6. Directors, Senior Management and Employees Employees and Labor Relations Pension and Health Care Plan and Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates Pension and other post-retirement benefits.

In addition, the financial assets held by Fundação Petros to cover pension obligations are subject to risks inherent to investment management and such assets may not generate the necessary returns to cover the relevant liabilities, in

which case extraordinary contributions from us, as sponsor, and the participants, may be required.

These risks may result in an increase in our liabilities and adversely affect our results of operations and our business. See Note 22 to our audited consolidated financial statements for further information about our employee benefits, including pension and health care plans.

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***We are exposed to the credit risks of certain of our customers and associated risks of default. Any material nonpayment or nonperformance by some of our customers could adversely affect our cash flow, results of operations and financial condition.***

Some of our customers may experience financial constraints or liquidity issues that could have a significant negative effect on their creditworthiness. Severe financial issues encountered by our customers could limit our ability to collect amounts owed to us, or to enforce the performance of obligations owed to us under contractual arrangements.

For example, as of December 31, 2017, certain subsidiaries of Centrais Elétricas Brasileiras S.A. Eletrobras owed us US\$5,247 million under energy supply agreements. In 2017 and 2016, we recognized an allowance for impairment of trade receivables from the isolated electricity sector in the Northern region of Brazil amounting to US\$250 million and US\$307 million, respectively, mostly to cover certain trade receivables due by Eletrobras' subsidiaries. For further information on our trade receivable in the electricity sector, see Note 8.4 to our audited consolidated financial statements.

In addition, many of our customers finance their activities through their cash flows from operations, the incurrence of short- and long-term debt. Declining financial results and economic conditions in Brazil, and resulting decreased cash flows, combined with a lack of debt or equity financing for our customers may affect us, since many of our customers are Brazilian, and may have significantly reduced liquidity and limited ability to make payments or perform their obligations to us. This could result in a decrease in our cash flows from operations and may also reduce or curtail our customers' future demand for our products and services, which may have an adverse effect on our results of operations and financial condition.

## **Compliance, Legal and Regulatory Risks**

***We are exposed to behaviors incompatible with our ethics and compliance standards, and failure to timely detect or remedy any such behavior may have a material adverse effect on our results of operations and financial condition.***

In the past, some of our senior managers and contractors have engaged in fraudulent activities incompatible with our ethics and compliance standards. Although we have adopted measures to identify, monitor, mitigate and remediate such actions, we are subject to the risk that our management, employees, contractors or any person doing business with us may engage in fraudulent activity, corruption or bribery, circumvent or override our internal controls and procedures or misappropriate or manipulate our assets for their personal or business advantage to our detriment. This risk is heightened by the fact that we have a large number of complex, valuable contracts with local and foreign suppliers, as well as the geographic distribution of our operations and the wide variety of counterparties involved in our business.

Our business, including relationships with third parties, is guided by ethical principles. We have adopted a Code of Ethics, a Conduct Guide and a number of internal policies designed to guide our management, employees and contractors and reinforce our principles and rules for ethical behavior and professional conduct. For further information on our Code of Ethics, see Item 16B. Code of Ethics. We offer an external whistleblower channel overseen by our General Ombudsman Office for employees, contractors and other third parties. See Item 6. Directors, Senior Management and Employees Ombudsman.

It is difficult for us to ensure that all of our employees and contractors, around 185,000, will comply with our ethical principles. Any failure—real or perceived—to follow these principles or to comply with applicable governance or regulatory obligations could harm our reputation, limit our ability to obtain financing and otherwise have a material adverse effect on our results of operations and financial condition.



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***In the past, our management has identified material weaknesses in our internal control over financial reporting. Although our management has concluded that our internal control over financial reporting was effective as of December 31, 2017, we are subject to the risk that our controls may become inadequate in the future because of changes in conditions, or that our degree of compliance with our policies and procedures may deteriorate.***

Our management identified a number of material weaknesses in our internal control over financial reporting in prior years. As a result, due to the identified material weaknesses, our management concluded that our internal control over financial reporting was not effective as of December 31, 2015 and December 31, 2016. We have developed and implemented several measures to remedy these material weaknesses, and our management has concluded that our internal control over financial reporting was effective as of December 31, 2017. However, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. It is also difficult to project the effectiveness of internal control over financial reporting for future periods, as our controls may become inadequate because of changes in conditions, or because our degree of compliance with our policies or procedures may deteriorate.

Any failure to maintain our internal control over financial reporting could adversely impact our ability to report our financial results in future periods accurately and in a timely manner, and to file required forms and documents with government authorities, including the SEC. We may also be unable to detect accounting errors in our financial reporting, and we cannot be certain that in the future additional material weaknesses will not exist or otherwise be discovered in a timely manner. Any of these occurrences may adversely affect our business and operation, and may generate negative market reactions, potentially leading to a decline in the price of our shares, ADSs and debt securities.

***Ongoing SEC and DoJ investigations regarding the possibility of non-compliance with the U.S. Foreign Corrupt Practices Act could adversely affect us. Violations of this or other laws may require us to pay fines and expose us and our employees to criminal sanctions and civil suits.***

In November 2014, we received a subpoena from the SEC requesting certain documents and information about us relating to, among other things, the Lava Jato investigation and any allegations regarding a violation of the U.S. Foreign Corrupt Practices Act. The DoJ is conducting a similar inquiry, and the internal investigation and related government inquiries concerning these matters remain ongoing. While we are cooperating fully with these investigations, there is a risk that the scope of the investigations could be expanded or that the authorities could decide to bring civil or criminal charges or that there could be other adverse developments in connection with these investigations. Such adverse developments could negatively impact us and could divert the efforts and attention of our management team from our ordinary business operations. In connection with the resolution of the SEC or DoJ investigations, or any other investigation carried out by any other authority, we may be required to pay fines or other financial relief, or consent to injunctions or orders on future conduct or suffer other penalties, any of which could have a material adverse effect on us. It is also possible that further information damaging to us and our interests will come to light in the course of the ongoing investigations of corruption by Brazilian authorities. See Item 8. Financial Information Legal Proceedings.

***Our methodology to estimate the overpayments incorrectly capitalized, uncovered in the context of the Lava Jato investigation, involves some degree of uncertainty. If substantive additional information comes to light in the future that would make our estimate for the overstatements of our assets appear, in retrospect, to have been materially underestimated or overestimated, this could require a restatement of our financial statements and may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities.***

As a result of the findings of the Lava Jato investigation, in the third quarter of 2014, we wrote off US\$2,527 million of capitalized costs representing amounts that we overpaid for the acquisition of property, plant and equipment in prior years.

See Note 3 to our audited consolidated financial statements and Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates Estimation Methodology for Determining Write-Off for Overpayments Incorrectly Capitalized for further information about the Lava Jato investigation, the overpayments charged by certain contractors and our suppliers and our methodology to estimate the overstatement of our assets.



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We concluded that a portion of our costs incurred to build property, plant and equipment that resulted from contractors and suppliers in the cartel overcharging us to make improper payments should not have been capitalized in our historical costs of property, plant and equipment. As it is impracticable to identify the specific periods and amounts for the overpayments made by us, we considered all the available information to determine the impact of the overpayments charged to us. As a result, to account for these overpayments, we developed a methodology to estimate the aggregate amount that we overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of our assets resulting from overpayments used to fund improper payments.

The Lava Jato investigation is still ongoing and it could be a significant amount of time before the Brazilian federal prosecutors conclude their investigation. As a result of this investigation, substantive additional information might come to light in the future that would make our estimate for overpayments appear, in retrospect, to have been materially low or high, which may require us to restate our financial statements to further adjust the write-offs representing the overstatement of our assets recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014.

We believe that we have used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized based on the information available to us, but our estimation methodology involves some degree of uncertainty. There can be no assurance that the write-offs representing the overstatement of our assets, determined using our estimation methodology, and recognized in our interim consolidated financial statements for the nine-month period ended September 30, 2014, are not underestimated or overestimated. In the event that we are required to write-off additional historical costs from our property, plant and equipment or to reverse write-offs previously recognized in our financial statements, this might impact the total value of our assets and we may be subject to negative publicity, credit rating downgrades, or other negative material events, which may have a material adverse effect on our results of operations and financial condition and affect the market value of our securities. For more information, see Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates *Write-off* for overpayments incorrectly capitalized and Note 3 to our audited consolidated financial statements.

### ***We may incur losses and spend time and financial resources defending pending litigations and arbitrations.***

We are currently party to numerous legal proceedings relating to civil, administrative, tax, labor, environmental and corporate claims filed against us. These claims involve substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. See Item 8. Financial Information Legal Proceedings and Note 30 to our audited consolidated financial statements included in this annual report for a description of the legal proceedings to which we are subject.

In the event that claims involving a material amount and for which we have no provisions were to be decided against us, or in the event that the losses estimated turn out to be significantly higher than the provisions made, the aggregate cost of unfavorable decisions could have a material adverse effect on our results of operations and financial condition. We may also be subject to litigation and administrative proceedings in connection with our concessions and other government authorizations, which could result in the revocation of such concessions and government authorizations. In addition, our management may be required to direct its time and attention to defending these claims, which could prevent them from focusing on our core business. Depending on the outcome, litigation could result in restrictions on our operations and have a material adverse effect on some of our businesses.

In addition, employees and unions have filed actions against us to require a review of the method adopted for calculating the Minimum Remuneration by Level and Regime (RMNR) complement. The claims involve substantial amounts of money and the costs derived from unfavorable decisions may have an adverse effect on our results of



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***We may face additional civil proceedings related to the Lava Jato investigation.***

We are subject to a number of civil proceedings relating to the Lava Jato investigation, including the Consolidated Securities Class Action and 13 Pending Individual Actions (as defined in Note 30.4.1 to our audited consolidated financial statements and in Item 8. Financial Information Legal Proceedings Class Action ) before the United States District Court for the Southern District of New York ( SDNY ). See Item 8. Financial Information Legal Proceedings and Note 30.4 to our audited consolidated financial statements for a description of the U.S. securities class action litigation and other civil proceedings. As detailed in Item 8. Financial Information Legal Proceedings and Note 30.4 to our audited consolidated financial statements, our board of directors has approved agreements to settle the Consolidated Securities Class Action, which is still subject to the SDNY s approval, as well as agreements to settle several of the Individual Actions. In 2017, we provisioned US\$3,449 million to reflect the settlement reached in the Consolidated Securities Class Action (including expected withholding taxes). We also provisioned US\$448 million to reflect Settled Individual Actions and Pending Individual Actions in advanced stages of negotiations, of which US\$76 million was provisioned in 2017, and US\$372 million had been provisioned in 2016.

The Pending Individual Actions involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors. Except as set forth above, the possible loss or range of losses, if any, arising from the Pending Individual Actions cannot be estimated and consequently we have made no provisions with respect to these litigations. In the event that these litigations are decided against us, or we enter into an agreement to settle such matters, we may be required to pay substantial amounts. Depending on the outcome, such litigations could also result in restrictions on our operations and have a material adverse effect on our business We will continue to defend ourselves vigorously in all Pending Individual Actions.

We are also currently a party to class actions commenced in Holland, and to arbitration and judicial proceedings commenced in Brazil, all of which are currently in their initial stages. In each case, the proceedings were brought by investors that purchased our shares traded in B3 or other securities issued by us outside of the United States, alleging damages caused by facts uncovered in the Lava Jato investigations. In addition, EIG Management Company filed a complaint against us on February 23, 2016 in connection with their investment in Sete Brasil Participações, S.A., or Sete Brasil, also arising out of the allegations related to the Lava Jato investigation.

It is possible that additional complaints or claims might be filed in the United States, Brazil or elsewhere against us relating to the Lava Jato investigation in the future. It is also possible that further information damaging to us and our interests will come to light in the course of the ongoing investigations of corruption by Brazilian authorities. Our management may be required to direct its time and attention to defending these claims, which could prevent them from focusing on our core business.

***Differing interpretations of tax regulations or changes in tax policies could have an adverse effect on our financial condition and results of operations.***

We are subject to tax rules and regulation that may be interpreted differently over time, or that may be interpreted differently by us and Brazilian tax authorities (including the federal, state and municipal authorities), both of which could have a financial impact on our business. For example, in 2017, we recognized material charges related to settlements of certain tax liabilities (see Notes 21.2 and 21.3 to our audited financial statement ended December 31, 2017). Although unanticipated, these charges relate to the settlement of disputes relating to tax regulations that allowed for certain tax contingencies to be settled at a reduced value. In some cases, when we have exhausted all administrative appeals relating to a tax contingency, further appeals must be made in the judicial courts, which may require that, in order to appeal, we provide collateral to judicial courts, such as the deposit of amounts equal to the potential tax liability in addition to accrued interest and penalties. In certain of these cases, settlement of the matter

may be a more favorable option for us.

In the future, we may face similar situations in which our interpretation of a tax regulation may differ from that of tax authorities, or tax authorities may dispute our interpretation and we may eventually take unanticipated provisions and charges. In addition, the eventual settlement of one tax dispute may have a broader impact on other tax disputes. Changes in interpretation or differing interpretations as to tax regulations, as well as our decision to settle any claims relating to such regulations, could have a material adverse effect on our financial condition and results of operations.

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***Differences in interpretations and new regulatory requirements by the agencies in our industry may result in our need for increased investments, expenses and operating costs, or may cause delays in production.***

Our activities are subject to regulation and supervision by regulatory agencies, including the ANP. Issues such as local content policies, procedures for the unitization of areas, definition of reference prices for the calculation of royalties and governmental participation, among others, are under the ANP's control.

Changes in the regulations applicable to us, as well as differences of interpretation between us and the agencies that regulate our industry, may have a material adverse effect on our financial condition and results of operations. For example, we filed four arbitrations with the ICC against the ANP's decision to unify unconnected oil fields belonging to us (Lula and Cernambi; Baúna and Piracaba; Tartaruga Verde and Tartaruga Mestiça; and Parque das Baleias). As a result, we have been granted a favorable precautionary decision in the arbitration proceedings established before the ANP in connection with Parque das Baleias, which addresses the possibility of unifying the fields. However, we will continue to discuss the legal merits of the unification of the Parque das Baleias fields before the arbitral tribunal, which corresponds to the difference in special participation between the second quarter of 2014 and the fourth quarter of 2017, in the amount of US\$2.4 billion. For more information, see Item 8. Financial Information Legal Proceedings Other Legal Proceedings.

Any future differences in interpretation between us and these regulatory agencies may materially impact our results of operations, since such interpretations directly affect the economic and technical premises that guide our investment decisions. In particular, there is no guarantee that we will not be subject to any assessment by the ANP related to the local content requirements or other decisions that impact our business.

***We are subject to the granting of new environmental licenses and permits that may result in delays to deliver some of our projects and difficulties to reach our crude oil and natural gas production objectives.***

Our activities are subject to and depend on the granting of new environmental licenses and permits by a wide variety of federal, state and local laws, relating to the protection of human health, safety and the environment, both in Brazil and in other jurisdictions in which we operate. As environmental, health and safety regulations become increasingly complex, it is possible that our efforts to comply with such laws and regulations will increase substantially in the future.

We cannot ensure that the planned schedules and budgets of our projects will not be affected by internal procedures of the regulatory body or that the relevant licenses and permits will be issued in a timely manner, and this could impact our crude oil and natural gas production objectives, negatively influencing our results of operations and financial condition. For example, in April 2017, although the production unit P-66 was ready to operate at the Lula Field, in the pre-salt Santos Basin, the implementation of that project was delayed until the applicable operating license from the environmental federal authority (IBAMA) was issued.

***The Assignment Agreement we entered into with the Brazilian federal government is a related party transaction subject to future price revision.***

We entered into an Assignment Agreement in 2010 with the Brazilian federal government, our controlling shareholder, to obtain oil and gas exploration and production rights for specific pre-salt areas, subject to a maximum production of five billion boe. At the time the Assignment Agreement was negotiated, the initial contract price paid by us was based on an assumed Brent oil crude price of approximately US\$80 per barrel. However, the Assignment Agreement includes provisions for a subsequent revision of certain of its terms, including the price we paid for the rights we acquired, maximum volume, maturity and local content percentages.

Negotiations with the Brazilian federal government to revise the Assignment Agreement began in December 2013, and are still ongoing. Once the revision process is concluded pursuant to the terms of the Assignment Agreement, if the revised contract price is higher than the initial contract price, we will either make an additional payment to the Brazilian federal government or reduce the amount of barrels of oil equivalent subject to the Assignment Agreement.

We do not know when this negotiation will be completed, nor can we assure that the terms of this new agreement would be favorable to us, which could negatively impact our operating and financial results. See Item 4. Information on the Company Exploration and Production-Santos Basin Assignment Agreement, Item 10. Material Contracts Assignment Agreement Additional Production in the Assignment Agreement Areas and Note 12.3 to our audited consolidated financial statements for further information.

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### ***Operations with related parties may not be properly identified and handled.***

Generally, transactions with related parties are part of the business of large companies. For further information on our related party transactions, see Item 7. Major Shareholders and Related Party Transactions Related Party Transactions. Such transactions must follow market standards and generate mutual benefit. Decision processes surrounding such transactions must be objective and documented. Further, we must comply with the rules of competition and adequate disclosure of information, in accordance with the applicable legislation and as determined by the CVM and the SEC. The possible failure of our process to identify and deal with these situations may adversely affect our economic and financial condition, as well as lead to regulatory assessments by agencies.

### ***Differing interpretations and numerous environmental, health and safety regulations and industry standards that are becoming more stringent may result in increased capital and operating expenditures and decreased production.***

Our activities are subject to evolving industry standards and best practices, and a wide variety of federal, state and local laws, regulations and permit requirements relating to the protection of human health, safety and the environment, both in Brazil and in other jurisdictions in which we operate. In addition, we are subject to environmental laws that require us to incur significant costs to cover any damages that a project may cause to the environment. These additional costs may have a negative impact on the profitability of the projects we intend to implement or may make such projects economically unfeasible. See Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil Environmental Regulations.

As environmental, health and safety regulations become more stringent with evolving industry standards, and as new laws and regulations relating to climate change, including carbon controls, become applicable to us, it is possible that our capital expenditures and investments to comply with such laws and regulations and industry standards will increase substantially in the future. Any substantial increase in expenditures for compliance with environmental, health or safety regulations or reduction in strategic investments and significant decreases in our production from unplanned shutdowns may have a material adverse effect on our results of operations and financial condition.

### ***We may be required by law to guarantee the supply of products or services to defaulted counterparties.***

As a company controlled by the federal government and operating throughout Brazil, we may be required by the Brazilian courts to provide products and services to clients, and public and private institutions, with the purpose of guaranteeing supplies to the domestic oil market, even in situations where these clients and institutions are in default with contractual or legal obligations. Such supply in exceptional situations may adversely affect our financial position.

## **Risks Relating to our Strategy**

### ***Our divestment program depends on external factors that could impede its successful implementation.***

Our 2018-2022 Plan includes, among other initiatives, a divestment program that contemplates partnerships and the sale of US\$21 billion in assets for the 2017-2018 period, with the goal of improving our short-term liquidity position (by increasing our cash balance) and allowing us to deleverage. For further information on our cash flow, see Item 5.

Operating and Financial Review and Prospects Liquidity and Capital Resources Sources of Funds Our Cash Flow. However, external factors, such as the sustained decline in oil prices, exchange rate fluctuations, the deterioration of Brazilian and global economic conditions, the Brazilian political crisis and judicial decisions, among other factors, may reduce or hinder sale opportunities for our assets or affect the price at which we can sell our assets, and may force us to alter the terms of our divestment program.

For the period from 2015-2016, we were unable to successfully implement all of the goals of our divestment program, due to administrative and judicial decisions. If we are unable to successfully implement our divestment program, this may negatively impact our business, results of operations and financial condition, including by potentially exposing us to short and medium-term liquidity constraints. In addition, the sale of strategic assets under our divestment program will result in a decrease in our cash flows from operations, which could negatively impact our long-term operating growth prospects and consequently our results of operations in the medium and long-term. For further information, see Item 8. Financial Information Legal Proceedings Legal Proceedings and Preliminary Procedure on TCU Divestments and Note 10 to our audited consolidated financial statements.



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***Many of our projects and operations are conducted in joint arrangements which may not perform as expected, negatively impacting our results.***

In our 2018-2022 Plan, we plan to establish partnerships to reduce risks in exploration and production, refining, transportation, logistics, distribution and commercialization activities. In cases where we are not the operator, we have limited influence and control over the behavior, performance and costs of operation of such joint arrangements or associations. Despite not having control, we could still be exposed to the risks associated with these operations, including reputational, litigation (where joint and several liability could apply) and government sanction risks, which could have a material adverse effect on our operations, cash flow and financial condition.

For example, our partners or members of a joint arrangement may not be able to meet their financial or other obligations, threatening the viability of the relevant project. Where we are the operator of a joint arrangement, the other partner(s) could still veto or block certain decisions, which could be to our overall detriment.

***The selection and development of our investment projects involve risks that may affect our originally expected results of operation.***

We have numerous project opportunities in our portfolio of investments. Since most projects are characterized by a long development period, we may face changes in market conditions, such as changes in prices, consumer preferences and demand profile, exchange rates, and financing conditions of projects that may jeopardize our expected rate of return on these projects.

In addition, we face specific risks for oil and gas projects. Despite our experience in the exploration and production of oil in deepwater and ultra-deepwater and the continuous development of studies during the planning stages, the quantity and quality of oil produced in a certain field will only be fully known in the phases of deployment and operation, which may require adjustments throughout the project life cycle.

In addition, we are not immune to potential risks arising from problems in contracting goods and services and in relationships with suppliers, partners, governments and local representatives. All these factors can impact our business and results of operation.

***Our projects and operations may affect, and be affected by, the expectations and dynamics of the communities where we operate, impacting our business, reputation and image.***

As part of our policy, we respect human rights and we maintain responsible relationships with the local communities located where we operate. However, the various locations where we operate are exposed to a wide range of issues related to political, social and economic instability, as well as intentional acts, such as illegal diversion, crime, theft, sabotage, terrorism, roadblocks and protests. We cannot control the changes in local dynamics and the expectations of the communities where we operate and establish our businesses. Social impacts that result from our decisions and direct and indirect activities – especially those related to divestments – and disagreements with these communities and local governments may affect the schedule or budget of our projects, hinder our operations due to potential lawsuits, have a negative financial impact and harm our reputation and image.

***The performance of companies licensed to use our brand may negatively impact our image and reputation.***

In our 2018-2022 Plan, we plan to continue to carry out divestitures and partnerships. Some of these transactions may involve licensing our brand for future buyers and partners. Recently, in line with our 2018–2022 Plan, we sold our distribution businesses in Argentina and Chile and licensed our brand for a certain period after the transfer of control

of operations to the buyers. Once a licensee holds the right to display our brand in products, services and communications, it can be perceived by stakeholders as our legitimate representative or spokesperson. Licensees failures, accidents, errors in the performance of their businesses, environmental crises, corruption scandals and improper use of our brand, among other factors, may negatively impact our image and reputation.

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***We have assets and investments in other countries, where the political, economic and social situation may negatively impact our business.***

We operate and have businesses in several countries, particularly in the Gulf of Mexico, in the U.S., in South America, in Europe, in Asia and in Africa, in areas where there may be political, economic and social instabilities. For further information on our operations abroad, see Item 4. Information on the Company Exploration and Production. In such regions, external factors may adversely affect the operating results and the financial condition of our subsidiaries in these countries, including: (i) the imposition of price controls; (ii) the imposition of restrictions on hydrocarbon exports; (iii) the fluctuation of local currencies against the *real*; (iv) nationalization of our oil and gas reserves and our assets; (v) increases in export tax and income tax rates for oil and oil products; and (vi) unilateral (governmental) and contractual institutional changes, including controls on investments and limitations on new projects.

If one or more of the risks described above occurs, we may lose part or all of our reserves in the affected country and may also fail to achieve our strategic objectives in these countries, or in our international operations as a whole, which may negatively impact our operating results and financial resources.

***The ability to develop, adapt, access new technologies, and take advantage of opportunities related to innovations in digital technology, is fundamental to our competitiveness.***

The oil industry is characterized by a strong technological base. Development and accessibility of, and adaptability to, technological change is essential for our competitiveness. In the event some disruptive technology is introduced into the oil industry, changing performance standards, it would be important for us to have access to this technology, which may impact our competitiveness in relation to other companies. Digital technologies are already a relevant part of our processes and operations. Recent advances in data acquisition and analysis, connectivity, artificial intelligence, robotics and other technologies are changing the sources that create competitive advantage. Failure to capture these opportunities may have an impact on our competitiveness in the oil and gas market and our long term objectives.

In addition, the availability of technologies that ensure the maintenance of our reserve rates and the viability of production in an efficient manner, as well as the development of new products and processes that respond to environmental regulations and new market trends, play a key role in maintaining our long-term competitiveness. Our pre-salt operations require continuous technological development for exploration, production and continuous cost reduction, which impact our competitiveness in the market.

***Climate change could impact our operating results and strategy.***

Climate change poses new challenges and opportunities for our business. More stringent environmental regulations can result in the imposition of costs associated with greenhouse gas emissions, either through environmental agency requirements relating to mitigation initiatives or through other regulatory measures such as greenhouse gas emissions taxation and market creation of limitations on greenhouse gas emissions that have the potential to increase our operating costs.

The risks associated with climate change could also manifest in difficulties accessing capital due to public image issues with investors; changes in the consumer profile, with reduced consumption of fossil fuels; and energy transitions in the world economy, such as increasing electrification in urban mobility. These factors may have a negative impact on the demand for our products and services and may jeopardize or even impair the implementation and operation of our businesses, adversely impacting our operating and financial results and limiting some of our growth opportunities.

## Business Risks

*We are exposed to the effects of fluctuations in the prices of oil, gas and oil products.*

Most of our revenue in Brazil is from sales of crude oil products and, to a lesser extent, natural gas. International prices for oil and oil products are volatile and the prices of our products are strongly influenced by conditions and expectations of world supply and demand. Volatility and uncertainty in international prices for crude oil, oil products and natural gas will most likely continue. See Item 5. Operating and Financial Review and Prospects Sales Volumes and Prices for further information on the variation of oil, oil products and gas prices. Changes in oil prices usually result in changes in the prices of oil products and natural gas.

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In October 2016, our board of directors approved a new diesel and gasoline pricing policy. For further information on our current pricing policy, see Item 5. Operating and Financial Review and Prospects Sales Volumes and Prices. Since one of the goals of our new pricing policy is to maintain fuel prices in parity with international market trends, substantial or extended declines in international crude oil prices may have a material adverse effect on our business, results of operations and financial condition, and may also affect the value of our proved reserves and lead to a decision to cancel or extend our projects.

In the past, we did not always adjust our prices to reflect parity with the international market trends or reflect exchange rate volatility. Our pricing policy is adapted from time to time by our management; we cannot assure you that our pricing policy will not be changed in the future. In the event our pricing policy changes based on the decisions of the Brazilian federal government, as our controlling shareholder, we may have periods in the future during which our prices for diesel and gasoline will not be at parity with international product prices (See Risks Relating to Our Relationship with the Brazilian Federal Government The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us ). Such change in policy could have a material adverse effect on our businesses, results of operations and financial condition.

***Market fluctuations, related to political instability, acts of terrorism, armed conflict and war in various regions of the world, may have a material adverse effect on our business.***

Geopolitical risk factors have recently become more prominent in the world. Events such as the increasing tension between the U.S. and other countries, the escalation of the conflict in Syria, the terrorist attacks and political movements in Europe indicate the growing possibility that new events may occur that affect, directly or indirectly, markets related to the oil industry, which could negatively impact our business and result in substantial losses.

***Developments in the oil and gas industry and other factors have resulted, and may result, in substantial write-downs of the carrying amount of certain of our assets, which could adversely affect our results of operations and financial condition.***

We evaluate on an annual basis, or more frequently when the circumstances require, the carrying amount of our assets for possible impairment. Our impairment tests are performed by a comparison of the carrying amount of an individual asset or a cash-generating unit with its recoverable amount. Whenever the recoverable amount of an individual asset or cash-generating unit is less than its carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount.

Changes in the economic, regulatory, business or political environment in Brazil or other markets where we operate, such as the recent significant decline in international crude oil and gas prices, the devaluation of the *real* and lower projected economic growth in Brazil, as well as changes in financing conditions, such as deterioration of risk perception and interest rates, for such projects, among other factors, may affect the original profitability estimates of our projects. For information about the impairment of certain of our assets, see Item 5. Operating and Financial Review and Prospects Results of Operations 2017 compared to 2016 and Item 5. Operating and Financial Review and Prospects Results of Operations 2016 compared to 2015 , Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates and Notes 5.2 and 14 to our audited consolidated financial statements.

Future developments in the economic environment, in the oil and gas industry and other factors could result in further substantial impairment charges, adversely affecting our operating results and financial condition.

***Maintaining our long-term objectives for oil production depends on our ability to successfully obtain and develop oil reserves.***

Our ability to maintain our long-term objectives for oil production is highly dependent upon our ability to successfully develop our existing reserves, and to obtain additional reserves. The development of the sizable reservoirs in deepwater and ultra-deepwaters, including the pre-salt reservoirs that have been licensed and granted to us by the Brazilian federal government, has demanded and will continue to demand significant capital investments. See Item 4.

Information on the Company Exploration and Production and Information on the Company Additional Reserves and Production Information, for further information on the capital investments required for exploration and production. We cannot guarantee that we will have or will be able to obtain, in the time frame that we expect, sufficient resources and financing necessary to exploit the reservoirs in deepwater and ultra-deepwaters that have been licensed and granted to us, or that may be licensed and granted to us in the future.

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Our ability to obtain additional reserves depends upon exploration activities, which exposes us to the inherent risks of drilling, and may not lead to the discovery of commercially productive crude oil or natural gas reserves. Drilling wells often yields uncertain results, and numerous factors beyond our control (such as unexpected drilling conditions, equipment failures or incidents, and shortages or delays in the availability of drilling rigs and the delivery of equipment) may cause drilling operations to be curtailed, delayed or cancelled. In addition, increased competition in the oil and gas sector in Brazil and our own capital constraints may make it more difficult or costly to obtain additional acreage in bidding rounds for new concessions and to explore existing concessions.

Also, our ability to maintain our long-term objectives for oil production partially depends on conducting major projects and operations in joint arrangements or in partnership with other oil and gas companies. If we or our partners fail or are unable to meet with respective payment obligations under applicable contractual arrangements, this may threaten the viability of a given project, and may result either in a delay in, or cancellation of, such project, which could bring regulatory sanctions to the relevant joint arrangement or partnership, an increase or dilution of our interest in such project or our withdrawal from such project, any of which could have a material adverse effect on our results of operations and financial condition. These factors could impede us from participating in further bidding rounds in the future and limit future exploration. We may not be able to maintain our long-term objectives for oil production unless we conduct successful exploration and development activities of our large reservoirs in a timely manner.

***Our crude oil and natural gas reserve estimates involve some degree of uncertainty, which could adversely affect our ability to generate income.***

Our proved crude oil and natural gas reserves set forth in this annual report are the estimated quantities of crude oil and natural gas that geological and engineering data demonstrate with reasonable certainty to be recoverable from known reservoirs under existing economic and operating conditions (i.e. prices and costs as of the date the estimate is made) according to applicable regulations. Reserve estimates presented are based on assumptions and interpretations, which present uncertainties and contingencies that are beyond our control. If the geological and engineering data that we use to measure our reserves are not accurate, our reserves may be significantly lower than the ones currently indicated in the volume estimates of our portfolio and reported by the certification companies. Substantial downward revisions in our reserve estimates could lead to lower future production, which could have an adverse effect on our results of operations and financial condition. For further information relating to our crude oil and natural gas estimates, see Item 4. Information on the Company Additional Reserves and Production Information , Item 5.

Operating and Financial Review and Prospects Critical Accounting Policies and Estimates , Note 5.1 and Supplementary information on Oil and Gas Exploration and Production to our audited consolidated financial statements.

***We do not own any of the subsoil accumulations of crude oil and natural gas in Brazil.***

Under Brazilian law, the Brazilian federal government owns all subsoil accumulations of crude oil and natural gas in Brazil and the concessionaire owns the oil and gas it produces from those subsoil accumulations pursuant to applicable agreements executed with the Brazilian federal government. We possess, as a concessionaire of certain oil and natural gas fields in Brazil, the exclusive right to develop the volumes of crude oil and natural gas included in our reserves pursuant to concession and other agreements. For further information, see Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil Concession Regime for Oil and Gas.

Access to crude oil and natural gas reserves is essential to an oil and gas company's sustained production and generation of income, and our ability to generate income would be adversely affected if the Brazilian federal government were to restrict or prevent us from exploiting these crude oil and natural gas reserves.

### **Risks Relating to Brazil and Our Relationship with the Brazilian Federal Government**

*The Brazilian federal government, as our controlling shareholder, may pursue certain macroeconomic and social objectives through us that may have a material adverse effect on us.*

Our board of directors is composed of a minimum of seven and a maximum of ten members, elected at the annual general meeting for a term of up to two years, with a maximum of three consecutive reelections permitted. The majority of nominations of candidates for our board of directors depends on appointment by the federal government, our controlling shareholder.



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Elections in Brazil occur every four years, and changes in elected representatives may lead to a change of the members of our board of directors appointed by the controlling shareholder, which may further impact the management of our business strategy and guidelines.

Moreover, the Brazilian federal government may pursue certain of its macroeconomic and social objectives through us. Brazilian law requires that the Brazilian federal government own a majority of our voting stock, and so long as it does, the Brazilian federal government will have the power to elect a majority of the members of our board of directors and, through them, a majority of the executive officers who are responsible for our day-to-day management. As a result, we may engage in activities that give preference to the objectives of the Brazilian federal government rather than to our own economic and business objectives.

Accordingly, we may make investments, incur costs and engage in sales with parties or on terms that may have an adverse effect on our results of operations and financial condition. In particular, we may have to assist the Brazilian federal government in ensuring that the supply and pricing of crude oil and oil products in Brazil meets Brazilian consumption requirements. In the past, we did not always adjust our prices to reflect parity with international market trends or reflect exchange rate volatility. Our pricing policy is adapted from time to time by our management; we cannot assure you that our pricing policy will not be changed in the future.

***Our planned investment budget is subject to approval by the Brazilian federal government, and failure to obtain approval of our planned investments may adversely affect our operations and financial condition.***

As a federal state-owned company, we are subject to certain rules that limit our investments, and we must submit our proposed annual budget to the MPDM and MME. Following review by these governmental authorities, the Brazilian Congress must approve our annual budget. Our approved budget may reduce or alter our proposed investments and incurrence of new debt, and we may be unable to obtain financing that does not require Brazilian federal government approval. As a result, we may not be able to make all the investments we envision, including those we have agreed to make to expand and develop our crude oil and natural gas fields, which may adversely affect our results of operations and financial condition.

***Fragility in the performance of the Brazilian economy, instability in the political environment, regulatory changes and investor perception of these conditions may adversely affect the results of our operations and our financial performance and may have a material adverse effect on us.***

Our activities are strongly concentrated in Brazil. The Brazilian federal government's economic policies may have important effects on Brazilian companies, including us, and on market conditions and prices of Brazilian securities. Our financial condition and results of operations may be adversely affected by the following factors and the Brazilian federal government's response to these factors:

exchange rate movements and volatility;

inflation;

financing of government fiscal deficits;

price instability;

interest rates;

liquidity of domestic capital and lending markets;

tax policy;

regulatory policy for the oil and gas industry, including pricing policy and local content requirements;

allegations of corruption against political parties, elected officials or other public officials, including allegations made in relation to the Lava Jato investigation; and

other political, diplomatic, social and economic developments in or affecting Brazil.

Uncertainty over whether the Brazilian federal government will implement changes in policy or regulations that may affect any of the factors mentioned above or other factors in the future may lead to economic uncertainty in Brazil and increase the volatility of the Brazilian securities market and securities issued abroad by Brazilian companies, which may have a material adverse effect on our results of operations and financial condition.

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Historically, the country's political scenario has influenced the performance of the Brazilian economy and political crises have affected the confidence of investors and the general public, which resulted in economic downturn and heightened volatility in the securities issued abroad by Brazilian companies. Although Brazilian authorities have publicly described us as a victim of the alleged illegal conduct identified during the Lava Jato investigation, any developments in the Lava Jato investigation (foreseeable and unforeseeable) could have a material adverse effect on the Brazilian economy and on our results of operations and financial condition.

Brazil has historically experienced high rates of inflation, particularly prior to 1995. Inflation, as well as government efforts to combat inflation, had significant negative effects on the Brazilian economy. More recently, inflation rates were 2.95% in 2017, 6.29% in 2016, 10.67% in 2015 and 6.41% in 2014, as measured by the IPCA, the National Consumer Price Index (*Índice Nacional de Preços ao Consumidor Amplo*), compiled by IBGE. Brazil may experience high levels of inflation in the future and the Brazilian government may introduce policies to reduce inflationary pressures, which could have the effect of reducing the overall performance of the Brazilian economy. Some of these policies may have an effect on our ability to access foreign capital or reduce our ability to execute our future business and management plans, particularly for those projects that rely on foreign partners.

The Brazilian government's measures to control inflation have often included maintaining a tight monetary policy with high *real* interest rates. These policies have contributed to limiting the size and attractiveness of the local debt markets, requiring borrowers like us to seek foreign currency funding in the international capital markets. To the extent that there is economic uncertainty in Brazil, which weakens our ability to obtain external financing on favorable terms, the local Brazilian market may be insufficient to meet our financing needs, which in turn may have a material adverse effect on us.

Additionally, since 2011, Brazil has been experiencing an economic slowdown culminating in a Gross Domestic Product, or GDP, increase of 1.0% in 2017. GDP growth rates were -3.6% in 2016, -3.8% in 2015, 0.5% in 2014, 3.0% in 2013 and 1.9% in 2012 (according to the GDP review released by IBGE). Our results of operations and financial condition have been, and will continue to be, affected by the growth rate of GDP in Brazil because a substantial portion of our oil products are sold in Brazil. We cannot ensure that GDP will increase or remain stable in the future. Future developments in the Brazilian economy may affect Brazil's growth rates and, consequently, the consumption of our oil products. As a result, these developments could impair our results of operations and financial condition.

### ***Allegations of political corruption against members of the Brazilian government could create economic and political instability.***

In the past, members of the Brazilian federal government and the Brazilian legislative branch have faced allegations of political corruption. As a result, a number of politicians, including senior federal officials and congressmen, resigned or have been arrested. Currently, elected officials and other public officials in Brazil are being investigated for allegations of unethical and illegal conduct identified during the Lava Jato investigation being conducted by the Office of the Brazilian Federal Prosecutor. The potential outcome of these investigations is unknown, but they have already had an adverse impact on the image and reputation of the implicated companies (including us), in addition to the adverse impact on general market perception of the Brazilian economy. These proceedings, their conclusions or further allegations of illicit conduct could have additional adverse effects on the Brazilian economy. Such allegations may lead to further instability, or new allegations against Brazilian government officials and others may arise in the future, which could have a material adverse effect on us. We cannot predict the outcome of any such allegations nor their effect on the Brazilian economy.

## **Risks Relating to Our Equity and Debt Securities**

***The size, volatility, liquidity or regulation of the Brazilian securities markets may curb the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs.***

Our shares are among the most liquid traded on the São Paulo Stock Exchange, or B3, but overall, the Brazilian securities markets are smaller, more volatile and less liquid than the major securities markets in the United States and other jurisdictions, and may be regulated differently from the way in which U.S. investors are accustomed. Factors that may specifically affect the Brazilian equity markets may limit the ability of holders of ADSs to sell the common or preferred shares underlying our ADSs at the price and time they desire.

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***The market for PGF's debt securities may not be liquid.***

Some of PGF's notes are not listed on any securities exchange and are not quoted through an automated quotation system. Most of PGF's notes are currently listed both on the New York Stock Exchange and the Luxembourg Stock Exchange and trade on the NYSE Euronext and Euro MTF (Multilateral Trading Facility) market, respectively, although most trading in PGF's notes occurs over-the-counter. PGF can issue new notes that can be listed in markets other than the NYSE and the Luxembourg Stock Exchange and traded in markets other than the NYSE Euronext and the Euro MTF market. We can make no assurance as to the liquidity of or trading markets for PGF's notes. We cannot guarantee that the holders of PGF's notes will be able to sell their notes in the future. If a market for PGF's notes does not develop, holders of PGF's notes may not be able to resell the notes for an extended period of time, if at all.

***Holders of our ADSs may be unable to exercise preemptive rights with respect to the common or preferred shares underlying the ADSs.***

Holders of ADSs who are residents of the United States may not be able to exercise the preemptive rights relating to the common or preferred shares underlying our ADSs unless a registration statement under the Securities Act is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available. We are not obligated to file a registration statement with respect to the common or preferred shares relating to these preemptive rights, and therefore we may not file any such registration statement. If a registration statement is not filed and an exemption from registration does not exist, The Bank of New York Mellon, as depositary, will attempt to sell the preemptive rights, and holders of ADSs will be entitled to receive the proceeds of the sale. However, the preemptive rights will expire if the depositary cannot sell them. For a more complete description of preemptive rights with respect to the common or preferred shares, see Item 10. Additional Information Memorandum and Articles of Incorporation Preemptive Rights.

***If holders of our ADSs exchange their ADSs for common or preferred shares, they risk losing the ability to timely remit foreign currency abroad and forfeiting Brazilian tax advantages.***

The Brazilian custodian for our common or preferred shares underlying our ADSs must obtain a certificate of registration from the Central Bank of Brazil to be entitled to remit U.S. dollars abroad for payments of dividends and other distributions relating to our preferred and common shares or upon the disposition of the common or preferred shares. Such remittances under an ADR program are subject to a specific tax treatment in Brazil that may be more favorable to a foreign investor if compared to remitting gains originated from securities directly acquired by the investor in the Brazilian regulated stock markets. Therefore, an investor who opts to exchange ADSs for the underlying common or preferred share may be subject to less favorable tax treatment on gains with respect to these investments.

The conversion of ADSs directly into ownership of the underlying common or preferred shares is governed by CMN Resolution No. 4,373 and foreign investors who intend to do so are required to appoint a representative in Brazil for the purposes of Annex I of CMN Resolution No. 4,373, who will be in charge for keeping and updating the investors certificates of registrations with the Central Bank of Brazil, which entitles registered foreign investors to buy and sell directly on the B3. Such arrangements may require additional expenses from the foreign investor. Moreover, if such representatives fail to obtain or update the relevant certificates of registration, investors may incur in additional expenses or be subject to operational delays which could affect their ability to receive dividends or distributions relating to the common or preferred shares or the return of their capital in a timely manner.

The custodian's certificate of registration or any foreign capital registration directly obtained by such holders may be affected by future legislative or regulatory changes, and we cannot assure such holders that additional restrictions

applicable to them, the disposition of the underlying common or preferred shares, or the repatriation of the proceeds from the process will not be imposed in the future.

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***Holders of our ADSs may face difficulties in protecting their interests.***

Our corporate affairs are governed by our bylaws and Brazilian Corporate Law, which differ from the legal principles that would apply if we were incorporated in a jurisdiction in the United States or elsewhere outside Brazil. In addition, the rights of an ADS holder, which are derivative of the rights of holders of our common or preferred shares, as the case may be, to protect their interests are different under Brazilian Corporate Law than under the laws of other jurisdictions. Rules against insider trading and self-dealing and the preservation of shareholder interests may also be different in Brazil than in the United States. In addition, the structure of a class action in Brazil is different from that in the US, and under Brazilian law, shareholders in Brazilian companies do not have standing to bring a class action, and under our by-laws must, generally with respect to disputes concerning rules regarding the operation of the capital markets, arbitrate any such disputes. See Item 10. Additional Information Memorandum and Articles of Incorporation Dispute Resolution.

We are a state-controlled company organized under the laws of Brazil, and all of our directors and officers reside in Brazil. Substantially all of our assets and those of our directors and officers are located in Brazil. As a result, it may not be possible for holders of ADSs to effect service of process upon us or our directors and officers within the United States or other jurisdictions outside Brazil or to enforce against us or our directors and officers judgments obtained in the United States or other jurisdictions outside Brazil. Because judgments of U.S. courts for civil liabilities based upon the U.S. federal securities laws may only be enforced in Brazil if certain requirements are met, holders of ADSs may face greater difficulties in protecting their interest in actions against us or our directors and officers than would shareholders of a corporation incorporated in a state or other jurisdiction of the United States.

***Holders of our ADSs do not have the same voting rights as our shareholders. In addition, holders of ADSs representing preferred shares do not have voting rights.***

Holders of our ADSs do not have the same voting rights as holders of our shares. Holders of our ADSs are entitled to the contractual rights set forth for their benefit under the deposit agreements. ADS holders exercise voting rights by providing instructions to the depository, as opposed to attending shareholders meetings or voting by other means available to shareholders. In practice, the ability of a holder of ADSs to instruct the depository as to voting will depend on the timing and procedures for providing instructions to the depository, either directly or through the holder's custodian and clearing system.

In addition, a portion of our ADSs represents our preferred shares. Under Brazilian law and our bylaws, holders of preferred shares do not have the right to vote in shareholders' meetings. This means, among other things, that holders of ADSs representing preferred shares are not entitled to vote on important corporate transactions or decisions. See Item 10. Additional Information Memorandum and Articles of Incorporation Voting Rights.

***We would be required to pay judgments of Brazilian courts enforcing our obligations under the guaranty relating to PGF's notes only in reais.***

If proceedings were brought in Brazil seeking to enforce our obligations in respect of the guaranty relating to PGF's notes, we would be required to discharge our obligations only in *reais*. Under Brazilian exchange controls, an obligation to pay amounts denominated in a currency other than *reais*, which is payable in Brazil pursuant to a decision of a Brazilian court, will be satisfied in *reais* at the rate of exchange in effect on the date of payment, as determined by the Central Bank of Brazil.

***A finding that we are subject to U.S. bankruptcy laws and that the guaranty executed by us was a fraudulent conveyance could result in PGF noteholders losing their legal claim against us.***

PGF's obligation to make payments on the PGF notes is supported by our obligation under the corresponding guaranty. We have been advised by our external U.S. counsel that the guaranty is valid and enforceable in accordance with the laws of the State of New York and the United States. In addition, we have been advised by our general counsel that the laws of Brazil do not prevent the guaranty from being valid, binding and enforceable against us in accordance with its terms. In the event that U.S. federal fraudulent conveyance or similar laws are applied to the guaranty, and we, at the time we entered into the relevant guaranty:

were or are insolvent or rendered insolvent by reason of our entry into such guaranty;

were or are engaged in business or transactions for which the assets remaining with us constituted unreasonably small capital; or



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intended to incur or incurred, or believed or believe that we would incur, debts beyond our ability to pay such debts as they mature; and

in each case, intended to receive or received less than reasonably equivalent value or fair consideration therefor,

then our obligations under the guaranty could be avoided, or claims with respect to that agreement could be subordinated to the claims of other creditors. Among other things, a legal challenge to the guaranty on fraudulent conveyance grounds may focus on the benefits, if any, realized by us as a result of the issuance of the PGF notes. To the extent that the guaranty is held to be a fraudulent conveyance or unenforceable for any other reason, the holders of the PGF notes would not have a claim against us under the relevant guaranty and would solely have a claim against PGF. We cannot ensure that, after providing for all prior claims, there will be sufficient assets to satisfy the claims of the PGF noteholders relating to any avoided portion of the guaranty.

## **Item 4. Information on the Company**

### **History and Development**

Petróleo Brasileiro S.A. Petrobras was incorporated in 1953 as the exclusive agent to conduct the Brazilian federal government's hydrocarbon activities. We began operations in 1954 and since then have been carrying out crude oil and natural gas production and refining activities in Brazil on behalf of the government. As of December 31, 2017, the Brazilian federal government owned 28.67% of our outstanding capital stock and 50.26% of our voting shares. See Item 7. Major Shareholders and Related Party Transactions Major Shareholders. Our common and preferred shares have been traded on the B3 since 1968 and on the NYSE in the form of ADSs since 2000.

We lost our exclusive right to carry out oil and gas activities in Brazil when the Brazilian Congress amended the Brazilian Constitution, and subsequently passed Law No. 9,478/1997 in 1997. Enacted as part of a comprehensive reform of the oil and gas regulatory system, this law authorized the Brazilian federal government to contract with any state or privately-owned company to carry out all activities related to oil, natural gas and their respective products. This new law established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed open competition in all aspects of the oil and gas industry in Brazil. The law also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil and to create a competitive environment in the oil and gas sector. See Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil Price Regulation.

Following the discovery of large pre-salt reservoirs offshore Brazil, Congress passed in 2010 additional laws intended to regulate exploration and production activities in the pre-salt area, as well as other potentially strategic areas not already under concession. Under these new laws, we acquired from the Brazilian federal government through an Assignment Agreement the right to explore and produce up to five bnboe of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas. Additionally, on December 2, 2013, based on these laws enacted in 2010, we executed our first agreement with the Brazilian federal government under a production sharing regime for the Libra field. On November 29, 2016, Law No. 13,365/2016 was enacted, which no longer requires us to be the operator in this area, but provides us with a right of first refusal to do so. It is no longer mandatory for us to be the exclusive operator. See Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil, Item 10.

Additional Information Material Contracts Assignment Agreement and Item 10. Additional Information Material Contracts Production Sharing Agreements.

We operate through subsidiaries, joint ventures, joint operations, consolidated structured entities and associates established in Brazil and many other countries. Our principal executive office is located at Avenida República do Chile 65, 20031-912 Rio de Janeiro, RJ, Brazil, our telephone number is (55-21) 3224-4477 and our website is [www.petrobras.com.br](http://www.petrobras.com.br). The information on our website, which might be accessible through a hyperlink resulting from this URL, is not and shall not be deemed to be incorporated into this annual report.

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**Overview of the Group**

***Business Segments***

We are one of the world's largest integrated oil and gas companies, operating principally in Brazil where we are the dominant participant. Our business segments operate year-round. As a result of our legacy as Brazil's former sole producer and supplier of crude oil and oil products and our strong and continuous commitment to find and develop oil fields in Brazil, we have a large base of proved reserves and operate and produce most of Brazil's oil and gas production. In 2017, our average domestic daily oil production was 2.15 mmbbl/d, which represents 82% of Brazil's total oil production. Most of our domestic proved reserves are located in the adjacent offshore Campos and Santos Basins in southeast Brazil. Their proximity allows us to optimize our infrastructure and limit our costs of development and production for our new discoveries. Additionally, we have developed special expertise in deepwater exploration and production from 47 years of developing Brazil's offshore basins. We are applying the technical expertise we gained through developing the Campos Basin to the Santos Basin, which is expected to be the principal source of our future growth in proved reserves and oil production.

As of December 31, 2017, we had proved developed oil and gas reserves of 5,042.2 mmboe and proved undeveloped reserves of 4,493.9 mmboe in Brazil. The development of this large reserve base and the exploration of pre-salt areas have demanded, and will continue to demand, significant investments and the growth of our operations.

We operate most of the refining capacity in Brazil. Our refining capacity is substantially concentrated in southeastern Brazil, within the country's most populated and industrialized markets and adjacent to the sources of most of our crude oil in the Campos and Santos Basins. Our current domestic crude distillation capacity is 2,176 mbbbl/d and our domestic refining throughput in 2017 was 1,736 mbbbl/d. We meet our demand for oil products through a planned combination of domestic refining of crude oil and oil products imports, seeking margin maximization. We are also involved in the production of petrochemicals. We distribute oil products through our own retail network and through wholesalers.

We participate in most aspects of the Brazilian natural gas market, including the logistics and processing of natural gas. To meet our domestic demand, we process natural gas derived from our onshore and offshore (mainly from fields in the Campos, Espírito Santo and Santos Basins) production, import natural gas from Bolivia, and to the extent necessary, import LNG through our regasification terminals. We also participate in the domestic power market primarily through our investments in gas-fired, fuel oil and diesel oil thermoelectric power plants and in renewable energy. In addition, we participate in the fertilizer business.

Outside Brazil, we operate in eight countries. In Latin America, our operations extend from exploration and production to marketing, retail services and natural gas. In North America, we produce oil and gas and have refining operations in the United States. In Africa, through a joint venture, we produce oil in Nigeria.

Comprehensive information and tables on reserves and production is presented at the end of Item 4. See [Information on the Company Additional Reserves and Production Information](#).

Our activities are currently organized into five business segments:

**Exploration and Production:** this segment covers the activities of exploration, development and production of crude oil, LNG and natural gas in Brazil and abroad, for the primary purpose of supplying our domestic

refineries and selling surplus crude oil and oil products produced in the natural gas processing plants to the domestic and foreign markets. The E&P segment also operates through partnerships with other companies;

**Refining, Transportation and Marketing:** this segment covers the activities of refining, logistics, transport and trading of crude oil and oil products in Brazil and abroad, exports of ethanol, extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil;

**Gas and Power:** this segment covers the activities of transportation and trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG, generation and trading of electricity, as well as holding interests in transporters and distributors of natural gas and in thermoelectric power plants in Brazil, in addition to being responsible for the fertilizer business;

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**Distribution:** this segment covers the activities of Petrobras Distribuidora S.A, which sells oil products, ethanol and vehicle natural gas in Brazil. This segment also includes distribution of oil products operations abroad (South America); and

**Biofuel:** this business segment covers the activities of production of biodiesel and its co-products, as well as ethanol-related activities such as equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse.

Additionally, we have a corporate segment that has activities that are not attributed to the other segments, notably those related to corporate financial management, corporate overhead and other expenses, including actuarial expenses related to the pension and medical benefits for retired employees and their dependents. For further information regarding our business segments, see Notes 4.2 and 29 to our audited consolidated financial statements.

The following table sets forth key information for each business segment in 2017:

	<b>Key Information by Business Segment, 2017</b>							
	<b>Exploration and Production</b>	<b>Refining, transportation and Marketing</b>	<b>Gas and Power</b>	<b>Biofuel</b>	<b>Distribution</b>	<b>Corporate</b>	<b>Eliminations</b>	<b>Group Total</b>
	<b>(US\$ million)</b>							
Sales revenues	42,184	67,037	12,374	213	27,567		(60,548)	88,827
Income (loss) before income taxes	10,633	6,099	3,018	(57)	802	(18,111)	(387)	1,997
Total assets at December 31	144,619	51,066	18,555	190	6,121	36,746	(5,931)	251,366
Capital Expenditures According to Our Plan Cost Assumptions	12,397	1,284	1,127	35	109	132		15,084
<b>Acquisitions and Divestments</b>								

As part of our 2018-2022 Plan, our partnership and divestment program aims to improve our operating efficiencies, returns on capital, and generate additional cash to service our debt. The partnership and divestment program contemplates the sale of minority, majority or entire positions in certain of our subsidiaries, associates, and assets to strategic or financial investors or through public offerings.

Based on our internal valuation of assets that are considered for sale pursuant to the partnership and divestment program for the period 2017-2018, our goal is to receive proceeds of US\$21 billion. Nonetheless, changes in market conditions or in our evaluation of our different businesses, among other factors, may affect ongoing negotiations or the feasibility of potential transactions. In addition, the sale of these assets will impact our future results of operations.

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In 2017 and the beginning of 2018, we completed, among others, the following partnerships and divestments.

<b>Signing Date</b>	<b>Closing Date</b>	<b>Transaction</b>	<b>Transaction Nominal Value* (US\$ billion)</b>
07/22/2016	01/04/2017	Sale of 100% of Petrobras Chile Distribución Ltda.	0.5
12/28/2016	02/03/2017	Sale of our entire 45.97% interest in Guarani S.A.	0.2
09/23/2016	04/04/2017	Sale of 90% of the total shares of Nova Transportadora do Sudeste (NTS), previously owned by us, a natural gas transportation company in Southeast Brazil**	5.2***
02/28/2017	01/15/2018	Strategic Partnership between Petrobras and Total, including the assignment of 22.5% Petrobras interests in the Iara area, and the assignment of 35% Petrobras interests of Lapa Field in Block BM-S-9, to Total. There are other aspects of the Strategic Partnership which are subject to compliance with contractual and legal conditions precedent.	2.2
12/14/2017	12/22/2017	Petrobras Distribuidora S.A. Secondary Public Offer (sale of 28.75% Petrobras shares)	1.5
02/16/2018	02/21/2018	Sale of the total amount of our shares in São Martinho S.A (6.593%).	0.1
<b>Total</b>			<b>9.7</b>

\* Considering amounts received and future payments related to the transaction.

\*\* Total transaction value includes debt settlement.

\*\*\* Value does not include negative price adjustment amounting to US\$0.1 billion.

In 2017 and early 2018, we received proceeds from the sale of assets under our partnership and divestment program amounting to US\$8.9 billion, mainly resulting from the (i) sale of Nova Transportadora do Sudeste, (ii) strategic alliance with Total including assignment of rights in the Iara and Lapa Oilfields and (iii) Petrobras Distribuidora S.A. secondary public offer.

For information on the TCU awards and other judicial proceedings related to our divestment program, see Item 8. Financial Information Legal Proceedings Legal Proceedings and Preliminary Procedure on TCU Divestments.

In addition, we have signed agreements in transactions which are currently pending closing, relating to our partnership and divestment program. Among others, the agreements listed below were signed in 2016 and 2017. Completion of such transactions is subject to compliance with contractual and legal conditions precedent.

<b>Signing Date</b>	<b>Transaction</b>	<b>Transaction Nominal Value* (US\$ billion)</b>
12/28/2016		0.4

	Sale of Companhia Petroquímica de Pernambuco ( PetroquímicaSuape ) and Companhia Integrada Têxtil de Pernambuco ( Citepe )	
02/28/2017	Sale of 50% in Termobahia S.A., as part of the Strategic Partnership between Petrobras and Total	***
11/22/2017	Assignment of Azulão Gasfield	0.05
12/18/2017	Strategic Partnership with Statoil which includes: (i) assignment of 25% of Petrobras interest in the Roncador field to Statoil; (ii) strategic technical alliance agreement for technical cooperation aiming at maximizing recovery factor; (iii) subject to regulatory requirements, an option for Statoil to hire a certain processing capacity of natural gas at the Cabiúnas Terminal (TECAB).	2.9
<b>Total</b>		<b>3.35</b>

\* Considering amounts to be received at the closing of the transaction and subsequent payments.

\*\* Considering the exchange rate as of December 29, 2017.

\*\*\* Value not yet announced.

Regarding the sale of PetroquímicaSuape and Citepe, the court of the Administrative Council for Economic Defense ( CADE ) has approved the transaction in February 7, 2018, subject to the execution of an Agreement on Concentration of Control (*Acordo de Controle de Concentração* ACC).

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Regarding the sale of Liquigás Distribuidora S.A. (Liquigás), the court of the CADE disapproved the purchase of Liquigás by Companhia Ultragaz S.A. CADE's decision triggered the termination of Liquigás sale contract, which requires Companhia Ultragaz S.A. to pay us a fine in the total amount of US\$ 88 million. The payment was made on March 13, 2018. We are currently analyzing alternatives for the divestment of Liquigás. Its sale remains in our partnerships and divestments program.

Our partnership and divestment processes are subject to continuous Brazilian judicial scrutiny. Since 2016, TCU has been taking actions that postponed several of our processes. For information on the TCU awards and other judicial proceedings related to our divestment program, see Item 8. Financial Information Legal Proceedings Legal Proceedings and Preliminary Procedure on TCU Divestments.

On December 15, 2017, our subsidiary Petrobras Distribuidora, a leader in the fuel distribution segment in Brazil and listed on the Novo Mercado, the main governance segment among the B3, held its initial public offering (IPO) at B3. The IPO attracted investors from Latin America, Europe, and the United States. The total amount of the offer was US\$1,507 million. The IPO of Petrobras Distribuidora marked the return of Petrobras Distribuidora to the capital markets.

### ***Restructuring and Contracting Initiatives***

In 2017, our board of directors approved changes in the organizational structure of our operational units, following the organizational changes implemented in the non-operational units started in 2016. We expect the 2017 changes to result in a reduction of 11% of all management positions in operational areas until 2021. In addition, we expect these changes to lead to cost savings of approximately US\$9.21 million per year.

The initiative to implement such changes has the purpose of aligning our organizational structure with our current business environment and with the current oil and gas sector. As part of the initiative, we also focus on maximizing efficiency, maintaining operational continuity and integrity of our facilities, and capturing gains through the implementation of lean and agile structures.

Some examples of the changes implemented are the redistribution of production's fields among E&P's operational units, the strengthening of our organizational structure for the management of reservoirs and a significant reduction of the various functions of our refiner.

With respect to the contracting initiatives, in 2017 we concluded the implementation of the Supplier Base Management Program (PGBF), which restructured the registration and selection process for contracting our suppliers, contracting became more competitive. Suppliers, registered under the new system, provide greater security for our contracting process.

Law No. 13,303 of June 30, 2016 ( Law No. 13,303/16 ) introduced new bidding and contracting proceedings, offering state-owned enterprises a twenty-four month period for adjustments. However, even before the deadline of June 30, 2018, all of our new contracts will comply with Law No. 13,303/16, by means of our new bid and contract regulation (RLCP), published on January 15th, 2018, at Brazilian Federal Register (Diário Oficial da União DOU). As referred to in Article 226, the RLCP entered into force on the date of its publication, having progressive effects per Organizational Unit, under the terms of the implementation schedule.

### ***Social Responsibility***



In March 2017, we approved our social responsibility policy with the commitment of respecting human rights and the environment, interacting responsibly with nearby communities and overcoming sustainability challenges of our business. In order to improve social risk management process, we incorporated, in the capital investment projects guideline, new requirements for the decision making process, such as social risk analysis by multidisciplinary group. Following this new guideline, 22 investment projects were assessed in 2017.

Through our social and environmental program, we strengthen our engagement with nearby communities, civil society organizations, public sector and universities, contributing to the environmental conservation, as well as mitigating social risks related to our business. In 2017, we invested around US\$18.8 million in 202 voluntary social and environmental projects. We improved the governance and compliance of our contracting process and renewed our portfolio, with a projected investment of US\$78.3 million by 2020, covering 20 Brazilian states.

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### **2018-2022 Plan and Strategic Monitoring Process**

In December 2017, our board of directors approved our 2018-2022 Plan and the proposed adjustments by our strategic monitoring process.

Our 2018-2022 Plan is based on two main safety and financial metrics, which guide our strategic actions. First, the security metric is measured as the Total Recordable Injury recorded per million men-hours (TRI) and we expect to reduce it from 1.4 to 1.0 by 2018. Second, the financial leverage target is measured as Net Debt/Adjusted EBITDA and we expect this ratio to reach 2.5 in 2018, calculated in *reais*.

Our strategic monitoring process consists of the permanent evaluation of the business environment and the implementation of the plan, allowing adjustments to be made in a more efficient way. The process generated adjustments in the set of strategies established in our strategic plan approved in 2016, resulting in a total of 20 strategies and incorporating three new strategies: (1) the transition to a low carbon economy; (2) the preparation of the company to enjoy opportunities arising from digital transformation; and (3) optimization of our financial and risk management.

Our 2018-2022 Plan contains five fundamental principles of our vision that are broken down into 20 strategies, with systematic follow-up, as detailed below.

*Efficient Integration:* (i) to reduce our risk, adding value in E&P, Refining, Transportation, Logistics, Distribution and Sales by active portfolio management through partnerships, acquisitions and divestments; and (ii) to restructure the electric energy business, seeking an alternative that maximizes value for us.

*Energy, with focus on oil and gas:* (i) to manage the exploratory portfolio in order to maximize cost effectiveness and ensure the sustainability of oil and gas production; (ii) to manage the E&P portfolio projects in an integrated manner; (iii) to optimize our business portfolio, withdrawing entirely from biofuel production, LPG distribution, fertilizer production and petrochemical interests, preserving technological competencies in areas with development potential; and (iv) to maximize value creation in the gas chain.

*Evolves with the society:* (i) to strengthen internal controls and governance, ensuring transparency and an effective system for preventing and combating irregularities, without reducing the agility of the decision-making process; (ii) to repair our credibility and strengthen our relationships and reputation with all our stakeholders, including our control and supervisory bodies, maintaining a transparent, respectful and proactive dialogue; (iii) to prepare us for a future based on a low carbon economy; and (iv) to take advantage of opportunities created by digital transformation, applying new technologies to our processes and/or generating new processes or new businesses, focusing on the aggregation of value.

*Company determined to create value:* (i) to ensure disciplined use of capital and return to shareholders in all of our projects, with high reliability and predictability in our delivery; (ii) to continuously maximize the productivity and the reduction of costs in accordance with the best international practices; (iii) to manage the process of contracting goods and services with a focus on value, aligned with international standards and metrics, meeting conformity requirements, maintaining flexibility in adverse and volatile demand scenarios

and contributing to the development of the chain as a whole; (iv) to promote the management of our workforce in an environment of participatory culture and mutual trust, focused on results that add value, with safety, ethical conduct, responsibility, encouragement of dialogue, meritocracy, simplicity and conformity; (v) to strengthen the reservoir management to maximize the value of E&P contracts in all the regulatory regimes, seeking opportunities to continuously incorporate reserves; (vi) to promote a market price policy and maximize margins in the value chain; and (vii) to optimize our financial and risk management.

*Technical ability:* (i) to ensure the constant development of technological competencies in areas with development potential, strengthening the performance of the current business; (ii) to prioritize the development of deepwater production, acting primarily in strategic partnerships, bringing together technical and technological expertise; and (iii) to enable the conception and implementation of projects with a low oil equilibrium price, in a safe way and in compliance with environmental requirements.

**Table of Contents****Exploration and Production**

	<b>Exploration and Production Key Statistics</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(US\$ million)</b>		
<b>Exploration and Production:</b>			
Sales revenues	42,184	33,675	35,680
Income (loss) before income taxes	10,633	2,055	(3,683)
Property, plant and equipment	126,487	123,056	109,724
Capital Expenditures According to Our Plan Cost Assumptions	12,397	13,509	19,131

Our oil and gas exploration and production activities are the largest components of our investment portfolio. Our activities are concentrated in deepwater oil reservoirs in Brazil. Our domestic activities represented 96% of our worldwide production in 2017 and accounted for 98% of our worldwide reserves on December 31, 2017. Over the last five years, approximately 89% of our total Brazilian production has been oil.

Brazil's largest oil fields are located offshore, most of them in deepwaters. We have been conducting offshore exploration and production activities in the Campos Basin since 1971, when we started exploration, and our major discoveries were made in deepwater and ultra-deepwater. Our technology and expertise have created a competitive advantage for us and we have become globally recognized as innovators in the technology required to explore and produce hydrocarbons in deep and ultra-deepwaters. In 2017, offshore production accounted for 93% of our production in Brazil and deepwater production accounted for 86% of our production in Brazil.

Historically, we focused our offshore exploration and production activities on sandstone turbidite reservoirs, located primarily in the Campos Basin. In 2006, we were successful in drilling through a massive salt layer off the Brazilian coast that stretches from the Campos to the Santos Basin. This pre-salt area has many large carbonate reservoirs with well-preserved oil, leading to a number of important discoveries. This pre-salt province occupies an area of approximately 149,000 km<sup>2</sup> (36.8 million acres), of which we have rights to produce from 14% of the total area (around 21,424 km<sup>2</sup> or 5.3 million acres), through acreage assigned to us under Concession Agreements, the Assignment Agreement and Production Sharing Agreements.

The pre-salt reservoirs we have discovered are located in deepwater and ultra-deepwaters at total depths of up to 7,000 meters (22,965 feet). The southern part of the pre-salt province consists of the Santos Basin, where the salt layer is approximately two kilometers thick. In the northern part of the pre-salt province, the salt is thinner and most of the oil has migrated through the salt to the post-salt sandstone reservoirs of the Campos Basin. While some of the oil that formed has migrated, we still have made important discoveries in pre-salt reservoirs in the Campos Basin, as we drilled through the salt layers. Most of our current and future capital will be committed to developing the oil found in the pre-salt province, with an emphasis on the Santos Basin, given the size of its reservoirs and its potential.

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The map below shows the location of our pre-salt reservoirs.

**Our activities by region**

***Brazil***

Domestic exploration and production assets are the main components of our portfolio, representing 91% of our worldwide exploratory blocks, 97% of our global oil production and 98% of our oil and natural gas reserves. We have expanded strategic alliances with large oil companies, including Total (headquartered in France), Statoil (Norway), BP (UK) CNPC (China) and Exxon (USA), aiming to combine these companies' technical capabilities, and allow for potential joint ventures in exploration, production and infrastructure of oil and gas in areas of common interest worldwide.

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The following map shows our exploration and production areas in Brazil as of December 2017.

### ***Campos Basin***

Our activities in the basin began in 1971 and we are now focused on maintaining our production in relatively mature fields. We have been able to mitigate the natural decline in mature fields of this basin by installing new production systems, tapping pre-salt reservoirs with both new and existing production units and improving operational efficiency. All of our licenses in the Campos Basin are under concession agreements. See Regulation of the Oil and Gas Industry in Brazil.

Most of our production in the Campos Basin is from post-salt reservoirs, but pre-salt reservoirs in the basin are a growing source of production. We first began pre-salt oil production in 2008 in the Jubarte field located in the Parque das Baleias region. In 2017, the Campos Basin pre-salt area average production of oil was 232.3 mbb/d, which represents a decrease of 5% compared to 2016. We have a 100% interest in oil produced from the Campos Basin pre-salt reservoirs.

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### ***Santos Basin***

The Santos Basin is one of the most promising offshore exploration and production areas in the world, containing the southern and most prolific part of the pre-salt province. Our activities in the Santos Basin began with the acquisition of eight blocks through public auction under concession agreements in 2000 and 2001. In 2010, we entered into an Assignment Agreement with the Brazilian federal government, under which we were assigned exclusive rights to explore and produce five billion barrels of oil equivalents in the Santos Basin. In 2013, a consortium led by us (holding a 40% interest and acting as exclusive operator of the area), Shell (20% interest), Total (20% interest), CNODC (10% interest) and CNOOC Limited (10% interest) was awarded the rights and obligations to explore and develop the Libra block in the ultra deepwaters of the Santos Basin in the first production sharing regime auction ever held in Brazil. See Regulation of the Oil and Gas Industry in Brazil and Item 10. Additional Information Material Contracts.

The Assignment Agreement and Libra areas are currently in development and appraisal phases, respectively, and have shown very successful results and will ensure our long-term reserves and production curve.

We currently have 12 pre-salt production units in the Santos Basin, of which two are dedicated to Extended Well Test (EWT). With these units, we have been increasing the pre-salt oil production in the Santos Basin since its first oil production, in 2009. Petrobras's and our non-operated partners' production in the Santos Basin pre-salt area reached an average of 1.05 mmbbl/d in 2017, which represents an increase of 36% when compared to 2016. Despite these important results, we continue to concentrate our efforts on gathering information about the pre-salt reserves through EWTs. In 2017, one EWT was performed in Itapu field and there is another on stream in Mero field.

### ***Other Basins***

We produce hydrocarbons and hold exploration acreage in 18 other basins in Brazil. While our onshore production is primarily in mature fields, we plan to sustain and slightly increase production in these fields by enhancing recovery methods. The most significant potential for exploratory success within our other basins is the equatorial margin and east margin.

### ***International***

Outside Brazil, we have long been active in South America, in North America and West Africa. We focus on opportunities to leverage the deepwater expertise we have developed in Brazil. Since 2012, we have been substantially reducing our international activities through the sale of assets to meet our announced divestment targets.

### ***South America***

We conduct exploration and production activities in Argentina, Bolivia, and Colombia.

In **Argentina**, through our 100% interest in Petrobras Operaciones S.A., or POSA. Our oil and gas production is concentrated in the Neuquén Basin.

In **Bolivia**, our oil and gas production comes principally from the San Alberto and San Antonio contracts, which are operated mainly to supply gas to Brazil and Bolivia.

In **Colombia**, our portfolio includes the Tayrona offshore exploration block and the Villarica Norte onshore exploration block.

***North America***

In the **United States**, we focus on deepwater fields in the Gulf of Mexico. Our production in the United States during 2017 originated mainly from the Cascade, Chinook, Saint Malo and Lucius fields.

In **Mexico**, we have held non-risk service contracts through our joint venture with PTD Servicios Multiplos SRL for the Cuervito and Fronterizo blocks in the Burgos Basin since 2003. Under these service contracts, we receive fees for our services.



**Table of Contents****Africa**

We explore oil and gas opportunities in Africa exclusively through our 50% interest in a joint venture with BTG Pactual, Petrobras Oil & Gas B.V. (PO&G). The assets of this joint venture include the Agbami and Akpo fields, the Egina field project and the Preowei and Egina South discoveries appraisal projects, all of them in Nigeria.

**Oil and Gas Production Activities**

In 2017, we had record domestic oil production average for the fourth consecutive year, reaching 2.15 mmbbl/d, a 0.4% increase compared to the previous year (2.14 mmbbl/d).

In 2017, our oil and gas worldwide production averaged 2.52 mmboe/d, a 1.1% decrease compared to the previous year (2.55 mmboe/d), and our oil worldwide production averaged 2.22 mmbbl/d, the same level compared to the previous year. Brazil represented 96% of our worldwide oil and gas production in 2017.

Pre-salt operated oil production averaged 1.29 mmbbl/d, the highest ever, representing a 26% increase compared to the previous year. Pre-salt oil production reached 1.48 mmbbl/d on December 4, 2017, achieving a new daily production record, with only 78 producing wells. Of these wells, 55 are located in the Santos Basin and were responsible for 84% of this production (1.24 mmbbl/d).

The natural gas output increased by 4% compared to the previous year and our domestic total production averaged 2.41 mmboe/d in 2017, an increase of 1% compared to the previous year.

The main highlights for production expansion in 2017 were the significant production growth in the Lula field (including Iracema Norte and Iracema Sul areas, with FPSOs Cidade de Saquarema, Cidade de Maricá and the start of operation FPSO -66) and in the Lapa field (FPSO Cidade de Caraguatatuba), located in the Santos Basin's pre-salt layer. In addition, there is one new production system that started its operation, FPSO Pioneiro de Libra, in the northwest area of the block of the same name, located in the Santos Basin's pre-salt layer. This area was declared commercial and came to be called Mero's field.

Oil and gas production abroad averaged 112.5 mboe/d in 2017, a 30% decrease from the 161.1 mboe/d recorded in 2016, primarily due to divestments, such as the sale of Petrobras Argentina in 2016.

Our average production per region as of December 31, 2017, December 31, 2016 and December 31, 2015 is summarized in the table below:

	Oil (mmbbl)(1)			Gas (mmcf)(2)			Total (mboe)			Stationary production units		
	2017	2016	2015	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Brazil</b>	786.1	784.8	776.8	556.0	534.0	563.4	878.8	873.8	870.7	118	121	120
Campos Basin	442.4	497.2	543.1	78.3	192.3	210.7	455.4	529.2	578.2	53	55	56
Santos Basin	269.0	203.9	144.3	296.1	193.3	177.9	318.3	236.1	174.0	22	15	12
Other Basins(3)	74.8	83.7	89.4	181.6	148.4	174.8	105.1	108.4	118.5	43	51	52
<b>South America (excluding</b>	1.9	8.0	14.1	85.4	144.7	173.3	16.1	32.1	43.0			

<b>Brazil)</b>												
<b>North America</b>	13.2	12.1	11.2	21.5	32.1	24.5	16.7	17.4	15.3	2	2	2
<b>Equity and non-consolidated affiliates</b>	8.2	9.2	11.0	0.0	0.1	0.3	8.2	9.2	11.0			
South America (excluding Brazil)		0.5	1.2		0.1	0.3		0.5	1.3			
Africa	8.2	8.7	9.7				8.2	8.7	9.7			
<b>Total</b>	809.4	814.1	813.0	662.8	710.9	761.6	919.8	932.6	939.9	120	123	122

(1) Oil production includes production from extended well tests (EWT) and NGL.

(2) Natural gas production figures are the production volumes of natural gas available for sale, excluding flared and reinjected gas and gas consumed in operations.

(3) Includes NGL, synthetic oil, and synthetic gas production from oil shales deposits in São Mateus do Sul, in the Paraná Basin of Brazil.

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For 2018, we expect to produce 2.1 mmbbl/d of oil in Brazil (the same level as our average in 2017). For more information on new production systems, see Item 4. Information on the Company Exploration and Production Production Development.

We recognized impairment reversals for the fiscal year ended December 31, 2017 of US\$870 million with respect to our domestic exploration and production producing properties due to (i) reversals of US\$1,733 million, substantially reflecting the lower post-tax *real* discount rate, the approval of investments enhancing the recovery of mature fields and the lower tax burden set forth in the new tax rules applicable to the oil and gas industry; and (ii) impairment losses of US\$863 million, substantially driven by an expected acceleration of production cessation reflecting an optimization of investment portfolio, as well as by a lower risk-adjusted discount rate for decommissioning costs, which also increased the costs of assets related to the abandonment and dismantling of certain areas. We have also recognized impairment losses of US\$363 million with respect to oil and gas production and drilling equipment, which were not directly related to producing properties in Brazil, mainly resulting from: (i) lower fair value of certain equipment related to the FPSO P-72 and P-73 that could not be allocated to other projects, when compared to their carrying amount (US\$127 million); (ii) decommissioning of a crane and launch ferry (US\$114 million) and (iii) hibernation of equipment of Inhaúma Shipyard excluded from the initial scope of Inhaúma logistic center (US\$125 million). In addition, we recognized impairment losses of US\$405 million with respect to the sale of 25% of Roncador field in Campos basin to Statoil, as its sales price was lower than the carrying amount.

For the fiscal year ended December 31, 2016, we previously recognized impairment losses of US\$2.3 billion with respect to our domestic exploration and production producing properties due to (i) the appreciation of the *real* against the U.S. dollar, (ii) the review of our price assumptions, (iii) our annual reviews of oil and gas reserves, (iv) decommissioning cost estimates and (v) a higher discount rate following the increase in Brazil's risk premium. This amount also includes an impairment reversal relating to the Centro Sul group, amounting to US\$415 million, was recognized due to the higher estimates of reserves and production and the lower estimates of operating expenses. The decommissioning of a unit, which had high operational costs, and the replacement of another unit by an investment in a new processing plant, which was committed during the third quarter of 2016, also contributed to such impairment reversal. We have also recognized impairment losses of US\$854 million with respect to oil and gas production and drilling equipment, which were not directly related to producing properties in Brazil, mainly due to uncertainties over the ongoing hulls construction of the FPSOs P-71, P-72 and P-73.

For the fiscal year ended December 31, 2015, we previously recognized impairment losses of US\$8.7 billion with respect to our domestic exploration and production producing properties due to the impact of the decline in international crude oil prices on the price assumptions for certain of our domestic crude oil and natural gas producing properties, including Papa-Terra, Centro Sul group, Uruguá group, Espadarte, among others, the use of a higher discount rate (reflecting an increase in Brazil's risk premium), as well as the geological revision of Papa-Terra reservoir. We have also recognized impairment losses of US\$0.5 billion with respect to oil and gas production and drilling equipment, which were not directly related to producing properties in Brazil, mainly related to the idle capacity of two drilling rigs in the future and to the use of a higher discount rate. For the fiscal year ended December 31, 2015, we also recognized impairment losses of US\$0.6 billion in E&P assets abroad, mainly in productive properties located in the United States (US\$0.4 billion) and Bolivia (US\$0.2 billion), attributable to the decline in international crude oil prices.

For further Information on impairment losses in 2017, 2016, and 2015, see Note 14 to our audited consolidated financial statements.

## ***Lifting Cost***

In 2017, our average lifting cost excluding government fees was US\$11.0 per boe, which is an increase of 7% compared to the average cost of US\$10.3 per boe mined in 2016. Our lifting cost excluding exchange rate effects of 2017 would be in line with the previous year, even considering the start-up of new units and higher effort on well interventions.

**Table of Contents****Capital Expenditures According to Our Plan Cost Assumptions E&P**

In our 2018-2022 Business Plan, we maintain our focus on the development of our reservoirs in Brazil, especially in the pre-salt layer.

Out of US\$60.3 billion Capital Expenditures According to Our Plan Cost Assumptions in exploration and production for the next five years, 77% will be allocated to production development, 11% to exploration and 12% to infrastructure and R&D.

The Capital Expenditures According to Our Plan Cost Assumptions in exploration and production activities in 2017 (in Brazil and abroad) amounted to US\$12.4 billion, an 8% decrease compared to Capital Expenditures According to Our Plan Cost Assumptions for the fiscal year ended December 31, 2016, mainly attributable to the postponement of some construction activities for FPSOs, gains in efficiency of capital expenditure and reduction in taxes for drilling units and support vessels. This amount includes US\$ 0.9 billion related to signature bonuses paid by us as a result of exploratory blocks contracted in ANP bidding rounds held in September and October 2017. See Liquidity and Capital Resources Use of funds for further information on our investments.

**Exploration**

As of December 31, 2017, we had 135 exploratory blocks in which 28 discoveries were under evaluation. We also had three discoveries being assessed in production areas. As of December 31, 2017, we had a 100% working interest in 55 exploratory blocks. We also had exploration partnerships with 23 foreign and domestic companies, for a total of 80 exploratory blocks. We serve as the operator in 52 of these exploration partnership blocks. We hold interest ranging from 30% to 100% in the exploration areas under concession or assigned to us.

The table below breaks down our investments in exploration activities in 2017, which totaled US\$1.4 billion.

	Net Exploratory Area (km <sup>2</sup> )			Exploratory Blocks			Evaluation Plans			Wells Drilled		
	2017	2016	2015	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Brazil</b>	<b>41,820</b>	<b>43,966</b>	<b>55,366</b>	<b>123</b>	<b>131</b>	<b>146</b>	<b>28</b>	<b>37</b>	<b>43</b>	<b>8</b>	<b>16</b>	<b>51</b>
Campos Basin	484	1,216	1,798	2	6	7	3	7	9	1	2	4
Santos Basin	1,927	2,140	3,378	4	4	6	2	3	5	1	2	5
Other Basins	39,409	40,610	50,190	117	121	133	23	27	29	6	12	42
<b>Other S. America</b>	<b>5,425</b>	<b>11,444</b>	<b>12,702</b>	<b>2</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>6</b>
<b>North America</b>	<b>198</b>	<b>376</b>	<b>787</b>	<b>10</b>	<b>28</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
<b>Africa</b>	<b>0</b>	<b>0</b>	<b>3,679</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>	<b>47,641</b>	<b>55,786</b>	<b>72,534</b>	<b>135</b>	<b>166</b>	<b>208</b>	<b>31</b>	<b>38</b>	<b>46</b>	<b>9</b>	<b>21</b>	<b>59</b>

In the Campos Basin, we had a new oil reservoir found in the Marlim Sul field. This was the first pre-salt layer discovery in the Marlim Sul field area. It occurred with the drilling of the Poraquê Alto well (6-BRSA-1349-RJS) that is currently under appraisal. We, as the operator of Libra consortium, presented to the ANP the declaration of

commerciality of the northwest portion of the Libra area, in the pre-salt Santos Basin. In the document submitted to the ANP, we proposed the name Mero for the new oil field, which holds a field's total recoverable estimated volume of 3.3 billion barrels of oil.

We acted selectively in the bidding rounds carried out by the ANP in September and October 2017, reflecting our strategic vision to reorganize our exploratory portfolio, which seeks to maintain the relationship between reserves and production and to ensure the sustainability of our future oil and gas production. Furthermore, the operation in consortium with important companies is aligned with our strategic goal to strengthen partnerships, sharing risks, combining technical and technological skills and capturing synergies to leverage results, while reflecting the importance of these areas in Brazil for world-class oil companies. In September and October 2017, we contracted 10 new exploratory blocks (nine offshore and one onshore), with a total area of 11.4 thousand km<sup>2</sup> and a signing bonus of R\$2.9 billion (equivalent to US\$0.9 billion) at the acquisition date. In the offshore blocks outside of the pre-salt polygon, contracted under the concession regime, we hold 50% of the working interests in partnerships with ExxonMobil. Under the Production Sharing Agreements, we acquired three blocks inside the pre-salt area, in partnership with Shell, Repsol Sinopec and BP.

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In addition, in March 2018, we participated in the 15<sup>th</sup> round of bids under the concession regime in Brazil, in which we acquired seven offshore blocks. The total amount of the signature bonus to be paid in 2018 is R\$2.2 billion (equivalent to US\$0.7 billion at the acquisition date, on March 29, 2018). In the Campos Basin, we acquired two blocks in partnership with Exxon and Statoil, which we will operate, and two blocks in partnership with Exxon and Qatar Petroleum, which will be operated by Exxon. In the Potiguar Basin, we acquired three blocks, two of them in partnership with Shell and one block is wholly owned by us. We will be the operator of all of them.

**Production Development**

In 2017, two new systems came on stream (FPSO P-66, in the Lula field, and FPSO Pioneiro de Libra, in the Mero Field) and we connected 44 new wells (28 production and 16 injection wells) in our production systems.

Over the last seven years, we had substantial cost optimizations regarding project development. For instance, we reduced the time required to drill and complete wells in the Santos Basin pre-salt area by 63% in the year 2017, compared to 2010, significantly reducing our capital expenditures per well. In addition, due to the wells high productivity, we have been able to top the capacity of the platforms with fewer wells.

**Recently Installed Systems**

In the last three years, we have installed several major systems, mainly in the pre-salt area of the Santos Basin, which helped mitigating the basin's natural decline (table below).

Start Up (year)	Basin	Field/Area	Unit Type	Production Unit	Crude Oil		Water Depth (meters)	E&P Regime
					Nominal Capacity (bbl/d)	Nominal Capacity (mmcf/d)		
2017	Santos	Lula	FPSO	P-66	150,000	211.9	2,100	Pre-salt Concession
2017	Santos	Mero	FPSO	Pioneiro de Libra	50,000	141.6	2,400	Pre-salt Production Sharing Contract
2016	Santos	Lapa	FPSO	Cid. de Caraguatatuba	100,000	176.6	2,140	Pre-salt Concession
2016	Santos	Lula Central	FPSO	Cid. de Saquarema	150,000	211.9	2,100	Pre-salt Concession
2016	Santos	Lula Alto	FPSO	Cidade de Maricá	150,000	211.9	2,100	Pre-salt Concession
2015	Santos	Lula	FPSO	Cidade de Itaguaí	150,000	282.5	2,240	Pre-salt Concession
2015	Campos	Papa-Terra Module 1	TLWP	P-61	(1)	(1)	1,180	Post-salt Concession

(1) P-61 production is processed by the FPSO P-63, which came onstream in 2013, with 140 mbbbl/d.

**Main systems to be Installed in 2018 and 2019**

We currently have nine major systems to be installed in the next two years. The Lula and Búzios fields will be particularly important to support our production growth. Production from these fields will be increased by bringing

onstream six more FPSOs. Moreover, we will install a new post-salt unit in the Tartaruga Verde Field by 2018. The table below lists our upcoming system start-ups.

Projected Start Up (year)	Basin	Field/Area	Unit Type	Crude Oil Natural Gas			E&P Regime
				Nominal Capacity (bbl/d)	Nominal Capacity (mmcf/d)	Water Depth (meters)	
2018	Campos	Tartaruga Verde	FPSO	150,000	176.6	765	Post-salt Concession
2018	Santos	Lula Norte	FPSO	150,000	211.9	2,100	Pre-salt Concession
2018	Santos	Lula Extremo Sul	FPSO	150,000	211.9	2,100	Pre-salt Concession
2018	Santos	Búzios 1	FPSO	150,000	211.9	2,100	Assignment Agreement
2018	Santos	Búzios 2	FPSO	150,000	211.9	2,100	Assignment Agreement
2018	Santos	Búzios 3	FPSO	150,000	211.9	2,100	Assignment Agreement
2018	Santos	Berbigão	FPSO	150,000	211.9	2,280	Pre-salt Concession
2019	Santos	Atapu 1	FPSO	150,000	211.9	2,300	Assignment Agreement
2019	Santos	Búzios 4	FPSO	150,000	211.9	2,100	Assignment Agreement



**Table of Contents****Critical Resources in Exploration and Production**

We seek to develop and retain the critical resources that are necessary to meet our production targets. Drilling rigs are an important resource for our exploration and production operations and lead time is required when fleet expansion is needed. When we discovered the pre-salt reservoirs, in 2006, our activities as operators were constrained by a lack of rigs, but our subsequent efforts to lease additional rigs have eliminated this constraint. Whereas in 2008 we only had three rigs capable of drilling in waters with depth greater than 2,000 meters (6,560 feet), we had 24 as of December 31, 2017 (see table below). We believe that we now have sufficient rigs to meet our production targets, and we will continue to evaluate our drilling requirements and will adjust our fleet size as needed. Likewise, in order to achieve our production goals, we must secure a number of specialized vessels (such as PLSV) to connect wells to production systems.

Since 2015, we've been adjusting our fleet to our project portfolio. In 2017, our specialized vessels were sufficient to meet our needs.

**Drilling Units in Use by Exploration and Production on December 31 of Each Year**

	2017		2016		2015	
	Leased	Owned	Leased	Owned	Leased	Owned
<b>Brazil</b>	<b>29</b>	<b>7</b>	<b>31</b>	<b>10</b>	<b>50</b>	<b>14</b>
<b>Onshore</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>10</b>	<b>8</b>
<b>Offshore, by water depth (WD)</b>	<b>28</b>	<b>3</b>	<b>30</b>	<b>6</b>	<b>40</b>	<b>6</b>
Jack-up rigs	0	2	0	2	0	2
Floating rigs:	28	1	30	4	40	4
500 to 999 meters WD	1	0	1	2	2	2
1000 to 1999 meters WD	3	1	3	2	8	2
2000 to 3200 meters WD	24	0	26	0	30	0
<b>Outside Brazil</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>9</b>	<b>0</b>
<b>Onshore</b>	<b>3</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>0</b>
<b>Offshore</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>
<b>Worldwide</b>	<b>33</b>	<b>7</b>	<b>35</b>	<b>10</b>	<b>59</b>	<b>14</b>

**Reserves**

According to SEC technical criteria for booking proved reserves, as of December 31, 2017, our worldwide net proved oil, condensate and natural gas reserves, including synthetic oil and gas, reached 9.8 bnboe, a 0.8% increase compared to our proved reserves of 9.7 bnboe as of December 31, 2016, as shown in the table below.

Proved Reserves (1)	Oil (mmbbl)			Gas (bcf)			Total (mmboe)		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
<b>Brazil</b>	<b>8,255.4</b>	<b>8,069.8</b>	<b>8,551.1</b>	<b>7,684.2</b>	<b>8,403.2</b>	<b>9,597.0</b>	<b>9,536.1</b>	<b>9,470.3</b>	<b>10,150.6</b>
Campos basin	3,933.6	4,097.1	4,778.8	2,517.6	2,767.2	3,407.5	4,353.2	4,558.3	5,346.7
Santos basin	3,944.7	3,576.2	3,216.0	3,963.5	4,169.1	4,579.7	4,605.3	4,271.1	3,979.3
Other basins	377.1	396.4	556.3	1,203.1	1,466.9	1,609.8	577.7	640.9	824.6
<b>Other S. America (2)</b>	<b>1.2</b>	<b>0.8</b>	<b>66.9</b>	<b>160.2</b>	<b>113.9</b>	<b>697.4</b>	<b>27.9</b>	<b>19.8</b>	<b>183.1</b>

<b>North America</b>	<b>114.6</b>	<b>96.4</b>	<b>90.6</b>	<b>40.9</b>	<b>87.2</b>	<b>138.5</b>	<b>121.5</b>	<b>111.0</b>	<b>113.7</b>
<b>Africa</b>	<b>63.4</b>	<b>69.0</b>	<b>65.8</b>	<b>17.3</b>	<b>12.5</b>	<b>16.6</b>	<b>66.3</b>	<b>71.1</b>	<b>68.6</b>
<b>Total</b>	<b>8,434.6</b>	<b>8,236.1</b>	<b>8,774.4</b>	<b>7,902.6</b>	<b>8,616.8</b>	<b>10,449.5</b>	<b>9,751.7</b>	<b>9,672.2</b>	<b>10,515.9</b>

(1) Includes synthetic oil and gas

(2) In the case of Bolivia, the country's Constitution prohibits concessionaires from recording reserves

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In 2017, we incorporated 670.1 million boe of proved reserves by revisions of previous estimates due to technical revisions, mainly due to better than forecasted behavior from reservoirs, in the pre-salt of Santos and Campos basins, both in Brazil. In addition, we added 246.7 million boe in our proved reserves resulting from positive responses from improved recovery (water injection), and added 82.5 million boe in our proved reserves due to extensions and discoveries, mainly in the pre-salt of Santos basins. Considering a production of 919.8 million boe in 2017, our total proved reserves resulted in 9,751.7 million boe in 2017. This 919.8 million boe production does not consider the production of Extended Well Tests (EWTs) in exploratory blocks and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves. For further information on our reserves, see Item 4. Information on the Company Additional Reserves and Production Information and Supplementary Information on Oil and Gas Exploration and Production in our consolidated audited financial statements.

The following table summarizes the reserves variations in the last three years, in terms of oil equivalents, including synthetic oil and gas.

<b>Proved reserves (million barrels of oil equivalent)</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Proved reserves, beginning of year</b>	<b>9,672.2</b>	<b>10,516.0</b>	<b>13,140.6</b>
Discoveries and extensions	82.5	103.2	493.9
Improved recovery	246.7	0.0	21.9
Revisions of previous estimates	670.1	131.0	(2,186.2)
Sales of proved reserves	0	(168.8)	(22.0)
Purchases of proved reserves	0	16.3	0.0
Production	(919.8)	(925.4)	(932.3)
<b>Proved Reserves, end of year</b>	<b>9,751.7</b>	<b>9,672.2</b>	<b>10,516.0</b>

We recorded in 2017 a reserve replacement ratio (RRR) of 109%. We also recorded a reserves-to-production ratio (R/P) of 10.6 years and a development ratio (DR), which is the ratio between developed proved reserves and total proved reserves, of 53%.

**Refining, Transportation and Marketing****Refining, Transportation and Marketing Key Statistics**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(US\$ million)</b>		
<b>Refining, Transportation and Marketing:</b>			
Sales revenues	67,037	62,588	74,321
Income (loss) before income taxes	6,099	8,644	8,459
Property, plant and equipment	33,400	35,515	33,032
Capital Expenditures According to Our Plan Cost Assumptions	1,284	1,168	2,534

According to global energy market data released by PIRA Energy Group, Inc. for the end of 2017, we are one of the world's largest refiners. We own and operate 13 refineries in Brazil, with a total net crude distillation capacity of 2,176 mbb/d. As of December 31, 2017, we operated substantially all of Brazil's total refining capacity. We supplied most of the refined product needs of third-party wholesalers, exporters and petrochemical companies, in addition to the needs of our Distribution segment. We operate a large and complex infrastructure of pipelines, terminals and a shipping fleet to transport oil products and crude oil to domestic and export markets. Most of our refineries are located near our crude oil pipelines, storage facilities, refined product pipelines and major petrochemical facilities, facilitating

access to crude oil supplies and end-users.

Our Refining, Transportation and Marketing segment also includes (i) petrochemical operations that add value to the hydrocarbons we produce, (ii) extraction and processing of shale and (iii) international refining activities.

### ***Refining Capacity in Brazil***

Our crude distillation capacity in Brazil as of December 31, 2017, was 2,176 mbb/d and our average throughput during 2017 was 1,736 mbb/d.

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The following table shows the installed capacity of our Brazilian refineries as of December 31, 2017, and the average daily throughputs of our refineries in Brazil in 2017, 2016, and 2015.

Name (Alternative Name)	Location	Capacity and Average Throughput of Refineries			
		Crude Distillation Capacity at December 31, 2017 (mmbbl/d)	Average Throughput*		
		2017	2017	2016	2015
		(mmbbl/d)	(mmbbl/d)		
LUBNOR	Fortaleza (CE)	8	7	9	8
RECAP (Capuava)	Capuava (SP)	53	50	54	40
REDUC (Duque de Caxias)	Duque de Caxias (RJ)	239	178	194	235
REFAP (Alberto Pasqualini)	Canoas (RS)	201	138	148	174
REGAP (Gabriel Passos)	Betim (MG)	157	143	150	152
REMAN (Isaac Sabbá)	Manaus (AM)	46	32	34	38
REPAR (Presidente Getúlio Vargas)	Araucária (PR)	208	162	167	197
REPLAN (Paulínia)	Paulínia (SP)	415	324	331	391
REVAP (Henrique Lage)	São José dos Campos (SP)	252	208	217	249
RLAM (Landulpho Alves)	Mataripe (BA)	315	198	218	248
RPBC (Presidente Bernardes)	Cubatão (SP)	170	144	142	157
RPCC (Potiguar Clara Camarão)	Guamaré (RN)	38	33	33	34
RNEST (Abreu e Lima)	Ipojuca (PE)	74	68	75	53
Average crude oil throughput		2,176	1,686	1,772	1,936
Average NGL throughput			50	47	40
Average throughput			1,736	1,819	1,976

\* Considers oil and NGLs processing (fresh feedstock)

**Refinery Investments**

We initiated in the last few years the construction of two new refineries Abreu e Lima Refinery RNEST in northeastern Brazil and Petrochemical Complex of Rio de Janeiro (Complexo Petroquímico do Rio de Janeiro COMPERJ) to process our domestically produced heavy oil for oil products that were most in demand in the Brazilian market and with growing shortage.

The first refining unit of RNEST began its operations in December 2014. Designed to process 115 mmbbl/d of crude oil into low sulfur diesel (10 ppm) and other products, this unit started operating with a partial capacity of 74 mmbbl/d and since January 2016 it has been authorized to process up to 100 mmbbl/d of crude oil. Reaching full capacity for the unit will require the completion of a sulfur emissions reduction unit (SNOX), which we expect will be completed in 2018 but also a revamp of the heavy gasoil section at Coker Unit to be implemented at the turnaround maintenance

scheduled for 2020. Construction of the second refining unit of RNEST is included in our 2018-2022 Plan and we prioritize the search for partnerships for this construction.

With respect to COMPERJ, we are currently building a business model to restart the construction of this project, which depends on partnerships with parties willing to fund and complete the construction of its first refining unit, according to our 2018-2022 Plan. To support gas processing from the pre-salt areas, in 2017, we started the execution of a bidding plan to complete the gas plant and its utilities. The projects for the second refining unit and the lubricants unit were cancelled.

We recognized impairment losses for the fiscal year ended December 31, 2017 of US\$515 million on the RNEST and COMPERJ refining assets. A loss of US\$464 million was recognized for the second refining unit in RNEST, mainly due to higher costs of raw materials and lower refining margin, as set forth in our 2018-2022 Plan. With respect to COMPERJ, as set out in our 2018-2022 Plan, the resumption of the project still depends on new partnerships. However, the construction of COMPERJ's first refining unit facilities that will also support the natural gas processing plant (UPGN) is in progress as the facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in Santos Basin. Nevertheless, due to the interdependence between such infrastructure and COMPERJ first refining unit, we recognized additional impairment charges, totaling US\$51 million in 2017.

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We previously recognized impairment losses for the fiscal year ended December 31, 2016 of US\$1,183 million on the RNEST and COMPERJ refining assets. A loss of US\$780 million was recognized for the second refining unit in RNEST, mainly attributable to the use of a higher discount rate and a delay in expected future cash inflows to 2023 due to the postponement of the RNEST project. The completion of this project is subject to our own capital resources, as set forth in our 2017-2021 Plan. Despite the postponement of the beginning of operations of its first refining unit until December 2020, the construction of COMPERJ's first refining unit facilities that will also support the natural gas processing plant (UPGN) are still in progress. These facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin. Due to the interdependence between such infrastructure and COMPERJ's first refining unit, we recognized additional impairment charges, amounting to US\$403 million of impairment losses in 2016.

We previously recognized impairment losses for the fiscal year ended December 31, 2015 of US\$1,352 million with respect to COMPERJ due to the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and the delay in expected future cash inflows resulting from the further postponement of the project. For further information, see Note 14 to our audited consolidated financial statements and Item 5. Operating and Financial Review and Prospects Critical Accounting Policies and Estimates Impairment Testing of Refining Assets.

In addition to constructing new refineries, over the past ten years, we made substantial investments in our existing refineries to increase our capacity to economically process heavier Brazilian crude oil, improve the quality of our oil products to meet stricter regulatory standards, modernize our refineries, and reduce the environmental impact of our refining operations. These investments in our existing refineries have been largely completed.

Our LPG distribution business Liquegas Distribuidora held a 21.8% market share and ranked second in LPG sales in Brazil in 2017, according to the ANP.

In January 2017, our shareholders' extraordinary general meeting approved the sale of our wholly-owned subsidiary Liquegás Distribuidora S.A. (Liquegás). In February 2018, the court of the Administrative Council of Economic Defense (CADE) evaluated the sale of Liquegás to Companhia Ultragas S.A., and decided, by the majority of its members, not to approve the sale.

Petrobras is analyzing the alternatives for the divestment of Liquegás that remains in our partnerships and divestments program in accordance with our strategic plan, which aims to optimize the business portfolio focused on oil and gas, withdrawing entirely from LPG distribution.

**Domestic Output of Oil Products and Domestic Sales Volumes**

The following tables summarize our domestic output of oil products and sales by product for the last three years.

**Domestic Output of Oil Products: Refining and marketing operations, mbb/d(1)**

	2017	2016	2015
Diesel	692	775	848
Gasoline	439	444	435
Fuel oil	200	196	250
Naphtha	53	54	78
LPG	126	125	127
Jet fuel	106	100	98

Others	184	193	190
<b>Total domestic output of oil products</b>	<b>1,800</b>	<b>1,887</b>	<b>2,026</b>
Installed capacity(2)	2,176	2,176	2,176
Crude distillation utilization (%) (3)	77	81	89
Domestic crude oil as % of total feedstock processed	93	92	86

(1) Output volumes are larger than throughput volumes as a result of gains during the refining process.

(2) Installed capacity as of December 31, 2017, 2016, and 2015.

(3) Crude distillation utilization considers average installed capacity as of December 31, 2017, 2016 and 2015.



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Our total domestic output of oil products decreased to 1,800 mbb/d in 2017 from 1,887 mbb/d in 2016, as a result of our lower market share in 2017 for diesel. In 2017, diesel represented 38% of our domestic output of oil products, as compared to 41% in 2016 and there was a higher participation of domestic crude oil in our total domestic feedstock processed (93% as compared to 92% in 2016.)

**Domestic Sales Volumes and Exports from Brazil, mbb/d**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Diesel	717	780	923
Gasoline	521	545	553
Fuel oil	61	67	104
Naphtha	134	151	133
LPG	235	234	232
Jet fuel	101	101	110
Others	171	186	179
<b>Total oil products</b>	<b>1,940</b>	<b>2,064</b>	<b>2,234</b>
Ethanol, nitrogen fertilizers, renewables and other products	112	112	123
Natural gas	361	333	432
<b>Total domestic market</b>	<b>2,413</b>	<b>2,509</b>	<b>2,789</b>
Exports (1)	672	554	510
<b>Total domestic market and exports</b>	<b>3,085</b>	<b>3,063</b>	<b>3,299</b>

(1) Includes oil products, crude oil, nitrogen fertilizers, gas natural, renewables and other products.

The Brazilian domestic market grew rapidly from 2010 to 2014, in parallel with Brazil's economic expansion and the increase of average income, increasing by an average of 5.6%. In 2015 and 2016, as a result of the Brazilian economic slowdown, the domestic growth rate in consumption of oil products, particularly diesel, decreased as compared to the higher rates of growth experienced in prior years. Differently from prior years, in 2017 we observed slight signs of improvement on fuel consumption, due to the effects of recovery of some sectors of the Brazilian economy.

Despite this increase in Brazilian fuel consumption, our total domestic sales volumes for oil products were 1,940 mbb/d in 2017, a reduction of 6% compared to 2016. In 2017, our sales of oil products declined as a result of growing market share from other players, particularly through gasoline and diesel imports.

**Imports and Exports**

Our import and export of crude and oil products is driven by the economics involving our domestic refining, the Brazilian demand levels and international prices. Most of the crude oil we produce in Brazil is intermediate. We import some light crude to balance the slate for our refineries, and export mainly intermediate crude oil from our production in Brazil. We also continue to import oil products to balance any shortfall between production from our Brazilian refineries and the market demand for each product. Due to the domestic market retraction and to our lower

market share in 2017, our imports levels were lower than in previous years.

We export oil products from our refineries, mainly fuel oil and bunker, but also gasoline and diesel.

The table below shows our exports and imports of crude oil and oil products in 2017, 2016, and 2015:

<b>Exports and Imports of Crude Oil and Oil Products, mbb/d</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Exports</b>			
Crude oil	512	387	360
Oil products	157	155	149
<b>Total exports</b>	<b>669</b>	<b>542</b>	<b>509</b>
<b>Imports</b>			
Crude oil	127	136	277
Diesel	12	13	78
Gasoline	11	32	28
Other oil products	158	193	150
<b>Total imports</b>	<b>308</b>	<b>374</b>	<b>533</b>

**Table of Contents*****Delivery Commitments***

We sell crude oil through long-term and spot-market contracts. In 2018, the crude oil volume committed through long-term contracts with fixed quantity subject to final agreement on commercial terms is approximately 200 mbbbl/d and the volume committed through long-term contracts subject to mutual agreement is expected to be around 150 mbbbl/d. Taking into consideration the planned processing rates of our refineries for the coming year we believe that our domestic proved reserves will be sufficient to allow us to continue delivering all contracted volumes. For 2018, approximately 77% of our domestic exported crude oil will be committed by our commercial contracts with third parties.

***Logistics and Infrastructure for Oil and Oil Products***

We own and operate an extensive network of crude oil and oil product pipelines in Brazil that connect our terminals, refineries and other primary distribution points. As of December 31, 2017, our onshore and offshore, crude oil and oil products pipelines extended over 7,719 km (4,796miles). We operate 27 marine storage terminals and 20 other tank farms with nominal aggregate storage capacity of 64.6 mmbbl. Our marine terminals handle an average of 8,523 tankers and oil barges annually.

We operate a fleet of owned and chartered vessels. These provide shuttle services between our producing basins offshore Brazil and the Brazilian mainland, and shipping to other parts of South America and internationally. We are increasing our fleet of owned vessels to replace older vessels and decrease our dependency on chartered vessels. Upgrades will include replacing vessels nearing the end of their 25-year useful life. Our long-term strategy continues to focus on the flexibility afforded by operating a combination of owned and chartered vessels.

Also, two new oil tankers and one new LPG carrier were delivered to Transpetro in 2017. We plan to have another three more vessels delivered to us during 2018, up to 6 vessels in the following years, and another three vessels were postponed, all of which will be built in Brazilian shipyards.

The table below shows our operating fleet and vessels under contract as of December 31, 2017.

**Owned and Chartered Vessels in Operation and Under Construction Contracts at December 31, 2017**

	In Operation		Under Contract/ Construction	
	Number	Tons Deadweight Capacity	Number	Tons Deadweight Capacity
<b>Owned fleet:</b>				
Tankers	47	4,479,863.00	5	573,500
LPG tankers	8	49,611.00	1	3,000
Anchor Handling Tug Supply (AHTS)			0	0
<b>Total</b>	<b>55</b>	<b>4,529,474.00</b>	<b>6</b>	<b>576,500</b>
<b>Chartered vessels:</b>				
Tankers	97	10,628,843.00		
LPG tankers	18	486,278.00		

<b>Total</b>	<b>115</b>	<b>11,115,121.00</b>
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A decrease in the number of chartered vessels (tankers) in 2017 to 97 (as compared to 113 as of December 31, 2016) is mainly attributable to a decrease in market demand.

We recognized impairment losses for the fiscal year ended December 31, 2017 of US\$112 million on transportations assets, relating to the decision to suspend the construction of three vessels of Panamax project, which triggered an impairment loss for the total carrying amounts of these assets.

We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$244 million on transportations assets, mainly in the third quarter of 2016, relating to the removal of a group of support vessels of Hidrovias project from the Transportation CGU, due to the postponements and suspension of construction projects and the use of a higher discount rate. In the last quarter of 2016, additional impairment charges were accounted for, due to the commencement of the construction on 5 vessels after securing the projects funding, which avoided potential future claims for breach of contracts, and further the higher discount rate.

For further information, see Note 14 to our audited consolidated financial statements.

**Table of Contents****Petrochemicals**

Our petrochemical operations provide an outlet for our growing production volumes of gas and other refined products, which increase their value and provide substitute for products that are otherwise imported. Our new strategy is to carry out divestments in subsidiaries, joint ventures, joint operations and associates, but keeping technological competencies in areas with development potential.

We engage in our petrochemical operations through the following subsidiaries, joint ventures, joint operations and associated companies:

	mmt/y (nominal capacity)	Petrobras interest (%)
<b>Braskem:</b>		
Ethylene	5.00	
Polyethylene	4.11	36.20
Polypropylene	4.05	
<b>DETEN Química S.A.:</b>		
LAB(1)	0.22	
LABSA(1)	0.12	27.88
<b>METANOR S.A./COPENOR S.A.(2):</b>		
Methanol(4)	0.08	
Formaldehyde	0.09	34.54
Hexamine	0.01	
<b>FCC Fábrica Carioca de Catalisadores S.A.:</b>		
Catalysts	0.04	
Additives	0.01	50.00
<b>SUAPE PETROCHEMICAL COMPLEX(3):</b>		
Purified Terephthalic Acid PTA	0.70	
Polyethylene Terephthalate PET	0.45	100.00
Polymer and polyester filament textiles	0.24	
<b>PETROCOQUE S.A.:</b>		
Calcined petroleum coke	0.50	50.00

(1) Feedstock for the production of biodegradable detergents.

(2) Copernor S.A. is a Metanor S.A. subsidiary.

(3) The PTA unit started operations in January 2013 and the PET unit started operations in August 2014.

(4) The company decided to stop the production of methanol in 2016.

At the end of December 2016, our board of directors approved the execution of the agreement for the sale of our stake in Suape Petrochemical Complex, which includes *Companhia Petroquímica de Pernambuco* (PetroquímicaSuape) and *Companhia Integrada Têxtil de Pernambuco* (Citepe) to Grupo Petrotex S.A. de C.V. and Dak Americas Exterior, S.L, both subsidiaries of Alpek. In March 2017, the transaction was approved at a shareholders meeting. The total sale value was US\$ 385 million, to be paid in *reais* on the closing date for the transaction. In February 2018, the CADE Court approved the sale of PetroquímicaSuape to Alpek subject to the execution of an Agreement on Concentration of Control (*Acordo de Controle de Concentração - ACC*).

We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$619 million with respect to the Suape Petrochemical Complex, mainly attributable to lower market projections and the appreciation of the *real* against the U.S. dollar. Following the disposal of Suape Petrochemical Complex in December 2016, we recognized an additional impairment charge of US\$435 million, due to the lower exit price of these investments when compared to their carrying amount adjusted by the debt to be settled by us as part of the closing of such transaction. We previously recognized impairment losses for the fiscal year ended December 31, 2015 of US\$200 million with respect to the Suape Petrochemical Complex due to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate (reflecting an increase in Brazil's risk premium). For further information, see Note 14 to our audited consolidated financial statements.

**Table of Contents****Refining Capacity Abroad**

Our international crude distillation capacity as of December 31, 2017 was 100 mbb/d and the utilization factor for our international consolidated refining facilities was 88%.

The following table shows the installed capacity of our international refineries as of December 31, 2017, and the average daily throughputs in 2017, 2016, and 2015, respectively.

Name (Alternative Name)	Location	Capacity and Average Throughput of Refineries			
		Crude Distillation Capacity at December 31, 2017 (mbbl/d)	2017 (2)	2016 (2)	Average Throughput(1) 2015
Pasadena Refining System Inc.	Texas (USA)	100	88.4	104.2	99.5
Nansei Sekiyu Kabushiki Kaisha(3)	Okinawa (JP)				10.2
Ricardo Eliçabe Refinery(4)	Bahía Blanca (AR)			15.3	28.7
Total average crude oil throughput		100	88.4	119.4	132.8
Average external intermediate throughput			5.2	6.5	5.6
Total average throughput			93.6	125.9	138.4

(1) Consider oil (fresh feedstock) and external processed intermediate oil products.

(2) For the years 2016 and 2017 we report the average crude oil throughput separately from the average external intermediate throughput.

(3) We operated this refinery, with a capacity of 100 mbb/d, until the first quarter of 2015. In December 2016, we closed the sale of 100% of the shares in Nansei Sekiyu ( NSS ) to Taiyo Oil Company.

(4) We used to own this refinery through our interest in PESA, with a capacity of 30.5 mbb/d until July 2016, when we sold our entire participation in PESA, indirectly owned through Petrobras Participaciones S.L. ( PPSL ), to Pampa Energía.

The following table shows the total average output of oil products of our international refineries in 2017, 2016, and 2015.

International Average Output of Oil Products				
	2017	2016	2015	(mbbl/d)
Total average output	94	128	149	

Currently, we participate in the refining sector in North America.

In the United States, we own 100% of the Pasadena Refining System Inc., and 100% of its related trading company, PRSI Trading, LLC. In March 2018, we announced the beginning of the non-binding phase related to the sale of the companies that integrate the Pasadena Refining System through its affiliate Petrobras America Inc (PAI).

*Sales Volumes Abroad*

**Sales Volumes Abroad, mbbl/d**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>International Sales</b>	<b>242</b>	<b>418</b>	<b>546</b>

**Distribution**

**Distribution Key Statistics**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(US\$ million)</b>		
Sales revenues	27,567	27,927	33,406
Income (loss) before income taxes	802	96	(219)
Property, plant and equipment	1,862	1,936	1,868
Capital Expenditures According to Our Plan Cost Assumptions	109	139	255



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### **Domestic Distribution**

We are Brazil's leading oil products distributor, operating through our own retail network, through our own wholesale channels, and by supplying other fuel wholesalers and retailers. Our Distribution segment sells oil products that are primarily produced by our Refining, Transportation and Marketing segment, or RTM, and works to expand the domestic market for these oil products and for other fuels, including LPG, natural gas, ethanol and biodiesel.

The primary focus of our Distribution segment is to be the benchmark in the distribution of oil products and biofuels in Brazil, by innovating and providing value to our business, while promoting safe operations and environmental and social responsibility, strengthening the our brand.

We supply and operate Petrobras Distribuidora, which accounts for 29.9% of the total Brazilian retail and wholesale distribution market. Petrobras Distribuidora distributes oil products, ethanol, biodiesel and natural gas to retail, commercial and industrial customers. In 2017, Petrobras Distribuidora sold the equivalent of 744.2 mbbbl/d of oil products and other fuels to wholesale and retail customers, of which the largest portion (39.8%) was diesel.

At December 31, 2017, our Petrobras Distribuidora branded service station network was Brazil's leading market retailer, with 8,277 service stations, or 19.69% of the stations in Brazil, according to ANP and Plural Associação Nacional das Distribuidoras de Combustíveis, Lubrificantes, Logística e Conveniência (Plural). Petrobras Distribuidora owned and franchised stations that represented 24.4% of Brazil's retail sales of diesel, gasoline, ethanol, vehicular natural gas and lubricants in 2017, according to ANP and Plural.

Most Petrobras Distribuidora service stations are owned by third parties that use the Petrobras Distribuidora brand name under license and purchase exclusively from us; we also provide franchisees with technical support, training and advertising. We own 630 of the Petrobras Distribuidora service stations and are required by law to subcontract the operation of these owned stations to third parties. We believe that our market share position is supported by a strong Petrobras Distribuidora brand image and by the remodeling of service stations and addition of lubrication centers and convenience stores.

Our wholesale distribution of oil products and biofuels under the Petrobras Distribuidora brand to commercial and industrial customers accounts for 45.9% of the total Brazilian wholesale market, according to ANP and Plural. Our customers include aviation, transportation and industrial companies, as well as utilities and government entities.

### **Distribution Abroad**

We also participate in the retail sector in other South American countries. See below our international distribution activities by region:

#### ***South America***

We conduct distribution activities in Argentina, Chile, Colombia, Paraguay and Uruguay:

In **Argentina**, through PESA, our operations included 266 retail service stations until July of 2016, when we sold our entire participation in PESA;

In **Chile**, our operations included 281 service stations, the distribution and sales of fuel at airports and a lubricant plant. In July of 2016, we signed with Southern Cross Group ( SCG ) a contract for the sale of our entire interest in distribution in Chile. We also signed a temporary brand licensing agreement through which SCG will operate under our brand;

In **Colombia**, our operations include 113 service stations and a lubricant plant;

In **Paraguay**, our operations include 192 service stations, the distribution and sales of fuel at three airports and an LPG refueling plant. In October 2017, we gave notice of the start of the binding phase for the sale of our assets in Paraguay; and

In **Uruguay**, we have downstream operations in the country, including 88 service stations.

**Table of Contents****Gas and Power****Gas and Power Key Statistics**

	2017	2016	2015
	(US\$ million)		
<b>Gas and Power:</b>			
Sales revenues	12,374	9,401	13,145
Income (loss) before income taxes	3,018	1,252	518
Property, plant and equipment	13,231	13,094	14,674
Capital Expenditures According to Our Plan Cost Assumptions	1,127	717	793

Our Gas and Power segment comprises gas transmission and distribution, LNG regasification, the manufacture of nitrogen-based fertilizers, gas-fired and flex-fuel power generation, and power generation from renewable sources, including solar and wind sources.

The primary focus of our Gas and Power segment is to:

Monetize our natural gas resources;

Assure reliability and profitability in the supply of natural gas; and

Consolidate our electric energy business, exploring synergies between our natural gas supply and power generation capacities.

**Domestic Gas and Power**

For more than two decades, we have actively worked to simultaneously develop Brazil's natural gas reserves and develop important infrastructure in order to assure flexibility and reliability in the supply of natural gas. As a result of this multi-year development program, Brazil has an integrated system centered around two main interlinked pipeline networks, a gas pipeline connection with Bolivia and an isolated pipeline in the northern region of Brazil (all together spanning over 9,190 km). This network allows us to deliver to our customers natural gas processed in our gas facilities arriving from our onshore and offshore natural gas producing fields, mainly from Santos, Campos and Espírito Santo Basins, as well as the natural gas from our three LNG terminals, and from Bolivia. It is important to note that Petrobras concluded on April 4, 2017 the sale transaction of 90% of the company's shares in Nova Transportadora do Sudeste ( NTS ) with pipelines of 2,043 kilometers of extension to Nova Infraestrutura Fundo de Investimentos em Participações ( FIP ), managed by Brookfield Brasil Asset Management Investimentos Ltda, an entity affiliated with Brookfield Asset Management.

**Natural Gas**

Our principal markets for natural gas are:

Industrial, commercial and retail customers;

Thermoelectric generation; and

Consumption by our refineries and fertilizer plants.

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The table below shows the sources of our natural gas supply, our sales and internal consumption of natural gas, and revenues in our local gas distribution operations for each of the past three years.

**Supply and Sales of Natural Gas in Brazil, mmm<sup>3</sup>/d**

	2017	2016	2015
<b>Sources of natural gas supply</b>			
Domestic production	53.7	44.0	44.9
Imported from Bolivia	24.0	28.4	32.1
LNG	5.0	3.8	18.0
<b>Total natural gas supply</b>	<b>82.7</b>	<b>76.2</b>	<b>95.0</b>
<b>Sales of natural gas</b>			
Sales to local gas distribution companies(1)	36.7	34.8	37.5
Sales to gas-fired power plants	20.7	18.0	31.1
<b>Total sales of natural gas</b>	<b>57.4</b>	<b>52.8</b>	<b>68.6</b>
<b>Internal consumption (refineries, fertilizer and gas-fired power plants)(2)</b>	<b>25.3</b>	<b>23.4</b>	<b>26.4</b>
<b>Revenues (US\$ billion)(3)</b>	<b>7.9</b>	<b>6.4</b>	<b>8.3</b>

(1) Includes sales to local gas distribution companies in which we have equity interest.

(2) Includes gas used in the transport system.

(3) Includes natural gas sales revenues from the Natural Gas segment to other operating segments, service and other revenues from natural gas companies.

Our volume of natural gas sales to industrial, gas fired electric power generation, commercial and retail customers in 2017 was 57.4 mmm<sup>3</sup>/d, representing an increase of 8.7% compared to 2016. This increase is attributable to growth of our industrial activities from 2016 to 2017 and to the more electric generation from gas-fired power plants. Natural gas consumption by refineries and fertilizer plants decreased by 1.8%. Currently, our main focus is to provide logistics and processing solutions for our planned natural gas production from the pre-salt fields. In 2018, we plan to continue to invest in:

(i) Construction of a new gas offshore pipeline Route 3 with capacity of 636 mmcf/d (18 mmm<sup>3</sup>/d) connecting the Santos Basin pre-salt producing fields to Itaboraí processing plant. The initial operation is scheduled to start by the end of 2019.

(ii) Construction of a natural gas processing plant with capacity of 742 mmcf/d (21 mmm<sup>3</sup>/d), located at city of Itaboraí, Rio de Janeiro State, also associated with the pre-salt reservoirs in the Santos Basin. The Itaboraí facility is scheduled to start operations by 2020.

(iii) Enhancement of Caraguatatuba natural gas processing plant related to pre-salt reservoirs in Santos Basin.

The natural gas processing plant in Itaboraí is scheduled to begin operations by 2020.

We also own and operate three LNG flexible terminals capable to receive FSRUs (Floating Storage and Regasification Units), one in Guanabara Bay (State of Rio de Janeiro) with a send-out capacity of 706 mmcf/d (20 mmm<sup>3</sup>/d), another in Pecém (State of Ceará) in Northeastern Brazil with a send-out capacity of 247 mmcf/d (7 mmm<sup>3</sup>/d) and the last one located in the Todos os Santos Bay (State of Bahia), with a send-out capacity of 494 mmcf/d (14 mmm<sup>3</sup>/d).

In 2017, we imported 27 LNG cargos in Brazil, as compared to 26 in 2016. In addition, in 2017, we kept our commercial activities primarily abroad, with 18 trading operations overseas (including 2 reloads from Brazil).

We also own and operate 23 natural gas processing units (including units managed by our E&P, Gas and Power, and RTM business segments) 20 in Brazil and 3 in Bolivia, with a total processing capacity of 150.80 million m<sup>3</sup>/day. Our natural gas processing units are located in Amazonas, Ceará, Rio Grande do Norte, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo and Bolívia, and are capable of processing natural gas in its gaseous and condensed form.

The total average volume of natural gas processed in Brazil in 2017 was 71.7 million m<sup>3</sup>/day, 16% higher than in 2016. In 2017, after the processing of natural gas, the main products were 58.25 million m<sup>3</sup>/day of natural gas and 3.8 million tons/day of GLP. Other than natural gas produced in Brazil, we also receive natural gas from Bolivia, through a gas pipeline, and liquefied natural gas, imported from other countries in specialized vessels and regassified in terminals in Brazil.

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The total average volume of natural gas processed in Bolivia in 2017 was 20.5 million m<sup>3</sup>/day, 17% less than 2016. The map below shows gas pipeline networks, LNG terminals and natural gas processing plants.

We hold stakes in nineteen of the twenty seven natural gas distributors in Brazil. Through Gaspetro, in which we have a 51% stake, we hold interests ranging from 23.5% to 100% in these distributors. In addition, Petrobras Distribuidora operates in the Espírito Santo state and we hold a 71.25% stake in this distributor. The three most significant distributors in our portfolio (by volume) are CEG Rio, Bahiagás and Copergás (held through Gaspetro) and their combined averaged gas sales volumes in 2017 amounted to 15.03 mmm<sup>3</sup>/d, representing 56.99% of the averaged gas sales volumes of our twenty natural gas distributors during 2017.

### ***Long-Term Natural Gas Commitments***

When we began construction of the Bolivia-Brazil pipeline ( GASBOL ) in 1996, we entered into a long-term Gas Supply Agreement, or GSA, with the Bolivian state-owned company Yacimientos Petrolíferos Fiscales Bolivianos, or YPF, to purchase certain minimum volumes of natural gas at prices linked to the international fuel oil price through 2019, after which the agreement may be extended until all contracted volume has been delivered. At the moment, we estimate that the agreement will be extended through 2022.

Our volume obligations under the ship-or-pay arrangements entered into with Gas Transboliviano S.A. (GTB) and Transportadora Brasileira Gasoduto Bolívia-Brasil S.A. (TBG) were originally designed to match our gas purchase obligations under the GSA through 2019.

Regarding GASBOL Bolivian side, while YPF has shipper's obligations, Petrobras agreed to pay, on behalf of YPF, the amounts related to 24 mmm<sup>3</sup>/d directly to GTB until 2019 and pre-paid 6 mmm<sup>3</sup>/d until 2039.

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For GASBOL Brazilian side, after 2020, there is 12 mmm<sup>3</sup>/d of remaining volume commitment related to Bolivian gas imports and 5.2 mmm<sup>3</sup>/d to extra capacity between Paulínia, São Paulo state, and Araucária, Paraná state. Any additional capacity must be contracted through a public process conducted by Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, or ANP, in accordance with Brazilian law.

The table below shows our contractual commitments under these agreements for the five-year period from 2018 through 2022.

Besides the aforementioned contracts, we also have obligations under the ship-or-pay contracts entered into with Nova Transportadora do Sudeste (NTS) and Transportadora Associada de Gás (TAG) to transport natural gas produced in Brazil and import LNG to gas distribution companies, power plants and oil refineries.

	2018	2019	2020	2021	2022
<b>Purchase commitments to YPFB</b>					
Volume obligation (mmm <sup>3</sup> /d)(1)	24.06	24.06	24.06	24.06	24.06
Volume obligation (mmcf/d)(1)	850.00	850.00	850.00	850.00	850.00
Brent crude oil projection (US\$)(2)	53.18	58.30	65.62	69.90	72.89
Estimated payments (US\$ million)(3)	1,340.86	1,349.68	1,382.96	1,485.61	1,623.05
<b>Ship-or-pay contract with GTB</b>					
Volume commitment (mmm <sup>3</sup> /d)	30.08	30.08	6.00	6.00	6.00
Volume commitment (mmcf/d)	1,062.28	1,062.28	211.89	211.89	211.89
Estimated payments (US\$ million)(4)(5)	113.72	114.30			
<b>Ship-or-pay contract with TBG (7)</b>					
Volume commitment (mmm <sup>3</sup> /d)(6)	35.28	35.28	17.20	17.20	11.20
Volume commitment (mmcf/d)	1,245.91	1,245.91	607.42	607.42	395.53
Estimated payments (US\$ million)(4)	513.58	546.26	150.60	150.65	18.06
<b>Ship-or-pay contract with NTS</b>					
Volume commitment (mmm <sup>3</sup> /d)	158.205	158.205	158.205	158.205	158.205
Volume commitment (mmcf/d)	5,587.01	5,587.01	5,587.01	5,587.01	5,587.01
Estimated payments (US\$ million)(4)	1,246.21	1,235.44	1,235.44	1,239.01	1,228.36
<b>Ship-or-pay contract with TAG (7)</b>					
Volume commitment (mmm <sup>3</sup> /d)	75.87	75.87	75.87	75.87	75.87
Volume commitment (mmcf/d)	2,679.35	2,679.35	2,679.35	2,679.35	2,679.35
Estimated payments (US\$ million)(4)	1,602.08	1,592.10	1,591.89	1,596.49	1,582.76

(1) 25.3% of contracted volume supplied by Petrobras Bolivia.

(2) Brent crude oil price forecast based on our 2018-2022 Plan.

(3) Estimated payments are calculated using gas prices expected for each year based on our Brent crude oil price forecast. Gas prices may be adjusted in the future based on contract clauses and amounts of natural gas purchased by us may vary annually.

(4) Amounts calculated based on current prices defined in natural gas transport contracts.

(5) No estimated payments from 2020 due to Contract TCO-Bolivia prepayment.

(6) Includes ship-or-pay contracts relating to TBG's capacity increase.

(7) We are undertaking divestment processes for TBG and TAG, expected to occur until 2022. The ship-or-pay contracts shown with TBG and TAG are not included in our audited consolidated financial statements, since such



contracts are intercompany transactions.

*Natural Gas Sales Contracts*

We sell our gas primarily to local gas distribution companies and to gas fired plants generally based on standard take-or-pay, long-term supply contracts. This represents 70% of our total sale volumes, and the price formulas under these contracts are mainly indexed to an international fuel oil basket. Additionally, we have a number of sales contracts designed to create flexibility in matching customer demand with our gas supply capabilities. These include flexible and interruptible long-term gas sales contracts.

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In 2017, we continued to renegotiate some existing long-term natural gas sales contracts with local distribution companies of natural gas in order to promote adjustments to commercial conditions tailored to specific market demands, concluding in negotiations with five local distribution companies that represent 25% of the non-thermoelectric natural gas market, with an average price increase of 9%. The renegotiations will continue in 2018 with remaining local distribution companies. The table below shows our future gas supply commitments from 2018 to 2022, including sales to both local gas distribution companies and gas-fired power plants:

<b>Future Commitments under Natural Gas Sales Contracts, mmm<sup>3</sup>/d</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>
<b>To local gas distribution companies:</b>					
Related parties(1)	16.36	17.57	18.17	18.20	18.18
Third parties	20.22	20.74	21.09	21.63	22.03
<b>To gas-fired power plants:</b>					
Related parties(1)	4.67	2.34	5.96	2.01	2.74
Third parties	12.01	10.56	10.23	10.33	11.16
<b>Total(2)</b>	<b>53.26</b>	<b>51.20</b>	<b>55.46</b>	<b>52.17</b>	<b>54.11</b>
Estimated amounts to be invoiced (US\$ billion)(3)(4)	4.52	4.99	5.15	5.62	5.46

(1) For purposes of this table, related parties include all local gas distribution companies and power generation plants in which we have an equity interest and third parties refer to those in which we do not have equity interest.

(2) Estimated volumes are based on take or pay and ship or pay agreements in our contracts, expected volumes and contracts under negotiation (including renewals of existing contracts), not maximum sales.

(3) Estimates are based on outside sales and do not include internal consumption or transfers.

(4) Prices may be adjusted in the future, according to formula defined in contract, and actual amounts may vary.

**Power**

Brazilian electricity needs are mainly supplied by hydroelectric power plants (95,619 MW of installed capacity), which account for 60% of Brazil's current generation capacity, according to the Brazilian National Electric Agency (*Agência Nacional de Energia Elétrica* - ANEEL). Hydroelectric power plants are dependent on the annual level of rainfall; in the years where rainfall is abundant, Brazilian hydroelectric power plants will generate more electricity and consequently less generation from thermoelectric power plants will be demanded. The total installed capacity of the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) in 2017 was 158,486 MW, according to ANEEL. Of this total, 6,148 MW (or 3.9%) was available from 20 thermoelectric plants we operate. These plants are designed to supplement power from the hydroelectric power plants.

In 2017, hydroelectric power plants in Brazil generated 44,895 MWavg, which corresponded to 68% of Brazil's total electricity needs (65,603 MWavg), according to the Brazilian National Electric System Operator (*Operador Nacional do Sistema Elétrico* - ONS). Hydroelectric generation capacity is supplemented by other sources of energy (wind, coal, nuclear, fuel oil, diesel oil, natural gas, and others). Total electricity generated by these sources, according to ONS, averaged 20,707 MW in 2017, of which our thermoelectric power plants contributed 3,165 MWavg, as compared to 2,252 MWavg in 2016 and 4,646 MWavg in 2015.

**Electricity Sales and Commitments for Future Generation Capacity**

Under Brazil's power pricing regime, a thermoelectric power plant may sell only electricity that is certified by the MME and which corresponds to a fraction of its installed capacity. This certificate is granted to ensure a constant sale of commercial capacity over the course of years to each power plant, given its role within Brazil's system to supplement hydroelectricity power during periods of unfavorable rainfall. The amount of certified capacity for each power plant is determined by its expected capacity to generate energy over time.

The total capacity certified by the MME (*garantia física*) may be sold through long-term contracts in auctions to power distribution companies (standby availability), sold through bilateral contracts executed with free customers and used to meet the energy needs of our own facilities.

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In exchange for selling this certified capacity, the thermoelectric power plants shall produce energy whenever requested by the national operator (ONS). In addition to a capacity payment, thermoelectric power plants also receive from the Electric Energy Trading Chamber (*Câmara de Comercialização de Energia Elétrica*, or CCEE) reimbursement for its variable costs (previously declared to MME to calculate its commercial certified capacity) incurred whenever they are requested to generate electricity.

In 2017, the commercial capacity certified by MME for all thermoelectric power plants controlled by us was 4,040 MWavg, although our total generating capacity was 6,148 MWavg. Of the total 4,928 MWavg of commercial capacity available (*capacidade comercial disponível* or *lastro*) for sale in 2017, approximately 62% was sold as standby availability in public auctions in the regulated market (compared to 70% in 2016) and approximately 25% was committed under bilateral contracts and self-production (i.e. sales to related parties) (compared to 30% in 2016).

Under the terms of standby availability contracts, we are paid a fixed amount whether or not we generate any power. Additionally, whenever we have to deliver energy under these contracts, we receive an additional payment for the energy delivered that is set on the auction date and is revised monthly or annually based on inflation-adjusted international fuel price indexes.

Our future commitments under bilateral contracts and self-production are of 1,376 MWavg in 2018, 1,368 MWavg in 2019, and 1,091 MWavg in 2020. The agreements expire gradually, with the last contract expiring in 2028. As existing bilateral contracts expire, we will sell our remaining certified commercial capacity under contracts in new auctions to be conducted by MME or through the execution of new bilateral contracts.

The table below shows the evolution of our installed thermoelectric power plants capacity, our purchases in the free market and the associated certificated commercial capacity.

	2017	2016	2015
<b>Installed power capacity and utilization</b>			
Installed capacity (MW)	6,148	6,148	6,148
Certified commercial capacity (MWavg)	4,040	4,197	4,307
Purchases in the free market (MWavg)	888	345	247
Commercial capacity available ( <i>Lastro</i> ) (MWavg)	4,928	4,542	4,554

The table below shows the allocation of our sales volume between our customers and our revenues for each of the past three years:

	2017	2016	2015
<b>Volumes of Electricity Sold (MWavg)</b>			
<b>Total sale commitments</b>	<b>4,270</b>	<b>4,463</b>	<b>4,451</b>
Bilateral contracts	788	835	854
Self-production	424	456	437
Public auctions to distribution companies	3,058	3,172	3,160
<b>Generation volume</b>	<b>3,165</b>	<b>2,252</b>	<b>4,646</b>
<b>Revenues (US\$ million)(1)</b>	<b>4,162</b>	<b>2,470</b>	<b>4,410</b>

- (1) Includes electricity sales revenues from the Power segment to other operating segments, service and other revenues from electricity companies.

**Table of Contents****Fertilizers**

Our fertilizer plants in Bahia, Sergipe and Paraná produce ammonia and urea for the Brazilian market. The units in Bahia and Paraná also produce automotive liquid reducing agents (ARLA-32) and the unit in Sergipe also produces ammonium sulfate. The combined production capacity of these plants is 1,852,000 t/y of urea, 1,406,000 t/y of ammonia, 300,000 t/y of ammonium sulfate and 800,000 t/y of ARLA-32. Most of our ammonia production is used to produce urea, and the excess production is mainly sold in the Brazilian market. In 2017, we reduced the utilization rate of these plants yielding to a 31.07% decrease in production volume compared to 2016 due to the maintenance turnaround of the fertilizer plants in Araucária located in Bahia, Sergipe and Paraná. The table below shows our ammonia and urea sales and revenues for each of the past three years:

	<b>Ammonia and Urea (t/y)</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
Ammonia	279,621	286,268	240,620
Urea	858,051	1,033,648	1,283,673
Revenues (US\$ million)(1)	370	465	676

(1) Includes nitrogenous fertilizers sales revenues from the Fertilizer segment to other operating segments, services and other revenues from fertilizers companies.

Due to major changes in our business context, in 2015, we suspended investments in the following fertilizer projects:

UFN III, with the capacity to produce 1.2 mmt/y of urea and 70 mt/y of ammonia from 2.2 mmm<sup>3</sup>/d of natural gas; and

UFN V, with the capacity to produce 519,000 t/y of ammonia from 1.3 mmm<sup>3</sup>/d of natural gas.

In December 2017, we announced the beginning of the binding phase regarding the process of divesting 100% of its assets in Araucaria Nitrogenados S.A. ( ANSA ) and in the Nitrogen Fertilizer Unit III ( UFN III ).

The UFN V fertilizing project was cancelled in January 2016.

In March 2018, we decided to mothball our fertilizer plants located in Sergipe ( Fafen-SE ) and Bahia ( Fafen-BA ). The decision to mothball these units is aligned with our strategic position to fully withdraw from fertilizer production activities, as set forth in our 2018-2022 Plan.

We recognized impairment losses of US\$412 million for the fiscal year ended December 31, 2017, with respect to the fertilizer plants, representing the total carrying amount of these assets, following our plan to withdraw our entire interest in this business segment, as set forth in our 2018-2022 Plan approved in December 2017, along with the low expectation of a successful sale of fertilizers and nitrogen products plants. In addition, we recognized US\$70 million relating to Araucária fertilizer facility, primarily in the second quarter of 2017, due to negative cash flow projections that were based on financial budget and forecasts approved by our management and a post-tax *real* discount rate of 6.6% p.a. derived for the weighted average cost of capital (WACC) for the fertilizer business.

We recognized impairment losses for the fiscal year ended December 31, 2016 of US\$153 million with respect to the UFN III fertilizer facility and of US\$140 million with respect to Araucária fertilizer facility, mainly attributable to (i) the use of a higher discount rate, (ii) the appreciation of the *real* against the U.S. Dollar for both projects and (iii) an increase in estimated production costs in Araucária.

We previously recognized impairment losses of US\$501 million for the fiscal year ended December 31, 2015, with respect to the UFN III fertilizer due to (i) the use of a higher discount rate (reflecting an increase in Brazil's risk premium) and (ii) the delay in expected future cash inflows resulting from postponement of the project and of US\$190 million with respect to the UFN V fertilizer facility due to our decision to cancel the project.

For further information, see Note 14 to our audited consolidated financial statements.

**Table of Contents****Renewable Energy**

We have invested, alone and in partnership with other companies, in renewable power generation sources in Brazil, including wind. We currently participate in joint ventures in four wind power plants (Mangue Seco 1, 2, 3 and 4) and we hold indirect interests in two small hydroelectric power plants (Areia and Água Limpa) through our associate Termoelétrica Potiguar S.A. – TEP. Additionally, a solar power plant unit UFVAR integrate our assets. The power generation capacity we have (alone and through the equity interests we hold in renewable energy companies) is equivalent to 25.4 MW of hydroelectric capacity, 1.1 MW of solar capacity and 104 MW of wind capacity. We and our partners sell energy from these plants directly to the Brazilian federal government via the 2009 reserve energy auctions.

**Gas and Power Abroad**

We also participate in the gas and power sector in other South American countries. See below our international activities by region:

**South America**

We conduct gas and power activities in Argentina, Bolivia and in Uruguay.

In **Argentina**, through PESA, we previously owned four electric power plants, Pichi Picún Leufú (hydrogeneration), Genelba (gas powered combined cycle), Genelba Plus (gas powered) and EcoEnergia (Cogeneration)), and we previously held an interest in two other electric power plants, Central Termelétrica José de San Martín S.A. and Central Termelétrica Manuel Belgrano S.A. and we also previously had a stake in a natural gas transportation company called TGS (Transportadora Gas del Sur). In July 2016, we sold our entire stake in PESA, owned through Petrobras Participaciones S.L. ( PPSL ), to Pampa Energía. Through Petrobras International Braspetro B.V. PIB BV (Netherlands), we have an interest of 34% in Compañía Mega S.A., a natural gas separation facility.

In **Bolivia**, we hold an 11% interest in GTB, owner of the Bolivian section of the Bolivia-to-Brazil (BTB) pipeline that transports natural gas we produce in Bolivia to the Brazilian market.

In **Uruguay**, we participate in the two companies that are responsible for the distribution of natural gas by pipelines in the country: (i) Distribuidora de Gás Montevideo S.A., a company we own a 100% stake in, that supplies natural gas to the Montevideo area; and (ii) Conecta S.A., a company in which we hold a 55% equity interest (the remaining 45% belong to ANCAP, Uruguay's state oil company), that supplies natural gas to the rest of country.

**Biofuels****Biofuels Key Statistics**

**2017 2016 2015**  
**(US\$ million)**



**Biofuel:**

Sales revenues	213	240	229
Income (loss) before income taxes	(57)	(351)	(317)
Property, plant and equipment	89	100	91
Capital Expenditures According to Our Plan Cost Assumptions	35	96	43

Brazil is a global leader in the use and production of biofuels. In 2017, 88.6% of new light vehicles sold in Brazil had flexfuel capability, and service stations offered a choice of 100% ethanol and an ethanol/gasoline blend. In March 2015, the Brazilian federal government increased the anhydrous ethanol content requirement for the gasoline sold in Brazil from 25% to 27%. Biodiesel also has a mandatory blend of 8% in all diesel fuel sold in Brazil since March 2017, increasing to 10% by March 2018.

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We recognized impairment losses for the fiscal year ended December 31, 2016 on equity-method investments, amounting to US\$208 million, as a result of equity-accounted investments relating to Guarani S.A. and Nova Fronteira Bioenergia S.A., in which we used to own interests that were approved for sale in the last quarter of 2016. For further information on our partnerships and divestments completed in 2017, see Item 4. Information of the Company Overview of the Group. For further information on impairment, see Note 14 to our audited consolidated financial statements.

**Biodiesel**

In 2017, we supplied 16% of Brazil's biodiesel (assuming 100% of BSBIOS Indústria e Comércio de Biodiesel Sul Brasil S.A. (BSBIOS Sul Brasil) production) and we act as a market catalyst by securing and blending biodiesel supplies and furnishing these to smaller distributors as well as our own service stations. We directly own three biodiesel plants (Quixadá biodiesel plant had its own operation stopped in November 2016 due to weak economic results and it is in restorative hibernation state) and, through our 50% interest in BSBIOS Sul Brasil, we own two additional plants. The biodiesel production capacity of these five plants totals 18.4 mbbbl/d.

**Ethanol**

We have historically been present in the ethanol and sugar production and have sold the exceeding electricity generated from sugarcane bagasse burn. However, we have strategically decided to withdraw from biofuel production, preserving technological competencies in areas with development potential, and have entered into a number of strategic transactions to that end. In 2017, we concluded the sale of our equity stake in Guarani and the incorporation of Nova Fronteira into São Martinho. As a result, we own 6.6% of São Martinho and 8.4% of Bambuí Bioenergia.

In February 2018, we sold, through an auction at B3, shares of São Martinho S.A. (SMT03). After the sale of 6.6% stake in the total capital of São Martinho S.A., we no longer hold any participation in this company.

**Corporate****Corporate Key Statistics**

	2017	2016	2015
	(US\$ million)		
<b>Corporate:</b>			
Income (loss) before income taxes	(18,111)	(13,723)	(14,961)
Property, plant and equipment	1,629	1,819	1,949
Capital Expenditures According to Our Plan Cost Assumptions	132	230	302

Our Corporate segment comprises activities that cannot be attributed to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retired employees and their dependents.

In 2017, our loss before income taxes includes the provision for the class action agreement to settle, in the amount of US\$3,449 million.

**Organizational Structure**

As of December 31, 2017, we had 24 direct subsidiaries and 2 direct joint operations as listed below. Twenty-three are entities incorporated under the laws of Brazil and three are incorporated abroad. We also have indirect subsidiaries (including PGF). See Exhibit 8.1 for a complete list of our subsidiaries and joint operations, including their full names, jurisdictions of incorporation and our percentage of equity interest.

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**PETROBRAS**

**BRAZIL**

Petrobras Distribuidora S.A. BR  
Petrobras Transporte S.A. Transpetro  
Petrobras Logística de Exploração e Produção  
S.A. PB-LOG  
Transportadora Associada de Gás S.A. TAG  
Petrobras Gás S.A. Gaspetro  
Petrobras Biocombustível S.A.  
Petrobras Logística de Gás Logigás  
Liquigás Distribuidora S.A.  
Araucária Nitrogenados S.A.  
Termomacaé Ltda.  
Breitener Energética S.A.  
Companhia Integrada Têxtil de Pernambuco S.A. CITEPE  
Termobahia S.A.  
Companhia Petroquímica de Pernambuco  
S.A. PetroquímicaSuape  
Baixada Santista Energia S.A.  
Petrobras Comercializadora de Energia Ltda. PBEN  
Fundo de Investimento Imobiliário RB Logística FII  
Petrobras Negócios Eletrônicos S.A. E-Petro  
Termomacaé Comercializadora de Energia Ltda 5283  
Participações Ltda.  
PDET Offshore S.A.  
Fábrica Carioca de Catalisadores S.A. FCC<sup>(\*)</sup>  
Ibiritermo S.A.<sup>(\*)</sup>

**ABROAD**

Petrobras Netherlands B.V. PNBV  
Petrobras International Braspetro PIB BV  
Braspetro Oil Services Company Brasoil

(\*) Joint operations.

**Property, Plant and Equipment**

Our most important tangible assets are wells, platforms, refining facilities, pipelines, vessels, other transportation assets, power plants as well as fertilizers and biodiesels plants. Most of these are located in Brazil. We own and lease our facilities and some owned facilities are subject to liens, although the value of encumbered assets is not material.

We have the right to exploit crude oil and gas reserves in Brazil under concession and production sharing agreements, but the reserves themselves are the property of the government under Brazilian law. Item 4. Information on the Company includes a description of our reserves and sources of crude oil and natural gas, key tangible assets, and material plans to expand and improve our facilities.

As of December 31, 2017, our property, plant and equipment included US\$22,614 million (US\$22,954 million as of December 31, 2016) related to the Assignment Agreement entered into by us and the Brazilian federal government in 2010, which grants us the right to carry out prospecting and drilling activities for oil, natural gas and other liquid hydrocarbons located in the pre-salt area, subject to a maximum production of five billion barrels of oil equivalent. For detailed information on the Assignment Agreement see Note 12.3 to our audited financial statements ended December 31, 2017 and also Item 10. Additional Information Material Contracts Assignment Agreement .

We also recognized impairment charges of US\$1,191 million in 2017 (US\$6,193 million in 2016) property, plant and equipment, intangible assets and assets classified as held for sale. Further information about impairment of our assets is provided in Note 14 to our audited consolidated financial statements.

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**Regulation of the Oil and Gas Industry in Brazil**

***Concession Regime for Oil and Gas***

Under Brazilian law, the Brazilian federal government owns all crude oil and natural gas subsoil accumulations in Brazil. The Brazilian federal government holds a monopoly over the exploration, production, refining and transportation of crude oil and oil products in Brazil and its continental shelf, with the exception that companies that were engaged in refining and distribution in 1953 were permitted to continue those activities. Between 1953 and 1997, we were the Brazilian federal government's exclusive agent for exploiting its monopoly, including the importation and exportation of crude oil and oil products.

As part of a comprehensive reform of the oil and gas regulatory system, the Brazilian Congress amended the Brazilian Constitution in 1995 to authorize the Brazilian federal government to contract with any state or privately-owned company to carry out upstream, oil refining, cross-border commercialization and transportation activities in Brazil of oil, natural gas and their respective products. On August 6, 1997, Brazil enacted Law No. 9,478, which established a concession-based regulatory framework, ended our exclusive right to carry out oil and gas activities, and allowed competition in all aspects of the oil and gas industry in Brazil. Since that time, we have been operating in an increasingly deregulated and competitive environment. Law No. 9,478/1997 also created an independent regulatory agency, the ANP, to regulate the oil, natural gas and renewable fuel industry in Brazil, and to create a competitive environment in the oil and gas sector. Effective January 2, 2002, Brazil deregulated prices for crude oil, oil products and natural gas.

Law No. 9,478/1997 established a concession-based regulatory framework and granted us the exclusive right to exploit crude oil reserves in each of our producing fields under the existing concession contracts for an initial term of 27 years from the date when they were declared commercially profitable. These are known as the Round Zero concession contracts. This initial 27-year period for production can be extended at the request of the concessionaire and subject to approval from the ANP. Law No. 9,478/1997 also established a procedural framework for us to claim exclusive exploratory rights for a period of up to three years, later extended to five years, to areas where we could demonstrate that we had made commercial discoveries or exploration investments prior to the enactment of the Law No. 9,478/1997. In order to perfect our claim to explore and develop these areas, we had to demonstrate that we had the financial capacity to carry out these activities, either alone or through other cooperative arrangements.

Starting in 1999, all areas not already subject to concessions became available for public bidding conducted by the ANP. All the concessions that have been granted to us since then were granted through our participation in public bidding rounds or by the Transfer of Rights Agreement. In 2016, the ANP granted us an extension of the production phase of the concession agreement related to Marlim Field and Voador Field until August 2052 and an extension related to Ubarana Field until August 2034. In 2017, the ANP granted us an extension of the production phase of the concession agreement related to Araçás Field until August 2052.

***Taxation under Concession Regime for Oil and Gas***

According to the Law No. 9,478/1997 and under our concession agreements for exploration and production activities with ANP, we are required to pay the government the following:

Signing bonuses paid upon the execution of the concession agreement, which are based on the amount of the winning bid, subject to the minimum signing bonuses published in the relevant bidding guidelines (*edital de*

*licitação*);

Annual retention bonuses for the occupation or retention of areas available for exploration and production, at a rate established by the ANP in the relevant bidding guidelines based on the size, location and geological characteristics of the concession block;

Special participation charges at a rate ranging from 0 to 40% of the net income derived from the production of fields that reach high production volumes or profitability, according to the criteria established in the applicable legislation. Net revenues are gross revenues, based on reference prices for crude oil or natural gas established by Decree No. 2,705 and ANP regulatory acts, less royalties paid, investments in exploration, operational costs and depreciation adjustments and applicable taxes. In 2017, we paid this tax on 18 of our fields, namely Albacora, Albacora Leste, Baleia Azul, Baleia Franca, Barracuda, Baúna, Caratinga, Jubarte, Leste do Urucu, Lula, Manati, Marlim, Marlim Leste, Marlim Sul, Mexilhão, Rio Urucu, Roncador and Sapinhoá; and

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Royalties, to be established in the concession contracts at a rate ranging between 5% and 10% of gross revenues from production, based on reference prices for crude oil or natural gas established by Decree No. 2,705 and ANP regulatory acts. In establishing royalty rates in the concession contracts, the ANP also takes into account the geological risks and expected productivity levels for each concession. Most of our crude oil production is currently taxed at the maximum royalty rate.

Law No. 9,478/1997 also requires concessionaires of onshore fields to pay to the owner of the land a participation fee that varies between 0.5% and 1.0% of the sales revenues derived from the production of the field.

### ***Production-Sharing Contract Regime for Unlicensed Pre-Salt and Potentially Strategic Areas***

Discoveries of large oil and natural gas reserves in the pre-salt areas of the Campos and Santos Basins prompted a change in the legislation regarding oil and gas exploration and production activities.

In 2010, three new laws were enacted to regulate exploration and production activities in pre-salt and other potentially strategic areas not subject to existing concessions: Law No. 12,351, Law No. 12,304, and Law No. 12,276. The enacted legislation does not impact the existing pre-salt concession contracts, which cover approximately 28% of the pre-salt areas.

Law No. 12,351/2010 regulates production-sharing contracts for oil and gas exploration and production in pre-salt areas not under concession and in potentially strategic areas to be defined by the CNPE. Under the production-sharing regime, we used to be the exclusive operator of all blocks. However, Law No. 13,365/2016 recently modified Law 12,3251/2010 in order to grant us the option to be the operator of the blocks offered under public bids under the production sharing regime. It is no longer mandatory for us to be the exclusive operator of all areas. CNPE will only offer us preference to operate the blocks under production-sharing regime. As part of this regulatory change, we must announce whether we will exercise our preference right for each of the areas offered, up to thirty (30) days after the notice by the CNPE and present our justifications. After our announcement, CNPE will propose to the Office of the Presidency which areas should be operated by us. The exploration and production rights for these areas will be offered under public bids. Regardless of whether we exercise our right of preference, we will also be able to participate, at our discretion, in the bidding process to increase our interest in these areas. Nonetheless, the winning bidder will be the company that offers to the Brazilian federal government the highest percentage of profit oil, which is the production of a certain field after deduction of royalties and cost oil, which is the cost associated with oil production.

Law No. 12,734 became partially effective on November 30, 2012, and amended Law 12,351, establishing a royalty rate of 15% applicable to the gross production of oil and natural gas under future production sharing contracts.

Law No. 12,304/2010, authorized the incorporation of a new state-run non-operating company that will represent the interests of the Brazilian federal government in the production-sharing contracts and will manage the commercialization contracts related to the Brazilian federal government's share of the profit oil. This new state-owned company was incorporated on August 1, 2013, named Pré-Sal Petróleo S.A. PPSA, and will participate in operational committees, with a casting vote and veto powers, as defined in the contract, and will manage and control costs arising from production-sharing contracts. Where production-sharing contracts are concerned, PPSA will exercise its specific legal activities alongside the ANP, the independent regulatory agency that regulates and oversees oil and gas activities under all exploration and production regimes, and the CNPE, the entity that sets the guidelines to be applied to the oil and gas sector, including with respect to the new regulatory model.

### ***Assignment Agreement (Cessão Onerosa) and Global Offering***



Pursuant to Law No. 12,276/2010, we entered into an agreement with the Brazilian federal government on September 3, 2010 (Assignment Agreement), under which the government assigned to us the right to conduct activities for the exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. The initial contract price for our rights under the Assignment Agreement was R\$74,807,616,407, which was equivalent to US\$42,533,327,500 as of September 1, 2010. See Item 10. Additional Information Material Contracts Assignment Agreement.

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As a result of the activities under the Assignment Agreement, we have declared the commerciality for the fields of Búzios, Sépia, Itapu, Sul de Lula, Sul de Sapinhoá, Norte and Sul de Berbigão, Norte and Sul de Sururu and Atapu. The beginning of the commercial production is expected to occur in the first semester of 2018.

We have created an internal committee to negotiate the revision of the Assignment Agreement with representatives of the Brazilian federal government (MME, Ministry of Finance, and the ANP). Both the ANP and we have hired consultancy services provided by international companies specialized in the oil industry (DeGolyer and MacNaughton and Gaffney, Cline & Associates) to help out with the negotiation.

### ***Natural Gas Law of 2009***

In March 2009, the Brazilian Congress enacted Law No. 11,909, or Gas Law, regulating activities in the gas industry, including transport, processing, storage, liquefaction, regasification and commercialization. The Gas Law created a concession regime for the construction and operation of new pipelines to transport natural gas, while maintaining an authorization regime for pipelines subject to international agreements. According to the Gas Law, after a certain exclusivity period, operators (*transportadores*) will be required to grant access to transport pipelines and maritime terminals, except LNG terminals, to third parties in order to maximize utilization of capacity.

The Gas Law authorized the ANP to regulate prices for the use of gas transport pipelines subject to the new concession regime, based on a procedure defined in the Gas Law as a *chamada pública*, and to approve prices submitted by carriers (*carregadores*), according to previously established criteria, for the use of new gas transport pipelines subject to the authorization regime.

Authorizations previously issued by the ANP for natural gas transport will remain valid for 30 years from the date of publication of the Gas Law, and initial carriers (*carregadores iniciais*) were granted exclusivity in these pipelines for 10 years. All pipelines that our subsidiaries currently own and operate in Brazil are subject to an authorization regime. The ANP will issue regulations governing third-party access and carrier compensation if no agreement is reached between the parties.

The Gas Law also authorized certain consumers, who can purchase natural gas on the open market or obtain their own supplies of natural gas, to construct facilities and pipelines for their own use in the event local gas distributors controlled by the states, which have monopoly over local gas distribution, do not meet their distribution needs. These consumers are required to delegate the operation and maintenance of the facilities and pipelines to local gas distributors, but they are not required to sign gas supply agreements with the local gas distributors.

In December 2010, Decree No. 7,382 was enacted in order to regulate Chapter I to VI and VIII of the Gas Law as it relates to activities in the gas industry, including transportation and commercialization. Since the publication of this decree, a number of administrative regulations were enacted by the ANP and the MME in order to regulate various issues in the Gas Law and Decree No. 7,382 that needed to be further clarified. Among those is ANP Resolution No. 51/2013, which prevents a carrier from holding any equity interest in concessionaires of gas transport pipelines. Resolution No. 51/2013 applies only to the concessions granted after its publication, not affecting, therefore, the transportation of our natural gas production through pipelines operated by its subsidiaries and subject to the previous authorization regime.

### ***Price Regulation***

Until Law No. 9,478 in 1997, the Brazilian federal government had the power to regulate all aspects of the pricing of crude oil, oil products, ethanol, natural gas, electric power and other energy sources. In 2002, the government

eliminated price controls for crude oil and oil products, although it retained regulation over certain natural gas sales contracts and electricity. Concurrently, the Brazilian federal government has periodically created and adjusted taxes applicable to crude oil, oil and natural gas products, which have been used as a tool to balance price stability to end consumers and also to increase its tax revenues.

### ***Environmental Regulations***

All phases of the crude oil and natural gas business present environmental risks and hazards. Our facilities in Brazil are subject to a wide range of federal, state and local laws, regulations and permit requirements relating to the protection of human health and the environment, and they fall under the regulatory authority of the *Conselho Nacional do Meio Ambiente* (National Council for the Environment, or CONAMA).

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Our offshore activities are subject to the administrative authority of IBAMA, which issues operating and drilling licenses. We are required to submit reports, including safety and pollution monitoring reports to IBAMA in order to maintain our licenses. This way, we maintain an ongoing communication channel with the environmental bodies, in order to improve issues connected with the environmental management of our exploration, production and refining processes of oil and natural gas. Recently, we designed actions and measures, together with Ibama, to adjust the disposal of water produced in some of our offshore platforms to recently issued requirements by Ibama.

Most of the onshore environmental, health and safety conditions are controlled either at the federal or the state level depending on the localization of our facilities and the type of activity under development. However, it is also possible for these conditions to be controlled on a local basis whenever the activities generate a local impact or are established in a county conservation unit. Under Brazilian law, there is strict and joint liability for environmental damage, mechanisms for enforcement of environmental standards and licensing requirements for polluting activities.

Individuals or entities whose conduct or activities cause harm to the environment are subject to criminal and administrative sanctions. Government environmental protection agencies may also impose administrative sanctions for noncompliance with environmental laws and regulations, including:

Fines;

Partial or total suspension of activities;

Requirements to fund reclamation and environmental projects;

Forfeiture or restriction of tax incentives or benefits;

Closing of establishments or operations; and

Forfeiture or suspension of participation in credit lines with official credit establishments.

We are subject to a number of administrative and legal proceedings relating to environmental matters. For more information about these proceedings, see Item 8. Financial Information Legal Proceedings. and Note 30 to our audited consolidated financial statements included in this annual report.

In 2017, we invested US\$0.8 billion in environmental projects, compared to US\$0.9 billion in 2016 and US\$1.1 billion in 2015. These investments continued to be primarily directed at reducing emissions and wastes from industrial processes, managing water use and effluents, remedying impacted areas, implementing new environmental technologies, upgrading our pipelines and improving our ability to respond to emergencies.

### ***New Taxation Model for the Oil and Gas Industry***

On December 28, 2017, the Brazilian federal government enacted Law No. 13,586, which outlines a new taxation model for the oil and gas industry and, along with the Decree 9,128/2017, establishes a new special regime for

exploration, development and production of oil, gas and other liquid hydrocarbons named Repetro-Sped.

Due to the application of this new model, we expect greater legal stability in the oil and gas industry in Brazil, which may encourage higher investments and reduce the number of litigations involving the industry players.

Regarding the Repetro-Sped, this regime enhances the former Repetro (Special Customs Regime for the Export and Import of Goods designated to Exploration and Production of Oil and Natural Gas Reserves), notably providing for tax relief over goods permanently held in Brazil in addition to the previous relief related to temporary admissions. Therefore, we are assessing transfers in the ownership of certain oil and gas assets from foreign subsidiaries to the parent company in Brazil. The regime will expire in December, 2040.

Following the creation of Repetro-Sped, the Brazilian states, pursuant to a decision of the Brazilian National Council of Finance Policies (CONFAZ), agreed to allow tax incentives relating to VAT (ICMS) to the extent each state enacts its specific regulation providing for the tax relief on oil and gas industry.

For additional information on the main provisions under Law 13,586/17, Decree 9,128 /17 and VAT (ICMS) tax incentives over the Repetro-Sped, see notes 21.4.1 and 21.4.2-c to our audited consolidated financial statements.

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### **Health, Safety and Environmental Initiatives**

The protection of human health and the environment is one of our primary concerns, and is essential to our success as an integrated energy company.

We have a Health, Safety and Environmental (HSE) Committee (*Comitê de Segurança, Meio Ambiente e Saúde*) composed of three members of our board of directors who are responsible for assisting our board in the following matters:

Definition of strategic goals in relation to HSE matters;

Establishment of global policies related to the strategic management of HSE matters within our group of companies; and

Assessment of the conformity of our strategic plan to its global HSE policies, among others. Our efforts to address health, safety and environmental concerns and ensure compliance with environmental regulations (which in 2017 totaled an investment of R\$5.2 billion, or US\$1.6 billion) involve the management of environmental costs related to production and operations, pollution control equipment and systems, projects to rehabilitate degraded areas, safety procedures and initiatives for emergency prevention and control, health and safety programs as well as:

An HSE management system that seeks to minimize the impacts of operations and products on health, safety and the environment, reduce the use of natural resources and pollution and prevent accidents;

The *Frota Nacional de Petroleiros* (National Fleet of Vessels) has been fully certified by the International Maritime Organization (IMO) International Management Code for Safe Operation of Ships and for Pollution Prevention (ISM Code) since December 1997;

Regular and active engagement with the MME and IBAMA, in order to discuss environmental issues related to new oil and gas production and other transportation and logistical aspects of our operations;

A strategic goal to reduce the intensity of greenhouse gas emissions, along with a set of performance indicators with targets to monitor progress with respect to this goal; and

We evaluate each of our operational projects to identify risks and to ensure compliance with all of our HSE requirements and the adoption of the best HSE practices throughout a project's life cycle. In addition, we conduct more extensive environmental studies for new projects when required by applicable environmental legislation.

In 2017, our emissions were 67 million tons of CO<sub>2</sub> equivalent. In 2016 we issued 66.5 million tons of CO<sub>2</sub> equivalent and in 2015 78.2 million tons of CO<sub>2</sub> equivalent. We are committed to reducing the intensity of greenhouse gas emissions from our processes and products through several initiatives, including reduction of gas flaring, energy efficiency measures and operational improvements.

In March 2018, Petrobras Board of Directors has approved the company's participation in the Oil and Gas Climate Initiative (OGCI). This is one of the main initiatives of the oil and gas sector to mitigate greenhouse gas emissions. The commitment provided by OGCI Climate Investments, the initiative's investment arm, to support the development, deployment and expansion of low-emission technologies is US\$ 1 billion over the next ten years, with the disbursement distributed equally among all OGCI members during this period. The participation in OGCI is aligned to Petrobras strategy to prepare the company for a future based on a low carbon economy, as disclosed in its 2018-2022 Business and Management Plan, and reinforces the company's commitment to reduce emissions and to a more efficient energy matrix.

Eliminating fatal accidents and achieving performance levels comparable to the best international oil and gas operators when it comes to the prevention of injuries to our employees and third parties are the two most important goals set by our safety management. Although we develop prevention programs in all of our operating units, we recorded 6 fatalities involving our own and contractors' employees in 2017 (compared to 3 in 2016). In addition, on December 18, 2017 there was an accident involving a man who fell into the sea and has not been found – we are currently waiting for a legal declaration of presumed death to compute such accident. We investigate all accidents reported in order to identify their causes and then take preventive and corrective actions, which are regularly monitored once they are adopted. In cases of serious accidents, we send out company-wide alerts to enable other operating units to assess the probability of similar events occurring in their own operations.

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***Environmental Remediation Plans and Procedures***

As part of our environmental plans, procedures and efforts, we maintain detailed response and remediation contingency plans to be implemented in the event of an oil spill or leak from our offshore operations. In order to respond to these events, we have dedicated oil spill recovery vessels fully equipped for oil spill control and firefighting, support boats and other vehicles, additional support and recovery boats available to fight offshore oil spills and leaks, containment booms, absorbent booms and oil dispersants, among other resources. These resources are distributed in 12 environmental protection centers in strategic areas in which we operate throughout Brazil and in emergency response centers (distributed over 24 sites) in order to ensure rapid and coordinated response to onshore or offshore oil spills.

We have more than 200 trained workers available to respond to oil spills 24 hours a day, seven days a week, and we can mobilize additional trained workers for shoreline cleanups on short notice from a large group of trained environmental agents in the country. While these workers are located in Brazil, they are also available to respond to an offshore oil spill outside of Brazil.

Since 2012, we have been a participating member of the Oil Spill Response Limited OSRL, an international organization that brings together over 160 corporations, including oil major, national/independent oil companies, energy related companies as well as other companies operating elsewhere in the oil supply chain. OSRL participates in the Global Response Network, an organization composed of several other companies dedicated to fighting oil spills. As a member of the OSRL, we have access to all resources available through that network, and we also subscribe to their Subsea Well Intervention Services, which provides swift international deployment of response-ready capping and containment equipment. The capping equipment is stored and maintained at bases worldwide, including Brazil. An OSRL Brazilian base opened in March 2014 and is now operational.

In 2017, we conducted 15 emergency drills of regional scope with the Brazilian navy, the civil defense, firefighters, the military police, environmental organizations and local governmental and community entities.

We set up a Zero Spill Plan, aiming at optimizing management and reducing the risk of oil spills in our operations. This plan encompasses investments to improve the management of processes and to ensure the integrity of our equipment and installations. Additionally, we have a model of communication, processing and recording of oil spills that permits the daily monitoring of these incidents, their impacts and mitigation measures.

We continue to evaluate and develop initiatives to address HSE concerns and to reduce our exposure to HSE risks. In 2017, we had oil spills totaling 35.8 m<sup>3</sup>, compared to 51.9 m<sup>3</sup> in 2016 and 71.6 m<sup>3</sup> in 2015.

**Insurance**

We maintain several insurance policies, including policies against fire, operational risk, engineering risk, property damage coverage for onshore and offshore assets such as fixed platforms, floating production systems and offshore drilling units, hull insurance for tankers and auxiliary vessels, third party liability insurance and transportation insurance. The coverages of these policies are contracted according to the objectives we define and the limitations imposed by the global insurance and reinsurance markets. Although some policies are issued in Brazil, most of our policies are reinsured abroad with reinsurers rated A- or higher by Standard & Poor's, or B + or higher by A.M. Best.

Our policies are subject to deductibles, limits, exclusions and limitations, and there is no assurance that such coverage will adequately protect us against liability from all possible consequences and damages associated with our activities. Thus, it is not possible to assure that insurance coverage will exist for all damages resulting from possible incidents or



accidents, which may negatively affect our results.

Specifically, we do not maintain insurance coverage to safeguard our assets in case of war or sabotage. We also do not maintain coverage for business interruption, except for a minority of our international operations and some specific assets in Brazil. Generally, we do not maintain coverage for our wells in operation in Brazil, except when required by a joint operating agreement. In addition, our third-party liability policies do not cover government fines or punitive damages.

Our national property damage policies have a maximum deductible of US\$180 million and their indemnity limits can reach US\$2.5 billion for refineries and US\$2.1 billion for platforms, depending on the replacement value of our assets. We self-insure less valuable assets, including but not limited to small auxiliary vessels, certain storage facilities and some administrative facilities.

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Our general civil responsibility policy with respect to our onshore and offshore activities in Brazil, including losses related to third parties due to sudden environmental risks, such as oil spills, has a maximum indemnification limit of US\$250 million with an associated deductible of US\$10 million. We also maintain marine insurance with additional protection and indemnification (P&I) against third parties related to our domestic offshore operations with an indemnity limit of US\$50 million up to US\$500 million, depending on the type of vessel. For activities in Brazil, in the event of an explosion or similar event on one of our non-fixed offshore platforms, these policies may provide third party combined liability coverage of up to US\$750 million. In addition, although we do not insure most of our pipelines against loss of equity, we have insurance against damages or losses to third parties arising from specific incidents, such as unexpected infiltration and oil pollution.

Outside Brazil, we have operations in eight countries and maintain different levels of third party liability insurance, as a result of a variety of factors, including our country risk assessments, if we have onshore and offshore operations, or legal requirements imposed by the particular country in which we operate. We maintain separate well-control insurance policies in our international operations to cover liabilities arising from the uncontrolled eruption of oil, gas, water or drilling fluid, as well as to cover claims of environmental damage caused by wellbore explosion and similar events as well as related clean-up costs with coverage limits of up to US\$500 million depending on the country.

**Additional Reserves and Production Information**

In 2017, our oil and gas production in Brazil averaged 2,408 mboe/d, of which 89% was oil and 11% was natural gas. The Campos Basin is one of Brazil's main and most prolific oil and gas offshore basins, with over 60 hydrocarbon fields discovered, eight large oil fields and a total area of approximately 115 thousand km<sup>2</sup> (28.4 million acres). In 2017, the Campos Basin produced an average 1,212 mbbbl/d of oil and 215 mmcf/d (6 mmm<sup>3</sup>/d) of natural gas, comprising 52% of our total production from Brazil. We also carry out limited oil shale mining operations in São Mateus do Sul, in the Paraná Basin of Brazil, and convert the kerogen (solid organic matter) from these deposits into synthetic oil and gas. This operation is conducted in an integrated facility and its final products are fuel gas, LPG, shale naphtha and shale fuel oil. Our business unit does not utilize the fracking method or the hydraulic fracturing method for oil production, since they are not appropriate in the context of our operations. Also, we do not inject any water or chemicals in the soil in connection with our open pit oil shale mining operations. Our process consists of crushing, screening and subsequently heating all the shale at high temperatures (pyrolysis) and we have in place a proper segregation process for the by-products derived from such process.

On December 31, 2017, our estimated proved reserves in Brazil totaled 9.5 bnbbbl of oil equivalent, including 8.3 bnbbbl of crude oil, condensate and synthetic oil and 7.7 tcf of natural gas and synthetic gas. As of December 31, 2017, our domestic proved developed crude oil, condensate and synthetic oil reserves represented 52% of our total domestic proved crude oil, condensate and synthetic oil reserves, and our domestic proved developed natural gas and synthetic gas reserves represented 59% of our total domestic proved natural gas and synthetic gas reserves.

We calculate reserves based on forecasts of field production, which depend on a number of technical parameters, such as seismic interpretation, geological maps, well tests, reservoir engineering studies and economic data. Our calculation of reserves also includes 2.6 tcf of fuel gas volumes, which represent 34% of our proved reserves of natural gas. All reserve estimates involve some degree of uncertainty. The uncertainty depends primarily on the amount of reliable geological and engineering data available at the time of the estimate and the interpretation of that data. Our estimates are thus made using the most reliable data and technology at the time of the estimate, in accordance with the best practices in the oil and gas industry and regulations promulgated by the SEC.

***Internal Controls over Proved Reserves***

The reserve estimation process begins with an initial evaluation of our assets by geophysicists, geologists and engineers. Corporate Reserves Coordinators (*Coordenadores de Reservas Corporativos*, or CRCs) safeguard the integrity and objectivity of our reserve estimates by supervising and providing technical support to Regional Reserves Coordinators (*Coordenadores de Reservas Regionais*, or CRRs) who are responsible for preparing the reserve estimates. Our CRRs and CRCs have degrees in geology and engineering and are trained internally and abroad in international reserve estimates seminars. CRCs are responsible for compliance with SEC rules and regulations, consolidating and auditing the reserve estimation process. In 2017, we replaced the technical person primarily responsible for overseeing the preparation of our reserves. The recently retained technical person has 14 years of experience in the field and has been with us for 15 years. Our reserve estimates are approved by our board of executive officers, which then informs our board of directors of its approval.

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D&M used our reserve estimates to conduct a reserve audit of 95% of the net proved crude oil, condensate and natural gas reserves, in terms of oil equivalent, as of December 31, 2017 in Brazil. In addition, D&M used our reserve estimates to conduct a reserve audit of 100% of the net proved crude oil, condensate and natural gas reserves as of December 31, 2017 in properties we operate in the United States. The reserve estimates were prepared in accordance with the reserves definitions of Rule 4-10(a) of Regulation S-X of the SEC. For further information about our proved reserves, see *Supplementary Information on Oil and Gas Exploration and Production* beginning on page F-132. For disclosure describing the qualification of D&M's technical person primarily responsible for overseeing our reserves audit and reserves evaluation, see Exhibit 99.1.

D&M audited 93% of our total proved reserves, in terms of oil equivalent, on December 31, 2017. The proportion of our total reserves covered by the D&M reports and the geographic area in which the covered reserves are located are summarized in the table below.

<b>Country/Region</b>	<b>SEC Proved Reserves* (in mmboe)</b>	<b>Audited Reserves (in mmboe)</b>	<b>Unaudited Reserves (in mmboe)</b>	<b>Proportion of Reserves Audited (%)</b>
Brazil	9,528.8	9,078.3	450.5	95%
Brazil Synthetic Oil and Gas	7.4		7.4	
North America Operated	36.5	36.5		100%
North America Non-Operated	85.0		85.0	
Other Countries	94.1		94.1	
<b>Total Proved Reserves</b>	<b>9,751.7</b>	<b>9,114.8</b>	<b>636.9</b>	<b>93%</b>

**Changes in Proved Reserves**

In 2017, our total proved reserves resulted in 9,751.7 million boe in 2017, a net increase of 79.6 million boe compared to 2016. We incorporated 670.1 million boe of total proved reserves by revisions of previous estimates, including 355.4 million boe due to economic revisions, mainly due to the increase in prices, and 314.7 million boe due to technical revisions, mainly due to better than forecasted outcome from reservoirs, in the pre-salt of Santos and Campos basins, both in Brazil. In addition, we added 246.7 million boe in our proved reserves resulting from positive responses from improved recovery (water injection), and added 82.5 million boe in our proved reserves due to extensions and discoveries, mainly in the pre-salt of Santos basins. The production of 919.8 million boe in 2017 partially offset these increases. This production does not consider the production of Extended Well Tests (EWTs) in exploratory blocks and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

At year-end 2017, our company-wide proved undeveloped reserves increased 151.0 million boe when compared to year-end 2016. This increase was mostly related to positive responses from improved recovery (water injection) amounting to 246.7 million boe, in Brazil, and 82.3 million boe due to extensions and discoveries, mainly in the pre-salt of Santos basins. Economic revisions of previous estimates resulted in an increase of 175.9 million boe, mainly due to higher prices, and technical revisions of previous estimates incorporated 27.2 million boe. The total increase was partially offset by conversion of some of our proved undeveloped reserves to proved developed reserves, mainly due to the FPSO P-66 start of operation, in Lula field, and offshore and onshore drilling and tieback operations. In 2017, we invested a total of US\$12.1 billion in development projects, of which 96% (US\$11.6 billion) were invested

in Brazil, and converted a total of 381.1 million boe of proved undeveloped reserves to proved developed reserves, approximately 95.4% (363.7million boe) of which were Brazilian reserves.

As of December 31, 2017, we had a total of 4,592.1 million boe of proved undeveloped reserves company-wide, approximately 9.0% (414.1 million boe) of which have remained undeveloped for five years or more as a result of several factors affecting development and production, including the inherent complexity of ultra-deep water development projects, particularly in the Santos Basin and in the Campos Basin, in which we are making investments to develop necessary infrastructure.

Most of our investments relate to long term development projects, which are developed in phases due to the large volumes, and extensions involved, the deep and ultra deepwater infrastructure and the production resources complexity. In these cases, the full development of the reserves related to these investments can exceed five years.

All reserve volumes described above are net to the extent that they only include our proportional participation in reserve volumes and exclude reserves attributed to our partners.

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The following tables set forth our production of crude oil, natural gas, synthetic oil and synthetic gas by geographic area in 2017, 2016 and 2015:

<b>Hydrocarbon Production by Geographic Area</b>											
<b>2017</b>				<b>2016</b>				<b>2015</b>			
<b>Crude Oil + NGL (mmbbl)(4)</b>	<b>Nat. Gas (mcf)(1)</b>	<b>Synth. Gas (mcf)(1)(4)</b>	<b>Total (mboe)</b>	<b>Oil + NGL (mmbbl)(5)</b>	<b>Synth. Oil + NGL (mmbbl)(4)</b>	<b>Nat. Gas (mmcf)(1)</b>	<b>Synth. Gas (mmcf)(1)(4)</b>	<b>Total (mboe)</b>	<b>Oil + NGL (mmbbl)(5)</b>	<b>Synth. Oil + NGL (mmbbl)(4)</b>	<b>Nat. Gas (mmcf)(1)</b>
969.7	555,820.9	183.6	878,798.2	783,862.2	915.0	533,815.1	209.0	873,801.8	775,807.5	1,022.0	563,000.0
	140,931.4		199,151.6	125,459.6		93,711.1		141,078.1	77,592.1		51,900.0
			717.5	3,262.4				3,262.4	2,386.8		
969.7	414,889.5	183.6	678,929.1	655,140.2	915.0	440,103.9	209.0	729,461.3	695,828.6	1,022.0	511,000.0
	85,388.2		16,103.8	8,007.7		144,728.7		32,129.2	14,089.0		173,300.0
	21,450.4		16,739.5	12,093.3		32,054.7		17,435.8	11,169.0		24,500.0
	106,838.6		32,843.3	20,101.0		176,783.4		49,564.9	25,258.0		197,800.0
969.7	662,659.5	183.6	911,641.5	803,963.2	1,040.0	710,598.5	209.0	923,366.7	801,065.5	1,163.1	760,900.0
				476.3		126.7		497.4	1,241.0		300.0
			8,190.2	8,705.3				8,705.3	9,709.0		
969.7	662,659.5	183.6	919,831.7	813,144.9	1,040.0	710,725.2	209.0	932,569.5	812,015.5	1,163.1	761,000.0

(1) Natural gas production figures are the production volumes of natural gas available for sale, excluding flared and reinjected gas and gas consumed in operations

(2) Búzios and Lula fields are separately included as they contain more than 15% of our total proved reserves each

(3) Equity-accounted investees

(4) We produce synthetic oil and synthetic gas from oil shale deposits in São Mateus do Sul, in the Paraná Basin of Brazil

(5) Oil production includes production from EWTs Extended Well Tests and NGL . In the last three years, NGL production represented 5.0%, 4.4%, and 4.0% of our worldwide oil production respectively

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The following table sets forth our estimated net proved developed and undeveloped reserves of crude oil and natural gas by region as of December 31, 2017.

Reserves category	Estimated Net Proved Developed and Undeveloped Reserves						
	Oil		Natural gas		Synthetic gas		Total oil and gas products
	(mmbbl)	(bncf)(1)(2)	(mmboe)	(mmbbl)(3)	(bncf)(3)	(mmboe)	(mmboe)(4)
<b>Proved developed:</b>							
<b>Brazil</b>	4,282.2	4,515.9	5,034.9	6.0	8.1	7.4	5,042.2
<b>International</b>							
South America (outside of Brazil)	0.7	56.7	10.2				10.2
North America	72.1	24.2	76.1				76.1
Total International	72.8	80.9	86.3				86.3
Total consolidated proved developed reserves	4,355.0	4,596.8	5,121.2	6.0	8.1	7.4	5,128.5
<b>Equity method investees</b>							
Africa	29.6	9.3	31.1				31.1
<b>Total proved developed reserves</b>	<b>4,384.6</b>	<b>4,606.0</b>	<b>5,152.3</b>	<b>6.0</b>	<b>8.1</b>	<b>7.4</b>	<b>5,159.6</b>
<b>Proved undeveloped:</b>							
<b>Brazil</b>	3,967.2	3,160.2	4,493.9				4,493.9
<b>International</b>							
South America (outside of Brazil)	0.5	103.5	17.7				17.7
North America	42.6	16.7	45.3				45.3
Total International	43.0	120.2	63.1				63.1
Total consolidated proved undeveloped reserves	4,010.2	3,280.5	4,557.0				4,557.0
<b>Equity method investees</b>							
Africa	33.8	8.0	35.1				35.1
<b>Total proved undeveloped reserves</b>	<b>4,044.0</b>	<b>3,288.5</b>	<b>4,592.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4,592.1</b>
	<b>8,428.6</b>	<b>7,894.5</b>	<b>9,744.4</b>	<b>6.0</b>	<b>8.1</b>	<b>7.4</b>	<b>9,751.7</b>



**Total proved reserves  
(developed and undeveloped)**

- (1) We estimate our oil and gas reserves at a reference point prior to the gas processing plants. Therefore, we book reserves of oil and wet natural gas only and, as such, we do not separately estimate reserves of natural gas liquids (NGLs).
- (2) Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 34% of our total proved reserves of natural gas.
- (3) Volumes of synthetic oil and synthetic gas from oil shale deposits in the Paraná Basin in Brazil have been included in our proved reserves in accordance with the SEC rules for estimating and disclosing reserve quantities.
- (4) The total proved reserves includes 292.7 millions of barrels of oil equivalent related to assets classified as held for sale.

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The table below summarizes information about the changes in total proved reserves of our consolidated entities and equity method investees for 2017, 2016 and 2015:

	<b>Total Proved Developed and Undeveloped Reserves(1)(2)(3)(4)</b>							<b>Equity method investees</b>	<b>Total for all product</b>
	<b>Consolidated Entities</b>						<b>oil and gas product</b>		
	<b>Oil</b>	<b>Natural gas</b>	<b>Total oil and natural gas</b>	<b>Synthetic oil</b>	<b>Synthetic gas</b>	<b>Total synthetic oil and gas</b>	<b>Total oil and gas products</b>	<b>oil and gas product</b>	<b>product</b>
	<b>(mmbbl)</b>	<b>(bncf)</b>	<b>(mmboe)</b>	<b>(mmbbl)</b>	<b>(bncf)</b>	<b>(mmboe)</b>	<b>(mmboe)</b>	<b>(mmboe)</b>	<b>(mmboe)</b>
<b>Reserves quantity information for the year ended</b>									
<b>December 31, 2017</b>									
January 1, 2017	8,160.3	8,595.1	9,592.8	6.8	9.2	8.3	9,601.1	71.1	9,672.2
Revisions of previous estimates	680.9	(87.0)	666.4	0.2	0.1	0.2	666.6	3.5	670.1
Improved recovery	212.7	204.2	246.7				246.7		246.7
Purchases of proved reserves									
Extensions and discoveries	69.4	78.4	82.5				82.5		82.5
Production	(758.0)	(913.5)	(910.3)	(1.0)	(1.2)	(1.2)	(911.4)	(8.3)	(919.8)
Sales of proved reserves									
December 31, 2017	8,365.3	7,877.2	9,678.1	6.0	8.1	7.4	9,685.5	66.3	9,751.7
<b>Reserves quantity information for the year ended</b>									
<b>December 31, 2016</b>									
January 1, 2016	8,687.0	10,406.8	10,421.5	6.9	9.3	8.5	10,430.0	86.0	10,516.0
Revisions of previous estimates	197.6	(472.6)	118.8	0.8	1.2	1.0	119.8	11.2	131.0
Improved recovery		0.1	0.0						
Purchases of proved reserves	0.7	93.3	16.3				16.3		16.3
Extensions and discoveries	87.8	92.1	103.2				103.2		103.2
Production	(766.3)	(892.6)	(915.1)	(0.9)	(1.4)	(1.2)	(916.2)	(9.2)	(925.4)
Sales of proved reserves	(46.6)	(631.9)	(151.9)				(151.9)	(16.9)	(168.8)

December 31, 2016	8,160.3	8,595.1	9,592.8	6.8	9.2	8.3	9,601.1	71.1	9,672.2
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**Reserves quantity information for the year ended**

**December 31, 2015**

January 1, 2015	11,037.5	12,081.0	13,051.0	7.9	10.6	9.6	13,060.7	79.9	13,140.6
Revisions of previous estimates	(1,990.8)	(1,178.3)	(2,187.2)	0.1	0.2	0.1	(2,187.1)	0.9	(2,186.2)
Improved recovery	1.1	27.9	5.8				5.8	16.2	21.9
Purchases of proved reserves									
Extensions and discoveries	411.9	492.2	494.0				494.0		493.9
Production	(766.0)	(924.5)	(920.1)	(1.0)	(1.4)	(1.3)	(921.3)	(11.0)	(932.3)
Sales of proved reserves	(6.8)	(91.4)	(22.0)				(22.0)		(22.0)
December 31, 2015	8,687.0	10,406.8	10,421.5	6.9	9.3	8.5	10,430.0	86.0	10,516.0

- (1) We estimate our oil and gas reserves at a reference point prior to the gas processing plants. Therefore, we book reserves of oil and wet natural gas only and, as such, we do not separately estimate reserves of natural gas liquids (NGLs).
- (2) Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including flared gas and gas consumed in operations and excluding reinjected gas. Oil production volumes used in this table are net volumes withdrawn from our proved reserves and exclude NGL and production from EWTs. As a result, the oil and natural gas production volumes in this table are different from those shown in the production table above, which shows the production volumes of natural gas available for sale.
- (3) Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 34% of our total proved reserves of natural gas.
- (4) In December 31, 2017, the total proved reserves includes 292.7 millions of barrels of oil equivalent related to assets classified as held for sale.

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The following tables show the number of gross and net productive oil and natural gas wells and total gross and net developed and undeveloped oil and natural gas acreage in which we had interests as of December 31, 2017. We do not have any material acreage expiring before 2025.

**Gross and Net Productive Wells(1)**

As of December 31, 2017

Gross and net productive wells(1):	Oil		Natural gas		Synthetic oil		Synthetic gas	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Consolidated subsidiaries</b>								
<b>Brazil</b>	7,185.0	7,161.0	199.0	191.0				
<b>International</b>								
South America (outside of Brazil)	59.0	25.2	182.0	91.2				
North America	22.0	9.0	2.0	0.8				
<b>Total international</b>	81.0	34.2	184.0	91.9				
<b>Total consolidated</b>	7,266.0	7,195.2	383.0	282.9				
<b>Equity method investees:</b>								
South America (outside of Brazil)								
Africa	47.0	2.5	0.0	0.0				
<b>Total gross and net productive wells</b>	7,313.0	7,197.7	383.0	282.9				

**Gross and Net Developed and Undeveloped Acreage(1)**

As of December 31, 2017

Gross and net developed acreage:	Oil		Natural gas (in acres)		Synthetic oil		Synthetic gas	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Brazil</b>	4,533,610.0	4,216,411.4	353,741.2	331,812.3	332.9	332.9	0.0	0.0
<b>International</b>								
South America (outside of Brazil)	2,525.7	848.6	33,311.2	11,192.6				
North America	11,663.4	6,163.6	788.8	261.3				
<b>Total international</b>	14,189.1	7,012.2	34,100.0	11,453.9				
<b>Total consolidated</b>	4,547,799.1	4,223,423.6	387,841.3	343,266.2	332.9	332.9	0.0	0.0
<b>Equity method investees:</b>								
Africa	428,866.8	32,003.7						

<b>Total gross and net developed acreage</b>	4,976,665.9	4,255,427.3	387,841.3	343,266.2	332.9	332.9	0.0	0.0
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## As of December 31, 2017

	Oil		Natural gas (in acres)		Synthetic oil		Synthetic gas	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Gross and net undeveloped acreage:</b>								
<b>Brazil</b>	761,820.4	629,105.4	131,925.5	127,777.7	0.0	0.0	0.0	0.0
<b>International</b>								
South America (outside of Brazil)	1,650.9	554.7	60,860.1	20,449.0				
North America	9,145.1	4,561.0	790.4	202.8				
<b>Total international</b>	10,796.0	5,115.7	61,650.5	20,651.8				
<b>Total consolidated</b>	772,616.4	634,221.1	193,576.0	148,429.5				
<b>Equity method investees:</b>								
Africa	215,707.6	19,671.7						
<b>Total gross and net undeveloped acreage</b>	988,324.0	653,892.8	193,576.0	148,429.5				

(1) A gross well or acre is a well or acre in which a working interest is owned, while the number of net wells or acres is the sum of fractional working interests in gross wells or acres.

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The following table sets forth the number of net productive and dry exploratory and development wells drilled for the last three years.

<b>Net Productive and Dry Exploratory and Development Wells</b>			
	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Net productive exploratory wells drilled:</b>			
<b>Consolidated subsidiaries:</b>			
Brazil	7	7.7	41.1
South America (outside of Brazil)		2.2	3.7
North America			0.1
Africa			
Other			
Total consolidated subsidiaries		9.9	44.9
<b>Equity method investees:</b>			
South America (outside of Brazil)			
Africa			
<b>Total productive exploratory wells drilled</b>	<b>7</b>	<b>9.9</b>	<b>44.9</b>
<b>Net dry exploratory wells drilled:</b>			
<b>Consolidated subsidiaries:</b>			
Brazil	0.4	5.1	14.9
South America (outside of Brazil)	0.4	1.0	
North America			0.5
Africa			
Other			
Total consolidated subsidiaries		6.1	15.4
<b>Equity method investees:</b>			
South America (outside of Brazil)			
Africa			
<b>Total dry exploratory wells drilled</b>	<b>0.8</b>	<b>6.1</b>	<b>15.4</b>
<b>Total number of net exploratory wells drilled</b>	<b>7.8</b>	<b>16.0</b>	<b>60.2</b>
<b>Net productive development wells drilled:</b>			
<b>Consolidated subsidiaries:</b>			
Brazil	174.8	194.4	523.5
South America (outside of Brazil)	2.4	24.5	70.9
North America	0.6	0.4	0.7
Africa			
Other			

Total consolidated subsidiaries	177.8	219.3	595.1
<b>Equity method investees:</b>			
South America (outside of Brazil)		0.0	0.7
Africa	1.0	1.7	0.0
<b>Total productive development wells drilled</b>	178.8	221.0	595.8
<b>Net dry development wells drilled:</b>			
<b>Consolidated subsidiaries:</b>			
Brazil		1.0	3.0
South America (outside of Brazil)			0.5
North America			
Africa			
Other			
Total consolidated subsidiaries		1.0	3.5
<b>Equity method investees:</b>			
South America (outside of Brazil)			
Africa			
<b>Total dry development wells drilled</b>		1.0	3.5
<b>Total number of net development wells drilled</b>	178.8	222.0	599.3

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The following table summarizes the number of wells in the process of being drilled as of December 31, 2017. For more information about our ongoing exploration and production activities in Brazil, see Exploration and Production Activities in Brazil. Our present exploration and production activities outside of Brazil are described in Exploration and Production Activities Abroad. Also, see Note 15 to our audited consolidated financial statements for further information about our capitalized exploration costs and the unaudited supplementary information on oil and gas exploration and production contained in our audited consolidated financial statements.

**Number of Wells Being Drilled as of December 31, 2017**

	Year-end 2017	
	Gross	Net
<b>Wells Drilling</b>		
<b>Consolidated Subsidiaries:</b>		
Brazil	11	11
<b>International:</b>		
South America (outside of Brazil)	2	0.7
North America		
Africa		
Others		
<b>Total International</b>	<b>2</b>	<b>0.7</b>
<b>Total consolidated</b>	<b>13</b>	<b>11.7</b>
<b>Equity method investees:</b>		
South America (outside of Brazil)		
Africa	4	0.5
<b>Total wells drilling</b>	<b>17</b>	<b>11.5</b>

The following table sets forth our average sales prices and average production costs by geographic area and by product type for the last three years.

	Brazil	South America (outside of Brazil)	North America US\$	Total	Equity method investees (2)
<b>During 2017</b>					
Average sales prices					
Oil and NGL, per barrel	50.48	34.18	47.92	50.42	53.87
Natural gas, per thousand cubic feet(1)	6.30	3.53	3.31	6.10	
Synthetic oil, per barrel	42.42			42.42	
Synthetic gas, per thousand cubic feet	3.97			3.97	
<i>Average production costs, per barrel total</i>	11.15	3.65	9.17	10.99	27.00



**During 2016**

Average sales prices					
Oil and NGL, per barrel	39.36	54.50	37.70	39.47	44.03
Natural gas, per thousand cubic feet(1)	5.22	3.83	2.72	4.99	
Synthetic oil, per barrel	32.98			32.98	
Synthetic gas, per thousand cubic feet	3.13			3.13	
<i>Average production costs, per barrel total</i>	10.36	6.95	6.83	10.18	35.11

**During 2015**

Average sales prices					
Oil and NGL, per barrel	42.16	65.96	45.31	42.60	51.77
Natural gas, per thousand cubic feet(1)	6.04	3.97	2.75	5.77	
Synthetic oil, per barrel	48.20			48.20	
Synthetic gas, per thousand cubic feet	5.68			5.68	
<i>Average production costs, per barrel total</i>	12.97	8.80	3.16	12.61	32.16

- (1) The volumes of natural gas used in the calculation of this table are the production volumes of natural gas available for sale and are also shown in the production table above. Natural gas amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.
- (2) Operations in Venezuela and in Africa-PO&G. After our divestment of PESA in 2016, we no longer have equity investments in Venezuela.

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### **Item 4A. Unresolved Staff Comments**

None.

### **Item 5. Operating and Financial Review and Prospects**

#### **Management's Discussion and Analysis of Financial Condition and Results of Operations**

The information below has been derived from our financial statements which were prepared in accordance with IFRS. For more information, see Presentation of Financial and Other Information and Notes 2, 4 and 5 to our audited consolidated financial statements.

You should read the following discussion of our financial condition and results of operations together with our audited consolidated financial statements and the accompanying notes beginning on page F-5 of this annual report.

#### **Overview**

We earn income from:

domestic sales, which consist of sales of oil products (including diesel, gasoline, jet fuel, naphtha, fuel oil and liquefied petroleum gas), natural gas, electricity, ethanol, petrochemical products and renewables;

export sales, which consist primarily of sales of crude oil and oil products;

international sales (excluding export sales), which consist of sales of crude oil, natural gas and oil products that are purchased, produced and refined abroad; and

other sources, including services, interest income from investments, share of earnings in equity-accounted investees, foreign exchange variation gains and inflation indexation gains on financial instruments.

Our expenses include:

costs of sales (mainly comprised of direct labor costs, operating costs and purchases of crude oil, oil products, natural gas and electricity in the spot market); property, plant and equipment maintenance and repairs; depreciation, depletion and amortization of property, plant and equipment, oil fields and signing bonuses (acquisition costs); and oil and gas exploration costs;

selling (which include expenses for transportation and distribution of our products), general and administrative expenses;

research and development;

impairment of assets and other operating expenses; and

interest expense, inflation indexation and foreign exchange variation losses on debt and other financial instruments.

Fluctuations in our financial condition and results of operations are driven by a combination of factors, including:

the volume of crude oil, oil products and natural gas we produce and sell;

changes in international prices of crude oil and oil products (denominated in U.S. dollars);

changes in the domestic prices of crude oil and oil products (denominated in *reais*);

fluctuations in the *real* vs. U.S. dollar exchange rates and other currencies, as set out in Note 33.2(c) to our audited consolidated financial statements;

the demand for oil products in Brazil and the amount of imports required to meet the domestic demand;

the recoverable amounts of assets for impairment testing purposes; and

the amount of production taxes from our operations that we are required to pay.

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**Sales Volumes and Prices**

The profitability of our operations in any particular accounting period is related to the sales prices and volumes of the crude oil, oil products, natural gas and biofuels that we sell and the relationship between these prices and international prices. Our consolidated net sales in 2017 totaled 1,214,358 mboe, representing US\$88,827 million in sales revenues, compared to 1,273,533 mboe, representing US\$81,405 million in sales revenues in 2016 and compared to 1,402,739 mboe, representing US\$97,314 million in sales revenues in 2015.

As a vertically integrated company, we process most of our crude oil production in our refineries and sell the refined oil products primarily in the Brazilian domestic market. Therefore, the price of oil products in Brazil has a more significant impact on our financial results than crude oil prices. International oil product prices vary over time as the result of many factors, including the price of crude oil. We intend to sell our products in Brazil at parity with international product prices.

The average price of Brent crude oil (as reported by Bloomberg), an international benchmark oil, was US\$54.35 per barrel in 2017, US\$44.11 per barrel in 2016 and US\$52.31 per barrel in 2015. In December 2017, Brent crude oil prices averaged US\$64.21 per barrel.

In June 2017, our executive board approved a review of our pricing policy for diesel and gasoline. Thus, our marketing and trading technical area will have power to perform adjustments in prices at any time, including daily, provided that the accumulated adjustments per product must be within a given range (-7% to +7%). Moreover, any change outside this range will have to be authorized by our Markets and Prices Executive Group, which includes our CEO, our Chief Refining and Natural Gas Officer, and our CFO and Investor Relations Officer. The approved policy review will allow greater adherence of domestic market prices to the international market in the short term, and will enable the company to compete in a more agile and efficient manner.

The principles of the pricing policy, which was approved in October 2016, remain unchanged, taking into consideration the international parity price (IPP), margins that reflects the risks related to the operations, and the level of market share.

In June 2017, our executive board of officers also approved our pricing policy for commercialization of LPG that will be sold by distributors in cylinders of up to 13 kg for residential use (LPG-13). This policy provides for monthly readjustments calculated by the average price of butane and propane on the European market in the previous month, plus a 5% margin.

In January 2018, our executive board of officers has approved a review of our pricing policy for commercialization of LPG-13 and defined new criteria for the application of adjustments, plus a transition rule for the year 2018. Further, our executive board of officers implemented a compensation mechanism designed to measure any difference between the prices defined in the reviewed policy against the original policy, and allocating the amount of any such difference in the following year in order to better manage the transfer of price volatility in the international market to the domestic price.

During 2017, 79.2% of our sales revenues were derived from sales of oil products, natural gas and other products in Brazil, compared to 79.9% in 2016 and 78.1% in 2015.



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	For the Year Ended December 31,								
	2017 Net Average Sales			2016 Net Average Sales			2015 Net Average Sales		
	Volume (mbbl, except as otherwise noted)	Price (US\$) (1)	Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Price (US\$) (1)	Revenues (US\$ million)	Volume (mbbl, except as otherwise noted)	Price (US\$) (1)	Revenues (US\$ million)
Diesel	261,821	95,70	25,049	285,422	89.40	25,524	336,723	90.70	30,532
Automotive gasoline	190,178	88,20	16,765	199,381	81.60	16,263	201,821	80.90	16,320
Fuel oil (including bunker fuel)	22,144	62,90	1,392	24,526	47.60	1,167	37,880	60.60	2,297
Naphtha	48,880	53,90	2,637	55,221	44.80	2,472	48,404	53.60	2,594
Liquefied petroleum gas	85,949	46,50	3,999	85,486	36.10	3,083	84,592	34.10	2,881
Jet fuel	36,842	85,00	3,131	37,147	69.30	2,573	40,187	82.70	3,325
Other oil products	62,258	60,60	3,775	68,101	49.50	3,372	65,202	53.20	3,468
<b>Subtotal oil products</b>	<b>708,072</b>	<b>80,10</b>	<b>56,748</b>	<b>755,284</b>	<b>72.10</b>	<b>54,454</b>	<b>814,809</b>	<b>75.40</b>	<b>61,417</b>
Natural gas (boe)	131,882	39,20	5,174	121,994	32.40	3,952	157,815	37.30	5,894
Ethanol, nitrogen products, renewables and other non-oil products	40,771	95,10	3,878	40,843	91.60	3,743	45,063	85.80	3,868
Electricity, services and others			4,533			2,753			4,850
<b>Total domestic market</b>	<b>880,725</b>		<b>70,333</b>	<b>918,121</b>		<b>64,902</b>	<b>1,017,687</b>		<b>76,029</b>
Exports	245,275	53,30	13,075	202,744	41.60	8,439	186,060	52.10	9,692
International sales	88,358	61,30	5,419	152,668	52.80	8,064	198,992	58.30	11,593
<b>Total international market</b>	<b>333,633</b>		<b>18,494</b>	<b>355,412</b>		<b>16,503</b>	<b>385,052</b>		<b>21,285</b>
<b>Consolidated sales revenues</b>	<b>1,214,358</b>		<b>88,827</b>	<b>1,273,533</b>		<b>81,405</b>	<b>1,402,739</b>		<b>97,314</b>

(1) Net average price calculated by dividing sales revenues by the volume for the year.

### **Tax Strategy and Effect of Taxes on Our Income**

Our tax strategy outlines the compliance with tax law of Brazil and other countries, where we operate in conjunction with tax risk management, contributing to improve profitability, as a corporation that influences the economic and social environment of which we are part. We also aim at engaging with tax authorities with an ethical and transparent relationship, developing the areas where we operate, considering we are one of the biggest taxpayers of Brazil, resulting in a multiplier effect over tax collection under federal, state and municipal jurisdictions, as well as production taxes in the scope of ANP.

We are subject to tax on our income at a Brazilian statutory corporate rate of 34%, comprising a 25% rate of income tax and a social contribution tax at a 9% rate. Since 2015, we have recognized income tax expenses over non-exempt income generated by our foreign subsidiaries based on Brazilian statutory corporate rates as established by Law No. 12,973/2014.

In addition to taxes paid on behalf of consumers to federal, state and municipal governments, such as the Domestic Value-Added Tax (*Imposto sobre Circulação de Mercadorias e Serviços*), we are required to pay three main charges on our oil production activities in Brazil under the scope of the ANP: royalties, special participation and retention bonuses. See Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil Taxation under Concession Regime for Oil and Gas and Item 3. Key Information Risk Factors Risks Relating to Brazil. These charges imposed by the Brazilian federal government are included in our cost of sales.

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**Table of Contents****Inflation and Exchange Rate Variation****Inflation**

After the remarkable rise in 2015 (10.67%), Brazilian inflation has decelerated during the years 2016 (6.29%) and 2017 (2.95%). This movement was associated with a fragile expansion of domestic demand and a low level of installed capacity utilization. This scenario allowed the government to reduce the interest rate to 7.0% p.a. by the end of 2017. See Item 3. Key Information Risk Factors Risks Relating to Brazil and Our Relationship with the Brazilian Federal Government.

**Exchange Rate Variation**

Fluctuations in exchange rate have multiple effects on our results of operations in *reais*. The relative pace at which our total revenues and expenses in *reais* increase or decrease with the exchange rate, and its impact on our margins, is affected by our pricing policy in Brazil. Absent changes in the international prices for crude oil, oil products and natural gas, when the *real* appreciates against the U.S. dollar and we do not adjust our prices in Brazil, our margins generally improve. Absent changes in the international prices for crude oil, oil products and natural gas, when the *real* depreciates against the U.S. dollar and we do not adjust our prices in Brazil, margins generally decline. However, it is our goal to sell our products in Brazil at parity with international product prices, when possible. For further information on our prices, see Sales Volumes and Prices.

The depreciation of the *real* against the U.S. dollar also increases our debt service in *reais*, as the amount of *reais* necessary to pay principal and interest on foreign currency debt increases with the depreciation of the *real*. A devaluation of the *real* also increases our costs to import oil and oil products, imported goods and services necessary for our operations and our production taxes. Unless the depreciation of the *real* is offset by higher prices for our products sold in Brazil, a devaluation increases our debt service relative to our cash flows while also reducing our operating margins.

The foreign exchange variations on foreign-denominated assets and liabilities of entities for which the *real* is the functional currency are recorded in profit or loss, while the foreign exchange variations on the translation to the presentation currency are recognized in other comprehensive income in equity. As our net debt denominated in other currencies increases, the negative impact of a depreciation of the *real* on our results and net income when expressed in *reais* also increases, thereby reducing the earnings available for distribution. Note 33.2(c) to our audited consolidated financial statements provides further information about our foreign exchange exposure related to assets and liabilities.

We have designated cash flow hedging relationships in which (a) the hedged items are foreign exchange gain or loss of our highly probable U.S. dollar-denominated future export revenues and (b) foreign exchange gain or loss in proportion to our long-term debt obligations denominated in U.S. dollars, and (c) the risk hedged is the effect of changes in exchange rates between the U.S. dollar and our functional currency, the *real*. Both long-term debt obligations (hedging instruments) and future exports (hedged items) are exposed to the *real*/U.S. dollar foreign currency risks at their respective spot exchange rate. Cash flow hedge accounting allows gains or losses arising from the effect of changes in the foreign currency exchange rate on the hedging instruments to be recognized in other comprehensive income in equity and then recycled from equity to profit or loss in the periods during which the hedged transactions (future exports) occur, rather than being immediately recognized as profits or losses. See Critical Accounting Policies and Estimates Cash Flow Hedge Accounting Involving our Future Exports and Notes 4.3.6, 5.8 and 33.2(a) to our audited consolidated financial statements for further information about our cash flow hedge.



Exchange rate variation also affects the amount of retained earnings available for distribution by us when expressed in U.S. dollars. Amounts reported as available for distribution in our statutory accounting records are calculated in *reais* and prepared in accordance with the IFRS and they may increase or decrease when expressed in U.S. dollars as the *real* appreciates or depreciates against the U.S. dollar.

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Fluctuation of the exchange rate also drives the foreign exchange translation effects on our results of operations. Our main functional currency is the *real*, which our functional currency and that of our Brazilian subsidiaries, and our presentation currency is the U.S. dollar. Therefore, our results of operations in *real* were translated into U.S. dollars using the average exchange rates prevailing during the period, as set out in IAS 21. The effects of foreign exchange rates. See Note 2 to our audited consolidated financial statements for the year ended December 31, 2017 for more information about the translation of *real* amounts into U.S. dollars.

When the *real* appreciates against the U.S. dollar, as it did in 2017, the effect is to generally increase both revenues and expenses when expressed in U.S. dollars. When the *real* depreciates against the U.S. dollar, the effect is to generally decrease both revenues and expenses when expressed in U.S. dollars. In 2017, the average *real* appreciated 8% against the U.S. dollar, compared to a depreciation of 4.2% in 2016, a depreciation of 42% in 2015. Through April 15, 2018, the *real* has depreciated by 3% against the U.S. dollar, when compared to December 31, 2017.

In order to isolate the foreign exchange translation effect on our results of operations, the table below presents a reconciliation of our income statement to financial information on a constant currency basis, assuming the same exchange rates between each quarter for translation. The amounts and respective variations presented in constant currency are not measures defined in IFRS. Our calculation may not be comparable to the calculation of other companies and it should not be considered as a substitute for any measure calculated in accordance with IFRS.

	As reported				Financial information in a constant currency basis				
	Jan-Dec U.S.\$ million		Variation		Jan-Dec 2017 U.S.\$ million		Variation*		
	2017	2016	D	)	Foreign exchange translation effects	Results on a constant currency basis	D	)	D(%)
Sales revenues	88,827	81,405	7,422	9	6,904	81,923	518	1	
Cost of sales	(60,147)	(55,417)	(4,730)	(9)	(4,589)	(55,558)	(141)		
<b>Gross profit</b>	<b>28,680</b>	<b>25,988</b>	<b>2,692</b>	<b>10</b>	<b>2,315</b>	<b>26,365</b>	<b>377</b>	<b>1</b>	
Selling expenses	(4,538)	(3,963)	(575)	(15)	(301)	(4,237)	(274)	(7)	
General and administrative expenses	(2,918)	(3,319)	401	12	(231)	(2,687)	632	19	
Exploration costs	(800)	(1,761)	961	55	(43)	(757)	1,004	57	
Research and development expenses	(572)	(523)	(49)	(9)	(41)	(531)	(8)	(2)	
Other taxes	(1,843)	(714)	(1,129)	(158)	(113)	(1,730)	(1,016)	(142)	
Impairment of assets	(1,191)	(6,193)	5,002	81	(21)	(1,170)	5,023	81	
Other income and expenses	(5,599)	(5,207)	(392)	(8)	(232)	(5,367)	(160)	(3)	
<b>Operating income</b>	<b>11,219</b>	<b>4,308</b>	<b>6,911</b>	<b>160</b>	<b>1,333</b>	<b>9,886</b>	<b>5,578</b>	<b>129</b>	
<b>Net finance income (expense)</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(2,140)</b>	<b>(28)</b>	<b>(806)</b>	<b>(9,089)</b>	<b>(1,334)</b>	<b>(17)</b>	
Results in equity-accounted investments	673	(218)	891	409	59	614	832	382	

<b>Net Income before income taxes</b>	1,997	(3,665)	5,662	154	586	1,411	5,076	138
<b>Income taxes</b>	(1,828)	(684)	(1,144)	(167)	(299)	(1,529)	(845)	(124)
<b>Net income</b>	169	(4,349)	4,518	104	287	(118)	4,231	97

\* Variation after isolating foreign exchange translation effects between periods used for translation.

### Results of Operations

The differences in our operating results from year to year occur as a result of a combination of factors, including primarily: the volume of crude oil, oil products and natural gas we produce and sell; the price at which we sell our crude oil, oil products and natural gas and the relationship of those prices to the international prices; the level and cost of imports and exports needed to satisfy our demand; production taxes; and the differential between Brazilian and international inflation rates, adjusted by the depreciation or appreciation of the *real* against the U.S. dollar.

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The table below shows the amount by which each of these variables has changed during the last three years. Production volumes presented in this table are prepared in accordance with SPE criteria, which are the criteria we apply to analyze our operating results:

	2017	2016	2015
<b>Crude oil and NGL production (mmbbl/d):</b>			
Brazil	2,154	2,144	2,128
International	41	55	69
Non-consolidated international production(1)	22	25	30
<b>Total crude oil and NGL production</b>	<b>2,217</b>	<b>2,224</b>	<b>2,227</b>
Change in crude oil and NGL production	2.9%	(0.1)%	3.6%
<b>Average sales price for crude oil (US\$/barrel):</b>			
Brazil	50.48	39.36	42.16
International	47.16	43.52	55.99
<b>Natural gas production (mmcf/d)(2):</b>			
Brazil	3,006	2,910	2,814
International	294	486	546
<b>Total natural gas production</b>	<b>3,000</b>	<b>3,396</b>	<b>3,360</b>
Change in natural gas production (sold only)	9.8%	1.1%	7.9%
<b>Average sales price for natural gas (US\$/mcf)(2):</b>			
Brazil	6.30	5.22	6.04
International	3.47	3.57	3.77
Year-end exchange rate ( <i>reais</i> /US\$)	3.31	3.26	3.90
Appreciation (depreciation) during the year(3)	(1.5)%	16.4%	(46.8)%
Average exchange rate for the year ( <i>reais</i> /US\$)	3.19	3.48	3.34
Appreciation (depreciation) during the year(4)	8.3%	(4.2)%	(41.9)%
Inflation rate (IPCA)	2.94%	6.28%	10.67%

(1) Non-consolidated companies in Venezuela and in Africa.

(2) Amounts were converted from bbl to cubic feet in accordance with the following scale: 1 bbl = 6 cubic feet.

(3) Based on year-end exchange rate (US\$/R\$)

(4) Based on average exchange rate for the year (US\$/R\$)

**Results of Operations 2017 compared to 2016****Sales Revenues**

Sales revenues increased by 9% to US\$88,827 million in 2017 from US\$81,405 million in 2016, driven primarily by:

Higher export revenues (US\$4,636 million) due to higher international prices of crude oil and oil products, as well as higher volume of exported crude oil reflecting an increase in the domestic market share.

Higher domestic revenues (US\$5,431 million), as a result of:

- a) Higher oil products revenues (US\$2,294 million), mainly reflecting the average increase in diesel and gasoline prices when expressed in U.S. dollars, as well as higher average realization prices for other oil products, such as liquefied petroleum gas and jet fuel, following the increase in their international prices. These effects were partially offset by the decrease in oil products sales volume due to drop in market share, mainly for diesel and gasoline markets;
- b) Increased electricity revenues (US\$1,678 million) due to higher thermoelectric dispatch with higher prices in the spot market, as a result of worsen hydrological conditions; and
- c) Higher natural gas revenues (US\$1,222 million), reflecting higher thermoelectric dispatches with higher prices and sales.

Lower revenues from operations abroad (US\$2,645 million), due to the sale of Petrobras Argentina S.A. in the third quarter of 2016 and Petrobras Chile Distribución Ltda in the first quarter of 2017.

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### ***Cost of Sales***

Cost of sales increased by 9% to US\$60,147 million in 2017, compared to US\$55,417 million in 2016, mainly due to:

Foreign exchange translation effects which increased the average cost of sales when expressed in U.S. dollars, reflecting the appreciation of the average *real*;

Higher production taxes expenses due to the increase in international prices and rise in production of Lula field, which has a higher special participation rate imposed on it; and

Increased electricity expenses as a result of higher prices in the spot market.  
These effects were partially offset by:

Lower import costs of oil and oil products due to higher share of domestic crude oil on the processed feedstock and the lower oil product sales volume in the domestic market;

Lower import costs of natural gas due to higher share of domestic natural gas in sales mix;

Decreased depreciation expenses, reflecting impairments of assets recognized in 2016;

Lower costs from operations abroad mainly attributable to the sale of Petrobras Argentina S.A. and Petrobras Chile Distribución Ltda.

### ***Selling Expenses***

Selling expenses increased by 15% to US\$4,538 million in 2017 from US\$3,963 million in 2016, mainly due to foreign exchange translation effects, which increased the average selling expenses when expressed in U.S. dollars, and higher transportation charges by the use of third parties gas pipelines, following the sale of Nova Transportadora do Sudeste (NTS). These effects were partially offset by lower impairment of trade and other receivables, primarily relating to companies from the electricity sector, and the effects of the sale of Petrobras Argentina S.A. and Petrobras Chile Distribución Ltda.

### ***General and Administrative Expenses***

General and administrative expenses decreased by 12% to US\$2,918 million in 2017 from US\$3,319 million in 2016. This decrease mainly reflects lower personnel expenses, following the separations under the voluntary separation incentive program (PIDV), and to lower expenses with outsourced administrative services. For further information, see Item 6. Directors, Senior Management and Employees Employees and Labor Relations.

### ***Exploration Costs***

Exploration costs decreased by 55% to US\$800 million from US\$1,761 million in 2016 due to decrease in exploration well costs written off as a dry hole or sub-commercial wells amounting to US\$ 1,002 million. A breakdown of our exploration costs by nature is set out in Note 15 to our audited consolidated financial statements.

### *Research and Development Expenses*

Research and development expenses increased by 9% to US\$572 million from US\$523 million in 2016, driven by foreign exchange translation effects which increased Research and Development expenses when expressed in U.S. dollars. See Item 5. Operating and Financial Review and Prospects Research and Development for further details about our research and development activities.

### *Other taxes*

Other taxes increased by 58% to US\$1,843 million from US\$714 million in 2016, mainly due to our decision to benefit from the Brazilian federal settlement programs. See Note 21 to our audited consolidated financial statements for further information on these tax amnesty and refinancing programs.

### *Impairment of Assets*

We recognized impairment charges of US\$1,191 million in 2017 mainly for RTM and Gas & Power assets (US\$781 million and US\$446, respectively), mainly due to higher costs of raw materials and the lower refining margin projection, as well as following the lower expectation of a successful sale of fertilizers and nitrogen products plants.

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Regarding E&P assets, the enhanced risk perception of Brazilian market decreased the discount rates applied for impairment testing purposes, along with the better operational efficiency of certain fields and the lower tax burden set forth in the new tax rules applicable to the oil and gas industry, resulted in reversals of US\$1,733. By contrast, expected acceleration of production cessation of certain fields reflecting an optimization of investment portfolio, as well as lower risk-adjusted discount rate for decommissioning costs, which also increased the costs of assets related to the abandonment and dismantling of these areas were the main contributing factors for impairment losses on producing properties in Brazil. In addition, we accounted for impairment losses for E&P under the scope of the partnership and divestment program, mainly with respect to oil and gas production and drilling equipment in Brazil and to the sale of a portion of Roncador field in Campos basin (US\$405 million).

Impairment losses in 2017 were 81% lower when compared to 2016. See Notes 4.10, 5.2, 5.3 and 14 to our audited consolidated financial statements for more information about the impairment of our assets.

### ***Other Income and Expenses***

Other income and expenses increased by 8% to US\$5,599 million in 2017 from US\$5,207 million in 2016, mainly attributable to:

Higher provision for losses on legal proceedings (US\$2,954 million), mainly impacted by the agreement to settle the class action in the United States;

Lower gains on review of provision for decommissioning costs, as a result of higher discount rate and the appreciation of the *real* against the U.S. dollar in 2017 (US\$1,154 million);

Higher pension and medical benefit expenses associated with retirees (US\$486 million), due to unwinding of discount over an increased net actuarial obligation;

Gain on sale and write-off of assets (US\$1,205 million), mainly driven by the sale of interests in NTS and on its remaining interests measured at fair value (US\$217 million);

Reversal of provisions relating to the voluntary separation incentive program (PIDV) due to the cancellation of enrollments in 2017 (US\$237 million), compared to the PIDV expenses in 2016 (US\$1,228 million); and

Lower foreign exchange losses reclassified from equity to results triggered by the sale of certain investees (US\$1,420 million), mainly reflecting the sale of PESA in the 2016 (US\$1,428 million).

### ***Net Finance Income (Expense)***

Net finance expense increased by 28% to US\$9,895 million in 2017 from US\$7,755 million in 2016, resulting from:



Higher foreign exchange and inflation indexation charges (US\$1,697 million), generated by:

- a) Foreign exchange variation losses of US\$718 million driven by the impact of a 13.7% depreciation of the U.S. dollar against our net debt in 2017 in Euro, compared to the foreign exchange gains of US\$191 million due to the 3.1% appreciation on the net debt in 2016 (US\$909 million);
- b) Foreign exchange losses of US\$39 million driven by the impact of a 9.1% depreciation of the U.S. dollar against the pound sterling over the average net debt in pound sterling in 2017, compared to the foreign exchange gains of US\$403 million due to the 16.5% appreciation on the net debt in 2016 (US\$442 million);
- c) Foreign exchange losses of US\$91 million driven by the impact of an appreciation of the *real* against the U.S. dollar over the average positive exposure in U.S. dollar in 2017, compared to the foreign exchange gains of US\$159 million due to the 16.5% appreciation of the *real* against the U.S. dollar over the average negative exposure in U.S. dollar in 2016 (US\$250 million); and
- d) Foreign exchange gains due to lower *real* x Euro exposure (US\$39 million).

Higher finance expenses (US\$437 million), mainly due to:

- a) Finance charges arisen from our decision to join Brazilian federal settlement programs in 2017 (US\$837 million); and
- b) Lower financing expenses in Brazil, due to pre-payment of debts (US\$376 million), along with higher capitalized borrowing costs (US\$247 million).

**Table of Contents****Results in equity-accounted investments**

Positive results in equity-accounted investments of US\$673 million in 2017, mainly due to the higher income of associates, compared to the negative result of US\$218 million in 2016, which was impacted by the Braskem's leniency agreement and by the negative result of our former associate Guarani S/A.

**Income Taxes**

Our net income before income taxes, along with the permanent difference pertaining to income taxes recognized in the scope of tax settlement programs created by the Brazilian federal government, resulted in income taxes expenses of US\$1,828 in 2017, a 167% increase compared to 2016. See Note 21.2 to our audited consolidated financial statements for information on our decision to join these settlement programs, thereby enabling us to resolve significant disputes.

The effective tax rate based on the results increased to a positive rate of 91.5% from a negative rate of 18.7% in 2016. Besides the income taxes under the aforementioned tax settlement programs, in 2017 other the difference between the statutory corporate tax rate (34%) and our effective tax rate were also affected to a lesser extent by other permanent difference, primarily the nondeductible expenses and nontaxable income including post-retirement health care plan expenses and results in equity accounted investments, as well as different jurisdictional tax basis for foreign subsidiaries. These permanent differences arise to the extent that expenses related to post-retirement health care benefits are recognized and we account for results in equity accounted investees for each reporting period, and profits and losses arising in higher and lower tax rate jurisdictions overseas subsidiaries occur.

See Note 21.6 to our audited consolidated financial statements for a reconciliation of statutory tax rates and our tax expense.

**Net Income (Loss) by Business Segment**

We measure performance at the business segment level based on net income. The following is a discussion of the net income (loss) of our main four business segments for 2017, compared to 2016.

See Item 4. Information on the Company and Notes 4.2 and 29 to our 2017 audited consolidated financial statements for more information about our business segments.

	Year Ended December 31,		
	2017(1)	2016(1)	Percentage Change
	(US\$ million)		
Exploration and Production	7,021	1,425	393
Refining, Transportation and Marketing	4,235	5,746	(26)
Gas and Power	1,915	732	162
Distribution	521	67	678
Biofuel	(47)	(323)	(85)
Corporate(2)	(13,481)	(11,403)	18
Eliminations	(255)	(1,082)	(76)
Net income	(91)	(4,838)	(98)

- (1) Excluding non-controlling interests.
- (2) Our Corporate segment comprises our financing activities not attributable to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retirees. In 2017, it includes the provision for the class action settlement.

*Exploration and Production*

Net income in our Exploration and Production segment was US\$7,021 million in 2017 compared to US\$1,425 million in 2016. This increase was mainly attributable to higher oil prices, lower depreciation and impairment expenses of oil and gas producing properties in Brazil. These effects were partially offset by higher production taxes. See Note 14 to our 2017 audited consolidated financial statements for further information about impairment expenses.

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### ***Refining, Transportation and Marketing***

In 2017, net income in our Refining, Transportation and Marketing segment was US\$4,235 million, lower when compared to 2016 (US\$5,746 million). The decrease in RTM operating income, was due mainly to the reduction on volumes of domestic sales associated with lower margins and the increase in oil prices, partially offset by lower expenses associated with sales, voluntary separation plan and Impairment, as well as higher result on equity accounted investments.

### ***Gas and Power***

Net income was US\$1,915 million in 2017 compared to US\$732 million in 2016, being the increase attributable to growth in natural gas sales, at higher prices, increase in the participation of the national gas in the sales mix as well as the gain with the sale of our interest in NTS, partially offset by increase in impairment.

### ***Distribution***

Net income was US\$521 million in 2017 compared to US\$67 million in 2016, mainly due to reduction in expenses with sales and with administrative and judicial claims, as well as the reversal of expenses with voluntary separation incentive program of our subsidiary Petrobras Distribuidora, provisioned in 2016. Those factors were partially compensated by lower sales volumes and market share, caused by lower sales to thermoelectric plants, as well as higher participation of third parties in the oil products distribution market.

## **Results of Operations 2016 compared to 2015**

### ***Sales Revenues***

Sales revenues decreased by 16% to US\$81,405 million in 2016 from US\$97,314 million in 2015, driven primarily by:

Decreased domestic revenues (US\$11,127 million) due to lower economic activity in Brazil, mainly as a result of:

- a) Lower oil products revenues (US\$6,963 million), reflecting an 8% decrease on sales, due to lower demand of diesel, consumption of fuel oil following the decreased thermoelectric generation, as well as lower average prices of jet fuel and naphtha. These effects were partially offset by an increase in average prices of diesel and gasoline;
- b) Decreased electricity revenues (US\$2,097 million) mainly from electricity generation, due to improved hydrological conditions; and
- c) Decreased natural gas revenues (US\$1,942 million), as a result of lower thermoelectric demand and of decreased prices.

Lower revenues from operations abroad (US\$3,529 million) pursuant to the disposal of interests in PESA and to lower crude oil and oil product sales prices; and

Lower export revenues (US\$1,253 million), as a result of a decrease in international oil and oil products prices, partially offset by higher export volumes, mainly crude oil, due to lower domestic demand and higher domestic production.

*Cost of Sales*

Cost of sales decreased by 18% to US\$55,417 million in 2016, compared to US\$67,485 million in 2015, mainly due to:

Lower import costs of natural gas, crude oil and oil products, generated by lower domestic demand and by the 17% decrease in Brent price;

Decreased production taxes in Brazil, as a result of lower international crude oil prices;

Decreased costs from operations abroad attributable to the disposal of PESA and to lower international crude oil prices;

Lower electricity costs as a result of decreased thermoelectric demand;

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Lower carrying amounts of assets impacted by the impairment losses recognized in 2015 and in September 2016; and

The higher crude oil production costs, reflecting the increase in depreciation expenses arisen from the lower reserves estimates (unit of production method), which partially offset the aforementioned effects.

### ***Selling Expenses***

Selling expenses decreased by 14% to US\$3,963 million in 2016 from US\$4,627 million in 2015, mainly due to (i) lower allowance for impairment of trade receivables from companies in the electricity sector and (ii) decreased freight expenses, as a result of lower domestic sales volume. For further information, see Note 8.4 to our audited consolidated financial statements.

### ***General and Administrative Expenses***

General and administrative expenses in 2016 remained relatively flat compared to 2015. For further information, see Item 6. Directors, Senior Management and Employees Employees and Labor Relations.

### ***Exploration Costs***

Exploration costs decreased by 8% to US\$1,761 from US\$1,911 million in 2015 due to (i) lower exploration well costs written off as a dry hole or sub-commercial wells (US\$160 million) and (ii) the decrease in geological and geophysical expenses (US\$45 million). These effects were partially offset by an increase in other exploration expenses (US\$55 million), such as charges related to minimum work program, as specified in the Assignment Agreement, and local content requirements. A breakdown of our exploration costs by nature is set out in Note 15 to our audited consolidated financial statements. For further information on our minimum work program, see Item 10. Additional Information Material Contracts Minimum Work Program and for further information on local content requirements, see Item 10. Additional Information Material Contracts Brazilian Content.

### ***Research and Development Expenses***

Research and development expenses decreased by 17% to US\$523 million from US\$630 million in 2015, driven by the decrease in gross revenues from highly productive oil fields in Brazil, since the ANP requires that we invest at least 1% of our gross revenues originating from those fields in research and development projects. See Item 5. Operating and Financial Review and Prospects Research and Development for further details about our research and development activities.

### ***Other taxes***

Other taxes decreased by 74% to US\$714 million from US\$2,796 million in 2015, mainly due to our decision, in 2015, to benefit from the Federal Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal* - REFIS) (US\$1,566 million) and from State Tax Amnesty Programs (US\$314 million). See Note 21 to our 2016 audited consolidated financial statements for further information on these tax amnesty and refinancing programs.

### ***Impairment of Assets***

We recognized Impairment charges of US\$6,193 million in 2016 mainly for exploration and production assets (US\$3,272 million), Refining, Transportation and Marketing activities (US\$2,457 million) and Gas and Power

(US\$375 million), mainly due to (i) a slower recovery of oil prices, (ii) a decrease in future capital expenditures, reflecting our plan to reduce current debt levels and optimize our investment portfolio, (iii) recent changes in Brazilian political and economic scenario. These changes significantly affected the estimates of our key assumptions for impairment testing. Changes in the political and economic scenario in Brazil also resulted in increases in discount rates.

Certain sales of assets, part of our divestment plan, the annual reviews of our estimated reserves and decommissioning costs and the write-offs related to COMPERJ and Transpetro fleet of vessels projects also contributed to impairment recognition.

Impairment losses in 2016 were 50% lower when compared to 2015. See Notes 4.10, 5.2, 5.3 and 14 to our audited consolidated financial statements for more information about the impairment of our assets.

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***Other Expenses, Net***

Other expenses, net decreased by 3% to US\$5,207 million in 2016 from US\$5,345 million, mainly attributable to:

Positive effect related to the review of provision for decommissioning costs, as a result of higher discount rate and the appreciation of the *real* against the U.S. dollar (US\$1,635 million);

Gross gains on disposal of assets (US\$1,051 million), mainly due to (i) gains from the sale of our interest in exploratory block BM-S-8 and in PESA and (ii) lower expenses with respect to areas reverted to ANP and cancelled projects;

Reversal of the provision for the legal proceeding filed against us due to the favorable decision on our appeal (US\$418 million);

Lower expenses with institutional relations and cultural projects (US\$175 million);

Reclassification of foreign exchange losses derived from the depreciation of Argentine Peso and Yen, from shareholders' equity to the statement of income (cumulative translation adjustment - CTA), due to the disposal of PESA and of Petrobras Nansei Seikyu, respectively (US\$1,457 million);

Higher expenses related to the 2016 PIDV (US\$1,113 million); and

Higher unscheduled stoppages and pre-operating expenses (US\$620 million), mainly related to drilling rigs idleness.

***Net Finance Income (Expense)***

Net finance expense decreased by 8% to US\$7,755 million in 2016 from US\$8,441 million in 2015, resulting from:

Lower foreign exchange and inflation indexation charges (US\$1,566 million), mainly due to:

- a) Foreign exchange variation of the *real* on our net debt in U.S. dollar (US\$1,275 million), due to the 16.5% appreciation of the *real* against the U.S. dollar, net of the reclassification of cumulative foreign exchange variation from shareholders' equity to net income due to occurred exports designated for cash flow hedge accounting;



- b) Lower foreign exchange losses of the *real* against the Euro, caused by our lower net debt in Euro (US\$591 million);
- c) Higher foreign exchange gains generated by the impact of a 16.5% appreciation of the U.S. dollar against the pound sterling on net debt, compared to the appreciation of 4.9% in 2015 (US\$282 million); and
- d) Lower foreign exchange gains caused by the impact of a 3.1% appreciation of the U.S. dollar against the Euro on our net debt in 2016, compared to a 10.4% appreciation in 2015 (US\$497million).

Higher finance expenses (US\$521 million), due to:

- a) An increase in our average debt, caused by the impact of the depreciation of the average *real* against the U.S. dollar, net of capitalized borrowing costs (US\$950 million);
- b) Higher unwinding discount on our provision for decommissioning costs (US\$431 million); and
- c) Finance expenses generated by the Tax Amnesty and Refinancing Program (*Programa de Recuperação Fiscal* - REFIS) we have jointed in 2015 (US\$768 million).

Lower finance income (US\$359 million), mainly due to lower average balance invested and to lower gains with derivatives on trade operations.

### **Income Taxes**

Although we reported a loss for the fiscal year ended December 31, 2016, income taxes expenses were recognized for the fiscal year ended December 31, 2016. The effective tax rate based on the results decreased to a negative rate of 18.7% in 2016 from a positive rate of 11.7% in 2015. In 2016, the main reconciliation items between the statutory corporate tax rate (34%) and our effective tax rate refer to nondeductible expenses and nontaxable income, such as CTA transferred to income statement, post-retirement health care plan and results in equity accounted investments. These permanent differences for income tax purposes arise to the extent that we dispose of foreign operations that use a functional currency other than the functional currency used by its parent company (ex. PESA), in which expenses related to post-retirement health care benefits are recognized and we account for results in equity accounted investees for each reporting period, respectively.

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See Note 21.6 to our 2017 audited consolidated financial statements for a reconciliation of statutory tax rates and our tax expense.

**Net Income (Loss) by Business Segment**

We measure performance at the business segment level based on net income. The following is a discussion of the net income (loss) of our main four business segments for 2016, compared to 2015.

See Item 4. Information on the Company and Notes 4.2 and 29 to our 2016 audited consolidated financial statements for more information about our business segments.

	<b>Year Ended December 31,</b>		
	<b>2016(1)</b>	<b>2015(1)</b>	<b>Percentage Change</b>
	<b>(US\$ million)</b>		
Exploration and Production	1,425	(2,480)	(157)
Refining, Transportation and Marketing	5,746	5,727	
Gas and Power	732	237	209
Distribution	67	(142)	(147)
Biofuel	(323)	(276)	17
Corporate(2)	(11,403)	(11,816)	(3)
Eliminations	(1,082)	300	(461)
Net income	(4,838)	(8,450)	(43)

(1) Excluding non-controlling interests.

(2) Our Corporate segment comprises our financing activities not attributable to other segments, including corporate financial management, central administrative overhead and actuarial expenses related to our pension and medical benefits for retirees.

**Exploration and Production**

Net income in our Exploration and Production segment was US\$1,425 million in 2016 compared to a loss of US\$2,480 million in 2015. This gain was mainly attributable to higher impairment expenses recognized in 2015 for producing properties related to oil and gas activities in Brazil. See Note 14 to our 2016 audited consolidated financial statements for further information about our impairment expenses. These effects were partially offset by a lower gross profit for this segment caused by the higher depreciation, given the reduction in reserves in 2015, which was more relevant in the E&P costs of sales than the lower lifting costs and lower production taxes.

For further information about our proved reserves, see Supplementary Information on Oil and Gas Exploration and Production to our 2016 audited consolidated financial statements for information on changes in our proved reserves.

**Refining, Transportation and Marketing**

In 2016, net income in our Refining, Transportation and Marketing segment was US\$5,746 million, remaining relatively flat when compared to 2015. The increase in RTM operating income, which mainly reflected higher expenses in 2015 derived from our decision to join tax amnesty and refinancing programs and from losses on legal

proceedings allocated to this business segment, were substantially offset by higher impairment expenses in 2016, as well as losses on equity accounted investments mainly related to the associate Braskem.

*Gas and Power*

Net income was US\$732 million in 2016 compared to US\$237 million in 2015, a US\$495 increase attributable to (i) a reduction in natural gas and LNG imports, resulting in lower acquisition costs, lower tax expenses and in impairment charges and (ii) revenues arisen from contractual fines. These effects were partially offset by the natural gas sales and electricity generation revenues due to the improvement of hydrological conditions in Brazil and higher impairment provision for trade receivables associated with the isolated electricity sector in the Northern region of Brazil.

**Table of Contents****Distribution**

Net income was US\$67 million in 2016 compared to the US\$142 million loss in 2015, mainly due to lower impairment provision for trade receivables from the isolated electricity sector in the Northern region of Brazil (see Note 8.4 to our 2016 audited consolidated financial statements). These effects were partially offset by lower sales volumes, caused by the reduction in economic activity in Brazil and expenses relating to the new voluntary separation incentive program of our subsidiary Petrobras Distribuidora.

**Additional Business Segment Information**

Additional selected financial data by business segment for 2017, 2016 and 2015 is set out below:

	<b>For the Year Ended December 31,</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
	<b>(US\$ million)</b>		
<b>Exploration and Production</b>			
Sales revenues to third parties(1)(2)	1,422	1,480	1,502
Intersegment sales revenues	40,762	32,195	34,178
Total sales revenues(2)	42,184	33,675	35,680
Net income (loss)(3)	7,021	1,425	(2,480)
Capital Expenditures According to Our Plan Cost Assumptions(4)	12,397	13,509	19,131
Property, plant and equipment	126,487	123,056	109,724
<b>Refining, Transportation and Marketing</b>			
Sales revenues to third parties(1)(2)	50,895	45,498	51,870
Intersegment sales revenues	16,142	17,090	22,451
Total sales revenues(2)	67,037	62,588	74,321
Net income (loss)(3)	4,235	5,746	5,727
Capital Expenditures According to Our Plan Cost Assumptions(4)	1,284	1,168	2,534
Property, plant and equipment	33,400	35,515	33,032
<b>Gas and Power</b>			
Sales revenues to third parties(1)(2)	9,347	6,911	11,072
Intersegment sales revenues	3,027	2,490	2,073
Total sales revenues(2)	12,374	9,401	13,145
Net income (loss)(3)	1,915	732	237
Capital Expenditures According to Our Plan Cost Assumptions(4)	1,127	717	793
Property, plant and equipment	13,231	13,094	14,674
<b>Biofuel</b>			
Sales revenues to third parties(1)(2)	12	9	16
Intersegment sales revenues	201	231	213
Total sales revenues(2)	213	240	229
Net income (loss)(3)	-47	(323)	(276)

Capital Expenditures According to Our Plan Cost Assumptions(4)	35	96	43
Property, plant and equipment	89	100	91
<b>Distribution</b>			
Sales revenues to third parties(1)(2)	27,151	27,507	32,854
Intersegment sales revenues	416	420	552
Total sales revenues(2)	27,567	27,927	33,406
Net income (loss)(3)	521	67	(142)
Capital Expenditures According to Our Plan Cost Assumptions(4)	109	139	255
Property, plant and equipment	1,862	1,936	1,868

- (1) As a vertically integrated company, not all of our segments have significant third-party revenues. For example, our Exploration and Production segment accounts for a large part of our economic activity and Capital Expenditures According to Our Plan Cost Assumptions, but has little third-party revenues.
- (2) Revenues from commercialization of oil to third parties are classified in accordance with the points of sale, which could be either the Exploration and Production or Refining, Transportation and Marketing segments.
- (3) Excluding non-controlling interests.
- (4) See definition of Capital Expenditures According to Our Plan Cost Assumptions in Glossary of Certain Terms Used in this Annual Report.

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### **Liquidity and Capital Resources**

#### ***Overview***

Our principal uses of funds in 2017 were for debt service obligations (US\$43,076 million) and capital expenditures (US\$13,639). We met these requirements with cash provided by operating activities (US\$27,112 million), proceeds from financing (US\$27,075 million) and cash provided by the disposal of assets and sale of interest without loss of control (US\$4,602 million). As of December 31, 2017, although our cash flow from operations was more than sufficient to meet our capital expenditures, our positive free cash flow (cash flow from operations after capital expenditures) was less than the resources needed to fund our debt principal and interest expenditures.

As of December 31, 2017, our foreign currency debt totaled US\$87,541 million, representing 80% of our total financial debt. When compared to 2016, our debt denominated in foreign currency decreased by 7% mainly reflecting pre-payment of debts during 2017.

In 2018, our major cash needs are to meet our budgeted capital expenditures for the year, currently amounting to US\$17.3 billion, and to make principal and interest payments of US\$11,579 million on our debt.

#### ***Financing Strategy***

Our financing strategy is to fund our necessary capital expenditures and to preserve our cash balance and liquidity while meeting our principal and interest payment obligations.

We will pursue our financing strategy in 2018 and going forward in the following ways: (i) using the potential proceeds from the sale of certain of our assets under our divestment program for the 2017-2018 period; (ii) using cash flow from operations and (iii) incurring new debt from traditional and new funding sources to prepay some short term and expensive loans with certain of our creditors and to exchange short term credit lines for long term credit lines to extend our maturity profile.

The following operations were carried out in 2018:

US\$1,962 million has been disbursed to us through the issuance of global notes in the international market, maturing in February 2029. These proceeds were entirely used to redeem global notes previously issued by us;

We purchased, in a cash tender offer, global notes in the principal aggregate amount of US\$3,197 million and 366 million (equivalent to US\$454 million);

We signed with Banco do Brasil a revolving credit facility in the amount of US\$ 605 million, with maturity in February 2023, and signed financing contracts as export credit notes in the total amount of US\$ 2,007 million, with maturities in 2023 and 2024. Additionally, we early repaid export credit notes with Banco do Brasil in the total amount of US\$ 2,314 million, which maturities were due between 2019 and 2021;

We signed with a syndicate of 17 banks a revolving credit facility (RCF) in the amount of US\$ 4.35 billion, with maturity in March 2023; and

We prepaid the remaining balance of the financing agreement with China Development Bank (CDB) contracted in 2009 in the amount of US\$ 2.8 billion and made a US\$ 2 billion withdrawal from the new financing agreement contracted with the CDB at the end of 2017.

### *Rating*

We are rated by the three major agencies (S&P, Moody's and Fitch). Our ratings are based on its financial health and are highly influenced by the sovereign rating.

Between 2015 and mid-2016, we lost our investment grade ratings due to the deterioration of our financial conditions, with high indebtedness and substantial increase in leverage, as well as liquidity pressure and reduced capacity to meet our payment obligations on the short-term and medium-term, affected by the significant decline in international crude oil prices and the sharp devaluation of the real. The deterioration of our ratings was also due to the sovereign's downgrade.

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From mid-2016 to 2017, our ratings were upgraded several times by Moody's and once by S&P, as a result of the overall improvement in our operating performance, with solid cash flow generation, better debt profile and access to banks and international market, progress in liquidity and governance, as well as significant reduction in leverage and the success of our pricing policy and divestment plan.

In 2018, S&P and Fitch downgraded the sovereign ratings. This movement resulted in the maintenance of Petrobras's rating by S&P and a one-notch downgrade by Fitch. Moody's maintained the sovereign rating, but changed the perspective from negative to stable, and upgraded Petrobras's rating. As of April 2018, all agencies attributed the same ratings to Petrobras and Brazil. Current Petrobras's ratings are Ba2 by Moody's and BB- by Fitch and S&P.

### ***Government Regulation***

We are required to submit our annual capital expenditures budget (*Orçamento Anual de Investimentos*, or OAI) to the MPDM and the MME. Following review by these governmental authorities, the Brazilian Congress must approve the budget. Thus, there may be a reduction or change in our planned investments. As a result, we may not be able to implement all of our planned investments, including those related to the expansion and development of our oil and natural gas fields, which may adversely affect our results of operation and financial condition.

The MPDM oversees the total amount of medium and long-term debt that we and our Brazilian subsidiaries may incur through the annual budget approval process. Operations of foreign credit promoted by us and our Brazilian subsidiaries are not subject to prior authorization by the National Treasury Secretariat - STN. Pursuant to applicable law, issuers must electronically register foreign credit operations in Brazil, which then must be accredited by the Central Bank in accordance with Annex II to Resolution No. 3,844, of 2010.

In addition, the incurrence of debt by our non-Brazilian subsidiaries, including PGF, is not subject to registration with the Central Bank or approval by the National Treasury Secretariat.

All medium and long-term debt incurred by us or our subsidiaries requires the approval of our board of executive officers, within the parameters established by our board of directors, except for the issuance of debentures, which require the approval of our board of directors.

### ***Sources of Funds***

#### ***Our Cash Flow***

In 2017, the resources needed to fund our capital expenditures (US\$13,639 million) and service our debt (US\$43,076 million) were met by cash flow from operations (US\$27,112 million), proceeds from financing (US\$27,075 million) and cash provided by the disposal of assets and sale of interest without loss of control (US\$4,602 million). As of December 31, 2017, our balance of cash and cash equivalents amounted to US\$22,519 million, compared to US\$21,205 million as of December 31, 2016 and our balance of government bonds and time deposits with maturities of more than three months was US\$1,885 million as compared to US\$784 million as of December 31, 2016.

We maintained our liquidity cushion consisting of our balance of cash and cash equivalents, as well as government bonds and time deposits with maturities of more than three months, amounting to US\$24,404 million as of December 31, 2017 as compared to US\$21,989 million as of December 31, 2016.

Net cash provided by operating activities increased by 4% to US\$27,112 million from US\$26,114. It was mainly generated by higher margins of exports and of oil products in the domestic market and by an increase in the share of



domestic oil in the processed feedstock and of the domestic gas in the sales mix, which led to lower import costs. These effects were partially offset by lower market-share in the oil products domestic market.

In 2017, proceeds from financing totaled US\$ 27,075 million principally reflecting: (i) global notes issued in the capital market in the amount of US\$ 10,218 and maturing in 2022, 2025, 2027, 2028 and 2044; (ii) debentures issued in the domestic market amounting to US\$ 1,577 and maturing in 2022 and 2024; and (iii) funds raised from the domestic and international banking market in the amount of US\$ 12,988 with average term of five years.

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Proceeds in 2017 from disposals of assets totaled US\$3,091 million and from sale of interest without loss of control (BR Distribuidora IPO) of US\$ 1,507 million were used for repayment of financing (and interest payments) and for capital expenditures. See Note 10 to our audited consolidated financial statements for further information regarding disposals of assets under our partnership and divestment program. We expect further proceeds derived from the disposal of assets, as our partnership and divestment program for the period 2018-2019 forecasts proceeds of approximately US\$21 billion. For further information on our divestment program, please see Item 4. Information on the Company Overview of the Group.

The uses of cash were primarily for capital expenditures and investments in operating units, which totaled US\$13,639 million in 2017 and remained relatively flat compared to 2016 (US\$14,085 million).

As occurred in 2016 and 2015, our board of directors proposed no distribution of dividends in 2017 as we also reported a loss for this fiscal year.

**Short-Term Debt**

Our outstanding short-term debt serves many purposes, including supporting our working capital and our imports of crude oil and oil products. As of December 31, 2017, our total debt due in the short-term, including accrued interest, amounted to US\$7,001 million, compared to US\$9,755 million as of December 31, 2016.

**Long-Term Debt**

Our outstanding long-term debt consists primarily of securities issued in the international and capital markets, funding from development banks (such as the CDB and the BNDES), loans from Brazilian and international commercial banks and amounts outstanding under facilities guaranteed by export credit agencies and multilateral agencies. The non-current portion of our total long-term debt amounted to US\$102,045 million as of December 31, 2017, compared to US\$108,371 million as of December 31, 2016. This decrease was primarily due to pre-payment of debt. See Note 17 to our audited consolidated financial statements for a breakdown of our debt, a roll-forward schedule of our non-current debt by source and other information.

The following international debt issues are included in these figures at December 31, 2017:

<b>Notes</b>	<b>Carrying amount as of December 31, 2017 (US\$ million)</b>
PGF s 7.875% Global Notes due 2019(*)	562
PGF s 3.000% Global Notes due 2019	691
PGF s 3.250% Global Notes due 2019	801
PGF s Floating Rate Global Notes due 2019	331
PGF s 4.875% Global Notes due 2020	380
PGF s 5.750% Global Notes due 2020(*)	936
PGF s Floating Rate Global Notes due 2020	182
PGF s 3.750% Global Notes due 2021	896
PGF s 5.375% Global Notes due 2021(*)	2,750
PGF s 8.375% Global Notes due 2021	2,820

PGF s 5.875% Global Notes due 2022(*)	717
PGF s 6.125% Global Notes due 2022	3,032
PGF s 4.250% Global Notes due 2023	830
PGF s 4.375% Global Notes due 2023	3,470
PGF s 6.250% Global Notes due 2024	2,491
PGF s 4.750% Global Notes due 2025	952
PGF s 5.299% Global Notes due 2025	3,596
PGF s 6.250% Global Notes due 2026(*)	929
PGF s 8.750% Global Notes due 2026	2,967
PGF s 7.375% Global Notes due 2027	4,168
PGF s 5.999% Global Notes due 2028	5,175
PGF s 5.375% Global Notes due 2029	593
PGF s 6.625% Global Notes due 2034	799
PGF s 6.875% Global Notes due 2040(*)	1,473
PGF s 6.750% Global Notes due 2041(*)	2,364
PGF s 5.625% Global Notes due 2043	1,712
PGF s 7.250% Global Notes due 2044	2,015
PGF s 6.850% Global Notes due 2115	2,019

(\*)Originally issued by PifCo.

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The Net debt/Adjusted EBITDA ratio is an important metric used in our 2018-2022 Plan that supports our management in assessing the liquidity and leverage of Petrobras Group. We expect our Net Debt/Adjusted EBITDA ratio to converge towards the global average of main investment-grade rated oil and gas companies by 2022. To reach this goal, we monitor our corporate and administrative activities and results.

Adjusted EBITDA represents an alternative measure to our net cash provided by operating activities and is computed by using the EBITDA (net income before net finance income (expense), income taxes, depreciation, depletion and amortization) adjusted by items not considered part of our primary business, which include results in equity-accounted investments, impairment, cumulative foreign exchange adjustments reclassified to the income statement and results from disposal and write-offs of assets.

Net Debt reflects the gross debt net of cash and cash equivalents, government bonds and time deposits from highly rated financial institutions abroad with maturities of more than 3 months from the date of acquisition, considering the expected realization of those financial investments in the short-term.

Our Net debt/Adjusted EBITDA ratio is a non-GAAP measure and may not be comparable to the calculation of liquidity measures presented by other companies and it should neither be considered in isolation nor as a substitute for any measure calculated in accordance with IFRS. This metric must be considered together with other measures and indicators for a better understanding of our financial condition.

We applied the same foreign exchange translation method as set in Note 2 to our audited consolidated financial statements ended December 31, 2017 for presenting this metric in the same currency used in our audited consolidated financial statements. Accordingly, assets and liabilities items were translated into U.S. dollars at the exchange rate as of the date of the statement of financial position, and all items pertaining to the statement of income and statement of cash flows were translated at the average rates prevailing at each quarter of the years.

Depending on the foreign translation effects on items that comprise this metric, the Net Debt/Adjusted EBITDA may differ or even present a different trend when comparing the results in both currencies, as it did in 2017. However, we are pursuing 2.5 target based on our net debt and Adjusted EBITDA computed in *reais*, as described in Item 4. Information on the Company 2018-2022 Plan and Strategic Monitoring Process.

The following table presents, in both currencies, the reconciliation for 2017 and 2016 of the Net debt/Adjusted EBITDA ratio measure to the most directly comparable GAAP measure in accordance with IFRS, which is in this case the Gross Debt Net of Cash and Cash Equivalents / Net Cash provided by operating activities ratio:

	2017 (R\$ million)	2016 (R\$ million)	2017 (US\$ million)	2016 (US\$ million)
<b>Cash and cash equivalents</b>	<b>74,494</b>	<b>69,108</b>	<b>22,519</b>	<b>21,205</b>
Government securities and time deposits (maturity of more than three months)	6,237	2,556	1,885	784
Adjusted cash and cash equivalents	80,731	71,664	24,404	21,989
<b>Current and non-current debt Gross Debt</b>	<b>361,483</b>	<b>385,784</b>	<b>109,275</b>	<b>118,370</b>

<b>Net Debt</b>	<b>280,752</b>	<b>314,120</b>	<b>84,871</b>	<b>96,381</b>
<b>Net cash provided by operating activities OCF</b>	<b>86,467</b>	<b>89,709</b>	<b>27,112</b>	<b>26,114</b>
Income taxes	(5,797)	(2,342)	(1,828)	(684)
Impairment of trade and others receivables	2,271	3,843	708	1,131
Trade and other receivables, net	(3,140)	397	(978)	(39)
Inventories	(1,130)	(2,010)	(336)	(518)
Trade payables	(160)	(4,154)	(62)	(1,060)
Deferred income taxes, net	1,452	(3,280)	467	(913)
Taxes payable	6,911	1,932	2,153	675
Others	9,503	6,630	2,949	1,892
<b>Adjusted EBITDA</b>	<b>76,557</b>	<b>88,693</b>	<b>24,039</b>	<b>25,630</b>
<b>Gross debt net of cash and cash equivalents / OCF ratio</b>	<b>3.32</b>	<b>3.53</b>	<b>3.20</b>	<b>3.72</b>
<b>Net debt/Adjusted EBITDA ratio</b>	<b>3.67</b>	<b>3.54</b>	<b>3.53</b>	<b>3.76</b>

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Our Net debt/Adjusted EBITDA ratio computed in *reais* increased from 3.54 to 3.67 principally reflecting the agreement to settle the Class Action before the Federal Court of New York in the United States of America. For further information, see Item 8. [Financial Information](#) [Consolidated Statements and Other Financial Information](#) [Legal Proceedings](#) [Class Action](#).

By contrast, our Net debt/Adjusted EBITDA ratio computed in US dollar decreased from 3.76 at December 31, 2016 to 3.53 at December 31, 2017 reflecting foreign exchanges effects over our net debt and Adjusted EBITDA. See [Inflation and Exchange Rate Variation](#) [Critical Accounting Policies and Estimates](#) [Exchange Rate Variation](#) for information on impacts of fluctuations in exchange rate on our financial statements.

**Off Balance Sheet Arrangements**

As of December 31, 2017, we had no off-balance sheet arrangements that have, or are reasonably likely to have, a material effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

**Uses of Funds****Capital Expenditures According to Our Plan Cost Assumptions**

We disbursed a total of US\$15,084 million in 2017, a 5% decrease when compared to our investments of US\$15,859 million in 2016. In line with our previous 2018-2022 Plan, our investments in 2017 were primarily directed toward the most profitable investment projects relating to oil and gas production. Of this amount, US\$12,397 relates to E&P business.

These investments are based on our 2018-2022 Plan cost assumptions and financial methodology, which include charges that do not necessarily qualify for recognition as assets under IFRS, and the following table sets forth a breakdown of them for each of our business segments for 2017, 2016 and 2015:

	<b>For the Year Ended</b>		
	<b>December 31</b>		
	<b>2017</b>	<b>2016</b>	<b>2015(1)</b>
	<b>(US\$ million)</b>		
Exploration and Production	12,397	13,509	19,131
Refining, Transportation and Marketing	1,284	1,168	2,534
Gas and Power	1,127	717	793
Distribution	109	139	255
Biofuel	35	96	43
Corporate	132	230	302
<b>Total</b>	<b>15,084</b>	<b>15,859</b>	<b>23,058</b>

(1) In the fourth quarter of 2015, we changed our reportable business segments to reflect the reallocation of our international activities into the business segment to which the underlying activities correspond, thus reducing our

reportable business segments from six to five.

We announced projected Capital Expenditures According to Our Plan Cost Assumptions of US\$74.5 billion for 2018-2022 period. For further information on our 2018-2022 Plan, see Item 4. Information on the Company 2018-2022 Plan and Strategic Monitoring Process. We plan to meet our budgeted Capital Expenditures According to Our Plan Cost Assumptions primarily through cash flow from our operations and through partnerships and divestments. Our actual Capital Expenditures According to Our Plan Cost Assumptions may vary substantially from the projected numbers set forth above as a result of market conditions and the cost and availability of the necessary funds.

### *Dividends*

We did not pay dividends for the year ended December 31, 2017. Our board of directors proposed no distribution of dividends in 2018 for profits accrued in the year ended December 31, 2017 as we reported a loss for the fiscal year. See Note 23.5 to our audited consolidated financial statements.

For more information on our dividend policy see Mandatory Distribution and Payment of Dividends and Interest on Capital in Item 10. Additional Information Memorandum and Articles of Incorporation.

**Table of Contents****Contractual Obligations**

The following table summarizes our outstanding contractual obligations and commitments at December 31, 2017:

	Total	Payments Due by Period			> 5 years
		< 1 year	1-3 years	3-5 years	
(US\$ million)					
<b>Contractual obligations</b>					
<b>Balance sheet items(1):</b>					
Debt obligations(2)	109,046	7,001	16,117	30,759	55,169
Finance lease obligations	229	25	42	31	131
Provision for decommissioning costs(3)	14,313	948	1,633	36	11,696
Total balance sheet items	123,588	7,974	17,792	30,826	66,996
<b>Other long-term contractual commitments</b>					
Natural gas ship-or-pay(4)	6,412	1,360	2,585	2,467	0
Service contracts	57,409	19,979	11,083	4,957	21,390
Natural gas supply agreements(4)	7,183	1,341	2,733	3,109	0
Operating leases	92,019	8,417	12,521	12,723	58,358
Purchase commitments	9,005	6,635	2,112	240	18
Total other long-term commitments	172,028	37,732	31,034	23,496	79,766
<b>Total</b>	<b>295,616</b>	<b>45,706</b>	<b>48,826</b>	<b>54,322</b>	<b>146,762</b>

(1) Excludes the amount of US\$36,855 million related to our pension and medical benefits obligations, which are partially funded by US\$15,025 million in plan assets. Information on employees' post-retirement benefit plans, including a schedule of expected maturity of pension and medical benefits obligations, is presented in Note 22 to our audited consolidated financial.

(2) Includes accrued interest, short-term and long-term debt (current and non-current portions). Information about our future interest and principal payments (undiscounted) for the coming years is presented in Note 33.6 to our audited consolidated financial statements.

(3) Includes US\$170 million of liabilities related to assets classified as held for sale.

(4) The current import contract is expected to terminate in December 2019, but it will be automatically extended until the entire contracted volume be taken by Petrobras up to, at least, April 2022.

**Critical Accounting Policies and Estimates**

Information about those areas that require the most judgment or involve a higher degree of complexity in the application of the accounting policies that currently affect our financial condition and results of operations is provided in our audited consolidated financial statements. See Note 5 Critical accounting policies: key estimates and judgments to our audited consolidated financial statements. Additional information about our accounting policies and new accounting standards and interpretations are provided in Notes 4 and 6 to our audited consolidated financial statements.

The accounting estimates we make in these contexts require us to make assumptions about matters that are highly uncertain. Note 5 to our audited consolidated financial statements addresses the estimates that we consider most important based on the degree of uncertainty, the potential events that may negatively affect our estimates and the



likelihood of a material impact if we used a different estimate. These assumptions are based on past transactions and other relevant information and are periodically reviewed by our management. Actual results could differ from these estimates.

The following addresses only those estimates that we consider most important based on the degree of uncertainty and the likelihood of a material impact if we used a different estimate. There are many other areas in which we use estimates about uncertain matters, but the reasonable likelihood of changes based on the use of different estimates in those cases is not material to our financial presentation.

### *Oil and gas reserves*

Note 5.1 to our audited consolidated financial statements addresses qualitative information on oil and gas reserves estimates, such as uncertainties associated with the methods and assumptions involved in determining oil and gas reserves, as well as estimates underlying the process through which we determine these reserves and the main impacts of these in our financial statements. Reserve quantities information, such as annual changes in proved reserves, including quantitative data and qualitative discussion, is presented in the Supplementary information on Oil and Gas Exploration and Production (unaudited) section of our audited consolidated financial statements.

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***Impairment testing***

Information on impairment testing is presented in detail in our consolidated audited financial statements. It is regarded as a significant accounting policy, as described in detail in Notes 4.10 and 4.11 to our audited consolidated financial statements, as well as a critical accounting estimate. For information about the impairment of certain of our assets, see Item 5. Operating and Financial Review and Prospects Results of Operations 2017 compared to 2016 and Item 5. Operating and Financial Review and Prospects Results of Operations 2016 compared to 2015, and Notes 5.2 and 14 to our audited consolidated financial statements.

Note 5.2 to our audited consolidated financial statements describes the key assumptions for impairment testing of our property, plant and equipment and intangible assets: average Brent prices and *real*/U.S. dollar average exchange rate. Note 5.2 also addresses the process through which we estimate these assumptions, which takes into account our 2018-2022 Plan and our strategic plan, and discusses the related uncertainties and potential events that we reasonably expect could negatively affect our assumptions. For further information, see Item 3. Key Information Risk Factors Business Risks We are exposed to the effects of fluctuations in the prices of oil, gas and oil products.

Identifying cash-generating units (CGUs) is also a critical accounting policy as described in Note 5.3 to our audited consolidated financial statements. The aggregation of assets into CGUs requires management judgment based on the consideration of certain assumptions and our business and management model. Note 5.3 addresses the underlying assumptions for the determination of our operating segment CGUs.

A comprehensive disclosure about impairments and the impacts of impairment testing for 2017, 2016 and 2015 is presented in Note 14 to our audited consolidated financial statements, which also includes impairment related to assets held for sale and impairment losses on equity-method investments. For further information, see Item 3. Key Information Risk Factors Business Risks Developments in the oil and gas industry and other factors have resulted, and may result, in substantial write downs of the carrying amount of certain of our assets, which could adversely affect our results of operations and financial condition.

***Pension and other post-retirement benefits***

As set out in Note 4.17 to our audited consolidated financial statements, actuarial commitments related to post-employment defined benefit plans and health-care plans are based on actuarial calculations that are revised annually by an independent qualified actuary. The most significant financial and demographic assumptions when measuring the post-retirement benefits recognized in our financial statements are described in Note 5.4 to our audited consolidated financial statements. Note 22 to our audited consolidated financial statements presents substantive disclosure on our net actuarial liability, describing qualitative and quantitative information about our main defined pension and health care plans, including the changes in the amounts recognized in our financial statements, a sensitivity analysis of the defined benefit plans and detailed data concerning actuarial assumptions.

***Estimates related to contingencies and legal proceedings***

As described in Note 5.5 to our audited consolidated financial statements, we are a defendant in numerous legal proceedings involving issues arising from the normal course of our business. This note addresses the process through which we estimate the amounts and the probability of outflow of resources, which are based on reports and technical assessments from legal advisors and on our management's assessment. Note 30 to our audited consolidated financial statement provides information regarding provisions for legal proceedings, judicial deposits made in connection with legal proceedings, as well as detailed disclosure about lawsuits or proceedings for which we are unable to make a reliable estimate of the expected financial effect that might result from resolution of the proceeding.

*Decommissioning costs estimates*

Decommissioning costs estimates are a critical accounting policy where, as described in Note 4.14 to our audited consolidated financial statements, we accrue as part of the cost of an asset, a corresponding liability in the form of the estimated costs of future obligations based on the present value of the expected future cash outflows, discounted at a risk-adjusted rate associated with performing environmental restoration, and dismantling and removing a facility when we terminate its operations.

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Note 5.6 to our audited consolidated financial statements outlines the main uncertainties when performing the complex calculation of estimating decommissioning costs and Note 20 to our audited consolidated financial statements provides quantitative and qualitative information about the provision for decommissioning costs.

### ***Deferred income taxes***

Deferred income taxes are recognized on temporary differences between the tax base of an asset or liability and its carrying amount. Note 4.16 to our audited consolidated financial statements provides information on the recognition of deferred income taxes.

As described in Note 5.7 to our audited consolidated financial statements, deferred income tax assets involve significant estimates and judgments by our management, as deferrals are recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods. This note also addresses the assumptions used when forecasting future taxable profit, supported by our 2018-2022 Plan, and mainly driven by Brent crude oil prices, foreign exchange rates and our projected net finance expenses (income).

Additionally, Note 21.5 to our audited consolidated financial statements presents the changes in the deferred income taxes and their expected timing of reversal.

### ***Cash flow hedge accounting involving our future exports***

As set out in Note 4.3.6 to our audited consolidated financial statements, we have designated cash flow hedging relationships in which the hedged items are foreign exchange gains or losses of our highly probable future U.S. dollar denominated future export revenues, and the hedging instruments are foreign exchange gains or losses from proportions of our long-term debt obligations denominated in U.S. dollars. The risk hedged is the effect of changes in exchange rates between the U.S. dollar and our functional currency, the *real* as both items are exposed to the *real*/U.S. dollar foreign currency risks at their respective spot exchange rates. See also Item 3. Key Information Risk Factors Risks Relating to Our Operations We are vulnerable to increased debt service resulting from depreciation of the *real* in relation to the U.S. dollar and increases in prevailing market interest rates.

Note 5.8 to our audited consolidated financial statements addresses how we estimate highly probable future exports. Note 5.1 d) to our audited consolidated financial statements also describes the impacts of oil and gas reserves estimates on highly probable future exports designated in cash flow hedging relationships.

Note 33.2 to our audited consolidated financial statement contains further information on how we designate these cash flow hedging relationships, their impact on our financial statements, such as the amounts recognized in our equity and our statement of income for the last fiscal years, as well as a schedule of the expected recycling of cumulative foreign exchange gains or losses from equity to our income statement in future periods, among other detailed information.

In March 2017, we received an official communication from the CVM that required us to restate our financial statements for all periods since we began to apply cash flow hedging. However, in July 2017, the CVM's collegiate body accepted our appeal, dismissing the official communication and reinforcing the correct application of the accounting policy by us.

### ***Write-off for overpayments incorrectly capitalized***

In the third quarter of 2014, we wrote off US\$2,527 million of capitalized costs representing amounts that we overpaid for the acquisition of property, plant and equipment in prior years. To account for these overpayments, we

developed an estimation methodology, as set out in Note 3 to our audited consolidated financial statements, which involves a significant degree of uncertainty. As we also describe in Note 5.9 to our audited consolidated financial statements, we continue to monitor the ongoing investigations and the availability of other information concerning the amounts it may have overpaid in the context of the payment scheme and, if reliable information becomes available that indicates with sufficient precision that our estimate should be modified, we will evaluate materiality and, if so, adjust. However, we believe we have used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized and there is no evidence that would indicate the possibility of a material change in the amounts written-off.

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### ***Allowance for impairment of trade receivables***

As described in Notes 4.3.3 and 5.10 to our audited consolidated financial statements, our management continuously assesses whether there is objective evidence that trade receivables are impaired (impacts on the estimated future cash flows) and recognizes allowances for impairment of trade receivables to cover losses. The amounts recognized as provision for impairment of trade and other receivables are presented in Note 8.3 to our audited consolidated financial statements. Note 8.4 to our audited consolidated financial statements provides further discussion on the provision for uncollateralized receivables from the isolated electricity system in the northern region of Brazil.

### **New Accounting Standards**

On January 1, 2018, two new accounting standards and an interpretation issued by IASB became effective: IFRS 9 Financial Instruments, IFRS 15 Revenue from Contracts with Customers and IFRIC 22 Foreign Currency Transactions and Advance Consideration.

IFRS 9 sets out, among others, new requirements for classification and measurement of financial assets, measurement and recognition of expected credit losses on financial assets, changes in the terms of financial assets and financial liabilities, hedge accounting and related disclosures. We will not restate the comparative information and will present the impacts related to our first application of this standard, which are immaterial, in retained earnings at January 1, 2018.

IFRS 15 establishes a comprehensive approach to determine when and in what amount, revenue from a contract with a customer should be recognized. We will initially apply this standard retrospectively with the cumulative effect recognized at the date of initial application. The changes in our accounting policies arising from IFRS 15 only affect the way certain revenues from contracts with customers are disclosed within the statement of income and do not impact net income. In 2017, it would be equivalent to a 1.7% reduction in sales revenues.

IFRIC 22 applies to a foreign currency transaction when an entity recognizes a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration before the entity recognizes the related asset, expense or income. We will apply this interpretation prospectively from its effective date and the impact on our financial statements is immaterial.

For additional information on new requirements and impacts brought up by IFRS 9, IFRS 15 and IFRIC 22, see Note 6 to our audited financial statements ended December 31, 2017. In addition, this note also presents information on IFRS 16 Leases that will be effective at January 1, 2019, setting out new principles for the recognition, measurement, presentation and disclosure of leases, from the lessees and lessors perspectives. However, we are unable to make a reasonable estimation of those impacts at the current stage of the implementation process.

### **Research and Development**

We are deeply committed to research and development as a means to extend our reach to new production frontiers and achieve continuous improvement in operations. We have a history of successfully developing and implementing innovative technologies, including the means to drill, complete and produce wells in increasingly deepwater.

We spend a significant percentage of our revenues in research and development, what makes us one of the largest research and development investors among the world's major oil companies. Our Brazilian oil and gas agreements require us to invest at least 1% of our gross revenues originating from high productivity oil fields on research and development, of which up to half is invested in our research facilities in Brazil and the remainder is invested in

Brazilian universities and institutions accredited by the ANP for this purpose.

Digital technologies have been increasingly considered in our research and development activities. Currently, about 10% of our research and development portfolio includes digital technologies such as Big Data, High Performance Computing and Artificial Intelligence, in the search for solutions to support the development of our business.

In 2017, we spent US\$572 million on research and development, equivalent to 0.64% of our sales revenues, while in 2016 we spent US\$523 million, equivalent to 0.64% of our sales revenues. In 2015, we spent US\$630 million, equivalent to 0.65% of our sales revenues. For more information about changes on these expenses, see section Management's Discussion and Analysis of Financial Condition and Results of Operations.

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Our research and development activities are based on strategic choices that we make regarding technological development, which we call our Technological Focus, namely:

Process safety, integrity and reliability of plants and equipment;

Protection of our value in environmental and social matters;

Opening of new exploratory frontiers;

Integration, increased accessibility and quality of reservoir and oil system databases;

Increase of reservoir recovery factor;

Reduction of the oil price breakeven point and of the operating cost;

Assets decommissioning;

Flexibility of the downstream productive chain;

Value aggregation to downstream products;

Productive processes optimization and efficient use of energy;

Integration and optimization of the logistic chain; and

Transition to low carbon matrix.

In the three-year period ended December 31, 2017, our research and development operations were awarded 124 patents in Brazil and 108 overseas. Our portfolio of patents covers all of our areas of activities.

We have operated a dedicated research and development facility in Rio de Janeiro, Brazil since 1963. As a result of its expansion in 2010, this is one of the largest facilities of its kind in the energy sector and the largest in the southern hemisphere, with laboratories especially dedicated to pre-salt technologies. As of December 31, 2017, this facility had 1,301 employees, 92% of which are dedicated to research and development.



We also have several semi-industrial scale prototype plants throughout Brazil that are in proximity to our industrial facilities and that are aimed at scaling up new industrial technologies at reduced costs. In 2017, we conducted research and development through joint research projects with more than 210 universities and research centers in Brazil and abroad and participated in technology exchange and assistance partnerships with several oilfield service companies, small technology companies and other operators.

## Trends

In 2017, the Brazilian economy grew by about 1.0%, starting a slow process of economic growth after a severe recession. The extractive industry and farming have led this process, although the construction sector has continued to decline. On the demand side, exports were a relevant growth driver. In sum, domestic demand remains fragile, but the Brazilian economy has taken advantage of external stimulus due to the continuity of China's growth and the United States' economic growth.

The exchange rate of BRL/USD was relatively stable in 2017 when compared to the last two years. The monthly average was quoted between 3.10 and 3.30, a narrower range than was observed in 2016 and 2015.

Rising vehicle ownership rates, population growth and the need to transport goods from production sites to end-consumers connect the anticipated medium- and long-term economic growth with additional demand for oil products. However, future economic downturns, internationally as well as in Brazil, could negatively affect these assumptions.

Until 2014, we responded to incremental growth in demand by increasing imports of oil and oil products and improving the output of our refineries since our oil production and our refining capacity were not enough to meet the increased demand. This means that the oil product demand in Brazil surpassed refining output, leading Brazil to import oil products in order to meet domestic consumption needs. Large volumes of crude oil and oil products imports increased our cost of sales and reduced our refining margins in those years, because we had not fully adjusted our domestic prices to reflect the higher international oil cost.

However, this dynamic changed in 2015. The oil price fall was a consequence of an over-supplied market, implicating in a strong demand for oil products, especially for gasoline. In that scenario, refining margins were higher when compared to the previous periods. In the following years, 2016 and 2017, oil prices remained at low levels, sustaining global oil demand and high downstream profitability.

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In addition, because of the increase of (i) the biodiesel blend in diesel and (ii) ethanol consumption driven by an increasing share of flexfuel fleet in Brazil, we expect that biofuels consumption will increase in Brazil over the long-term, resulting in a reduction in the pace of growth in Brazilian demand for gasoline and diesel. However, in the medium term, ethanol supply is limited to productivity gains from improvements in the management of cane fields, since investment capacity has been reduced due to high indebtedness levels in the Brazilian ethanol industry. In the long-term, international agreements in favor of reducing greenhouse gas emissions may play a role in increasing the consumption of biodiesel and ethanol. In December 2015, the UN Climate Conference was held in Paris and it adopted the first global agreement to reduce greenhouse gas emissions and mitigate climate change impacts.

After a strong decline through the second half of 2014, oil prices remained at low levels in 2015, ending the year with Brent crude oil trading at US\$35.75/barrel. The 2015 annual average price was US\$52.31 per barrel, a decrease of 47% compared to the previous year. In 2016, the average price of crude oil decreased further, with Brent crude oil trading at US\$44.11/barrel. In 2017, the average price of crude oil increased to US\$54.35 per barrel.

In November 2017, in its 173rd Ordinary Meeting, the Organization of the Petroleum Exporting Countries (OPEC) decided to extend the group's production agreement until the end of 2018. The decision maintains the production target for the group of 32.5 MM bpd, which represents a cut of 1.2 MM bpd from the level observed in October 2016. The agreed cut is effective since January 2017. For the first time in the last fifteen years, OPEC countries managed to reach an agreement with non-OPEC countries to cut production by an additional volume of 0.56 mmbbl/d. In the end of 2017, compliance with agreed crude oil production cuts rose to high levels and lifted the 2017 average to 91%.

Worldwide, Non-OPEC supply is set to rise by 0.6 mmbbl/d in 2017, mainly in response to the growth of unconventional oil in the United States. On the other hand, the OPEC crude supply fell by 1.3 mmbbl/d compared to a year ago. Output was lower in Saudi Arabia, Angola and Venezuela. Oil demand strongly increased in 2017 by 1.6 mmbbl/d. In agreement with this dynamic, in the last quarter of 2017, OECD commercial stocks fell to their lowest level since July 2015, heading towards to the five-year average index. The combination of supply decline and demand growth contributed to diminish the oversupply in the oil market in 2016.

This low crude oil price environment has posed challenges for technological development and innovation in the oil and gas industry. Upstream projects are either being developed at a slower pace or postponed. Oil and gas companies are prioritizing technologies and techniques that assure lower costs and higher efficiency in the short- and medium term, although maintaining and increasing oil and gas reserves is still a long-term objective.

Each year, we review and revise our long-term business and management plan in order to adapt to changing market conditions and to revise our capital expenditure levels in accordance with updated scenarios and projected cash flows.

## **Item 6. Directors, Senior Management and Employees**

### ***Directors and Senior Management***

#### ***Directors***

Our board of directors, which we refer to as the *conselho de administração*, is composed of a minimum of seven and maximum ten members and is responsible for, among other things, establishing our general business policies. The members of the board of directors are elected at the annual general meeting of shareholders, including the employee representative previously selected by means of a separate voting procedure. The term of office may not exceed two years and members may be reelected at most three consecutive times. For further information regarding the attributions and duties of our board of directors, see Exhibit 1.1 for a copy of our bylaws.

Under Brazilian Corporate Law, shareholders representing at least 10% of the company's voting capital have the right to demand that a cumulative voting procedure be adopted to entitle each common share to as many votes as there are board members and to give each common share the right to vote cumulatively for only one candidate or to distribute its votes among several candidates. Pursuant to regulations promulgated by the CVM, the 10% threshold requirement for the exercise of cumulative voting procedures may be reduced depending on the amount of capital stock of the company. For a company like ours, the applicable threshold is 5%. Thus, shareholders representing 5% of our voting capital may demand the adoption of a cumulative voting procedure.

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Our bylaws enable (i) minority preferred shareholders that together hold at least 10% of the total capital stock (excluding capital stock held by the controlling shareholders) to elect and remove one member to our board of directors, in a separate voting procedure at the general meeting; (ii) minority common shareholders to elect and remove one member to our board of directors, if a greater number of directors is not elected by such minority shareholders by means of the cumulative voting procedure; and (iii) our employees to directly elect one member to our board of directors by means of a separate voting procedure, pursuant to Law No. 12,353 and MPDM's Act No. 26; and (iv) subject to the provisions of applicable law, the Ministry of Planning, Development and Management – MPDM to elect and remove one member of our board of directors.

Our bylaws provide that, regardless of the rights above granted to minority shareholders, the Brazilian federal government always has the right to elect the majority of our directors, independently of their number. In addition, under Law No. 13,502, one of the board members elected by the Brazilian federal government must be indicated by the Minister of Planning, Development and Management – MPDM. The maximum term for a director is two years, and re-election is permitted three times consecutively. In accordance with the Brazilian Corporate Law, the shareholders may remove any director from office at any time with or without cause at an extraordinary meeting of shareholders. Following an election of board members pursuant to the cumulative voting procedure, the removal of any board member by an extraordinary meeting of shareholders will result in the removal of all of the other members, after which new elections must be held.

In accordance with Law No. 13,303/16, 25% of the members of our board of directors, and at least one member of our board of directors in the case of adoption of multiple voting by minority shareholders, must comply with independence requirements. However, our bylaws were recently amended to provide for a minimum of 30% independent directors, as required by the Rules of Procedure of B3's Highlight Program on State-Owned Companies Governance.

We currently have nine directors. The following table sets forth certain information with respect to these directors:

<b>Name</b>	<b>Date of Birth</b>	<b>Position</b>	<b>Current Term Expires</b>	<b>Business Address of Permanent Directors</b>
Luiz Nelson Guedes de Carvalho(1)	November 18, 1945	Chair	April 2018	Avenida Professor Luciano Gualberto, 908, FEA3, Cidade Universitária, São Paulo, SP ZIP code: 05508-010
Jerônimo Antunes(1)	November 18, 1955	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Segen Farid Estefen(1)	January 20, 1951	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Francisco Petros Oliveira Lima Papanthanasidis(1)	September 14, 1964	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio

				de Janeiro, RJ ZIP code: 20.231-030
Durval José Soledade Santos(1)	December 13, 1948	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Pedro Pullen Parente(1)	February 21, 1953	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 18 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Guilherme Affonso Ferreira(2)	May 09, 1951	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030
Marcelo Mesquita de Siqueira Filho(3)	December 20, 1969	Director	April 2018	Avenida Niemeyer, 2, sala 201, Leblon, Rio de Janeiro, RJ ZIP code: 22.450-220
Betania Rodrigues Coutinho(4)	January 17, 1976	Director	April 2018	Avenida Henrique Valadares, 28, Tower A, 19 <sup>rd</sup> floor, Centro, Rio de Janeiro, RJ ZIP code: 20.231-030

- (1) Appointed by the controlling shareholder.  
(2) Appointed by the minority preferred shareholders.  
(3) Appointed by the minority common shareholders.  
(4) Appointed by our employees.

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*Luiz Nelson Guedes de Carvalho* Mr. Luiz Nelson Guedes de Carvalho (commonly referred to as Nelson Carvalho) teaches in the category of Senior Professor at the School of Economy, Business Administration and Accounting (Faculdade de Economia, Administração e Contabilidade), or FEA, of the Universidade de São Paulo. He is an advisor of the Brazilian Accounting Pronouncements Committee (Comitê de Pronunciamentos Contábeis), or CPC (the Brazilian Accounting Standards entity), and he was a representative of the CPC in the Emerging Economies Group of IASB. He is member of the board of directors and chairs the audit committees as the accounting and finance specialist of (a) B3 S.A. (formerly BM&FBOVESPA), the self-listed Brazilian Futures and Stock Exchange and (b) Cia. Brasileira de Distribuição CBD – GPA Group, dual listed company (Brazil and USA). He also chairs the Board of PETROBRAS Petróleo Brasileiro S.A., dual listed company (Brazil and USA). At B3 S.A. he is also an independent member of its sustainability committee. Mr. Carvalho is a member of the Brazilian Accounting Academy (Academia Brasileira De Ciências Contábeis), or Abracicon, and chairs the Fiscal Council ( Conselho Fiscal ) of Fundação Amazonas Sustentável – FAS, an NGO aiming to protect the Amazon Forest. He is also a Trustee of Fundação Instituto de Pesquisas Contábeis, Atuariais e Financeiras FIPECAFI, a not-for-profit academic research organization. He is also a Co-arbitrator at the Brazil – Canada Chamber of Commerce (São Paulo) and at the International Chamber of Commerce (Paris). He is a Litigation Expert in matters involving Financial Accounting, International Accounting, Corporate Governance, Risk Management and Auditing. Previously, Mr. Carvalho has been: (a) Chairman of the Committee on Capacity Building in the area of International Financial Reporting of the Intergovernmental Group of Experts in International Standards of Accounting and Reporting, a branch of UNCTAD, United Nations, in Geneva, Switzerland; (b) an independent member of the banking self-regulation Committee of the Brazilian Federation of Banks (Federação Brasileira de Bancos), or FEBRABAN; (c) member of the board of directors of the NGO Sustainable Amazon Foundation (Fundação Amazônia Sustentável), where today he chairs its Fiscal Council ( Conselho Fiscal ); (d) a member of the International Integrated Reporting Council (Conselho Internacional para Relatórios Integrados) led by the Prince of Wales; (e) vice-president at large of the International Association for Accounting Education and Research – IAAER; (f) he was also a member of the Financial Crisis Advisory Group set out by the US FASB and the IASB in 2008; (g) the first independent Chairman of the Standards Advisory Council (Conselho Consultivo de Normas) of the IASB; (h) a member of the Consultative and Advisory Group of the International Federation of Accountants ( IFAC – Federação Internacional de Contadores ); (i) a vice-director of the Interamerican Accounting Association; (j) a member of the board of directors of (i) Banco Nossa Caixa S.A., (ii) Caixa Econômica Federal, (iii) Banco Bilbao Vizcaya Argentaria Brasil – BBVA, (iv) Banco de Crédito Real de Minas Gerais, (v) Grupo ORSA (pulp and paper), (vi) Companhia Müller de Bebidas, (vii) Vicunha Têxtil S.A., and (viii) Banco Fibra S.A.; (ix) he was a member of the audit committees of Banco Nossa Caixa and Vicunha Têxtil; and a member of the internal controls committee of Banco Fibra.

Mr. Carvalho was also the regional president of the International Association of Financial Executives Institutes IAFEI for Central and South Americas. He has been Head of Banking Supervision at the Board of the Brazilian Central Bank and a Commissioner at CVM (the Brazilian Securities and Exchange Commission). Mr. Carvalho holds bachelor's degrees in economics from FEA and in accounting from Faculdade São Judas Tadeu and master and PhD degrees in accounting and controllership from FEA USP.

*Jerônimo Antunes* Mr. Antunes has been a member of our board of directors since May, 2016. He is currently an accounting professor in FEA/USP, where he has been a professor since 1999. He has been a professor of several MBA and accounting, auditing, finance and business management courses at FIPECAFI USP since 2000 and also teaches at other higher education institutions. He is also a member of the board of directors and a coordinator of the audit committee for Petrobras Distribuidora and Basic Sanitation Utility Company of the State of Sao Paulo – Sabesp. Mr. Antunes has served as an independent auditor of companies for over 30 years. He has been contracted as an expert accountant in several disputes at the Brazil-Canada Chamber of Commerce and the Judiciary since 2005. He received a bachelor's degree in accounting and business administration, a master's and a PhD. in controlling and accounting from FEA USP. He has previously served as an alternate member of our board of directors.



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*Segen Farid Estefen* Professor Estefen has been a member of our board of directors since May, 2015, and chairman of the board of directors of Petrobras Distribuidora from November 2015 to April 2016. He is professor of ocean structures and subsea engineering from the Universidade Federal do Rio de Janeiro COPPE, where he held the position of dean from 1998 to 2001. He is also the general manager of the Subsea Technology Laboratory and the coordinator of the Ocean Renewable Energy Group, both at Universidade Federal do Rio de Janeiro COPPE, and is a member of the advisory committee of the Ocean, Offshore and Arctic Engineering division of the American Society of Mechanical Engineers (ASME), fellow of the Society for Underwater Technology SUT (UK), technical coordinator of the Embrapii COPPE unit for subsea engineering and member of the Academia Nacional de Engenharia ANE. He received a bachelor's degree in civil engineering from the Universidade Federal de Juiz de Fora, a master's degree in ocean engineering from Universidade Federal do Rio de Janeiro COPPE, a Ph.D. degree in civil engineering from Imperial College of Science, Technology and Medicine (London) and he was a post-doctoral research fellow at the Institute for Marine Technology, Norwegian University of Science and Technology.

*Francisco Petros Oliveira Lima Papathanasiadis* Mr. Papathanasiadis has been a member of our board of directors since May, 2016. He is currently managing partner at Fernandes, Figueiredo, Franoso and Petros Law Firm. He has worked for over thirty years in various financial institutions, notably Unibanco, Brasilpar and Sul America Group, in the Brazilian financial and capital markets. He was the deputy chairman and the chairman of the Brazilian Association of Capital Markets (ABAMEC So Paulo) from 1999 to 2001, and the first chairman of the supervisory board of the capital markets analysts at APIMEC from 2010 to 2014. From 2015 to 2016, he served as an alternate member of our board of directors and during the same period he was a member of BR Distribuidora's board of directors. Mr. Papathanasiadis was also a member of our audit committee in 2015. He is currently Vice-President of the board of directors at BRF Foods and coordinator of its independent audit committee and its finance committee.

*Durval Jos Soledade Santos* Mr. Santos has been a member of our board of directors since May, 2016. He currently serves in the lawyers council of the Bar Association of Brazil (OAB), in the Rio de Janeiro section. He is currently a guest Professor at the LLMDS Course, the FGV Law School in Rio de Janeiro and a professor of corporate law promoted by the OAB/RJ capital market committee. He also acts as vice chairman of the independent investigation committee at Eletrobras. He previously served as a board member of the corporate governance committee of Forjas Taurus Inc.; and as a member of the financial and investment committee at Odebrecht Agroindustrial Inc. He served twice as director at the CVM. He received a law degree from Federal Fluminense University in 1974. He has an executive MBA from COPPE/UFRJ. He holds a master's degree in development economics from PUC/BNDES and a degree in corporate law from Cndido Mendes University. He has twice been the Commissioner of the CVM.

*Pedro Pullen Parente* Mr. Parente has been a member of our board of directors since June, 2016. He began his public service career at Banco do Brasil in 1971 and was transferred to the Central Bank in 1973, in both cases following public examination. He received a bachelor's degree in electric engineering from the University of Braslia in 1976. He has been a consultant for the International Monetary Fund and public institutions in Brazil, including several State Departments and the National Constituent Assembly of 1988, and has occupied various government positions in the economics area. He was Minister of State between 1999 and 2002, having led the team handling the transition from President Fernando Henrique Cardoso's government to President Lula's administration. During this period, he played an important role as President of the Energy Crisis Management Chamber. He was a member of our board of directors between March 24, 1999 and December 31, 2002 and Chairman of the board as of March 25, 2002. He was Chief Operating Officer of RBS Group between 2003 and 2009 and President and CEO of Bunge Brasil from 2010 to 2014. He is currently a Licensed Partner of the Prada group of consulting and financial advisory companies and Chairman of the board of directors of the B3 S.A. – Brasil, Bolsa Balco.

*Guilherme Affonso Ferreira* Mr. Ferreira has been a member of our board of directors since May, 2015, and he is also a member of the board of directors of Sul America S.A., Gafisa S.A., Bahema S.A, B3 S.A. – Brasil, Bolsa Balco,



Arezzo S.A. and T4F S.A. and a member of the board of directors of non-governmental organizations such as the Institute of Citizenship, AACD, Solidarity Sport, among others. Mr. Ferreira received a bachelor's degree in engineering from the Polytechnic School of the Universidade de São Paulo-USP and has studied political science at Macalester College.

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**Marcelo Mesquita de Siqueira Filho** Mr. Mesquita has been a member of our board of directors since August, 2016. Mr. Mesquita has a degree in Economics from PUC-Rio, in French Studies from Nancy University II and an OPM (Owner/President Management) from Harvard (HBS). He is a co-founding partner of Leblon Equities (since 2008) and co-manager of equity funds and of private equity investments. He has 27 years of experience in the Brazilian stock market, having worked 10 years at UBS Pactual (1998-2008) and 7 years at Banco Garantia (1991-1998). At UBS Pactual, he was the co-head of Brazilian Equity Capital Markets (2007-2008); co-head of Brazilian Equities (2005-2007); and head of Brazil Equity Research & Strategy Analysis (1998-2006). At Banco Garantia he was a commodities stocks analyst (1991-1997) and investment banker (1997-1998). Since 1995, he was appointed by investors as one of the leading analysts of Brazil according to several surveys made by Institutional Investor magazine. He was ranked #1 Brazil Analyst from 2003 to 2006 (#3 in 2002, #2 in 2001 and #3 in 2000). He was also ranked as #1 Stock Strategist in Brazil from 2003 to 2005. Marcelo Mesquita worked in more than 50 transactions in the Brazilian stock market (IPOs), both in Garantia and UBS Pactual. Currently he is also a member of the board of directors of BR Home Centers S.A., and Tamboro Educacional S.A.

**Betania Rodrigues Coutinho** Ms. Coutinho has been a member of our board of directors since April, 2016. She has been a petroleum engineer at Petrobras since 2004, and she has also been an administration adviser and representative of our employees since April, 2016. Previously, she was a deputy professor at the Federal University of Espírito Santo UFES. She has a master's degree in civil engineering, with an emphasis on environmental geotechnics.

**Executive Officers**

Our board of executive officers, which we refer to as the *diretoria*, is composed of the Chief Executive Officer (CEO) and seven executive officers, and is responsible for our day-to-day management. Our executive officers are Brazilian citizens residing in Brazil. Pursuant to our bylaws, the board of directors elects the executive officers, including the CEO, and in electing executive officers to their respective areas, must consider personal qualification, expertise and specialization. The maximum term for our executive officers is two years, with no more than three consecutive re-elections allowed. The board of directors may remove any executive officer from office at any time with or without cause. Four of our current executive officers are experienced Petrobras career managers, engineers or technicians. For further information regarding our board of executive officers, see Exhibit 1.1 for a copy of our bylaws.

The following table sets forth certain information with respect to our executive officers:

<b>Name</b>	<b>Date of Birth</b>	<b>Position</b>	<b>Current Term</b>
Pedro Pullen Parente	February 21, 1953	Chief Executive Officer	April 2018
Ivan de Souza Monteiro	November 15, 1960	Chief Financial Officer and Chief Investor Relations Officer	April 2018
Roberto Moro*	November 8, 1962	Chief Production Development and Technology Officer	November 2017
Solange da Silva Guedes	November 22, 1960	Chief Exploration and Production Officer	April 2018
Jorge Celestino Ramos	October 11, 1956	Chief Refining and Natural Gas Officer	April 2018
Hugo Repsold Júnior**	July 23, 1959	Chief Production Development and	April 2018

Technology Officer

João Adalberto Elek Junior***	November 26, 1958	Chief Governance and Compliance Officer	April 2018
Nelson Luiz Costa Silva	September 14, 1955	Chief Strategy and Performance Officer	April 2018
Eberaldo de Almeida Neto****	November 19, 1962	Chief of Corporate Affairs Officer	April 2018

(\*) Mr. Moro retired in November 2017.

(\*\*) Mr. Repsold assumed position in January 2018.

(\*\*\*) Mr. João Elek was temporarily out of office from August 23, 2017 through September 27, 2017.

(\*\*\*\*) Mr. Almeida assumed position in January 2018.

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*Pedro Pullen Parente* Mr. Parente has been our Chief Executive Officer since June 2016. For biographical information regarding Mr. Parente, see Directors.

*Ivan de Souza Monteiro* Mr. Monteiro has been our Chief Financial Officer and Chief Investor Relations Officer since February 2015. Mr. Monteiro previously served as the vice-president of Financial Management and Investor Relations of Banco do Brasil from June 2009 to February 2015, where he has held different positions, including the position of Chief Commercial Officer and vice-president of Finance, Capital Markets and Investor Relations. He was also president of the Supervision Committee of BB AG, a Banco do Brasil subsidiary in Austria, from April 2014 to February 2015 and president of BB Banco de Investimentos S.A. from June 2009 to February 2012 (and vice-president from February 2012 to February 2015). Mr. Monteiro was also a member of the board of directors of Banco Votorantim Participações S.A. from September 2009 to February 2015, Ultrapar Participações S.A. from March 2013 to February 2015, BB Seguridade Participações S.A. from August 2013 to February 2015 and an alternate member of the board of directors of Mapfre BB SH-2 Participações S.A. from June 2013 to February 2015 and Petrobras Gás S/A GASPETRO from February 2015 to November 2017. Mr. Monteiro holds a degree in electronic engineering and telecommunications from INATEL-MG and an MBA in finance from IBMEC-RJ and in management from the Pontifícia Universidade Católica do Rio de Janeiro PUC-Rio.

*Roberto Moro* Mr. Moro was our Chief Production Development and Technology Officer from April 2016 to November 2017, when he retired. Mr. Moro joined Petrobras in 1981 and has held various positions in our Engineering Projects, including the position of Chief Engineering, Technology and Procurement Officer from February 2015 to March 2016, General Manager for the implementation of Engineering Projects for E&P and Engineering Executive Manager for Subsea Projects from October 2013 to February 2015. Mr. Moro holds a degree in mechanical engineering from Universidade Gama Filho and a specialization in project management from Fundação Getúlio Vargas-FGV.

*Solange da Silva Guedes* Ms. Guedes has been our Chief Exploration and Production Officer since February 2015. Ms. Guedes joined Petrobras in 1985 and has held various positions in our E&P business segment, including the position of Executive Manager of our upstream activities in Northern and Northeastern Brazil from February 2003 to April 2008, Executive Manager of Engineering Production in the E&P business segment from April 2008 to December 2013 and Corporate Executive Manager in E&P from December 2013 to February 2015. Ms. Guedes holds a degree in Civil Engineering from the Universidade Federal de Juiz de Fora UFJF, a master's degree in civil engineering from the Universidade Federal do Rio de Janeiro UFRJ, a PhD in oil engineering from the Universidade Estadual de Campinas UNICAMP and an MBA in management from COPPEAD/UFRJ.

*Jorge Celestino Ramos* Mr. Ramos has been our Chief Refining and Natural Gas Officer since April 2016. Mr. Ramos joined Petrobras in 1983 and has held various positions in our distribution and refining segments, including the position of Chief Downstream Officer from February 2015 to March 2016, Executive Manager of Logistics in Downstream from April 2014 to February 2015 and Executive Manager of Operations of Petrobras Distribuidora from February 2007 to April 2014. Mr. Ramos holds a degree in chemical engineering from the Universidade do Estado do Rio de Janeiro UERJ and he holds an MBA in marketing from Escola Superior de Propaganda e Marketing ESPM and in management from Fundação Getúlio Vargas-FGV.

*Hugo Repsold Júnior* Mr. Repsold has been our Chief Production Development and Technology Officer since January 2018. He was our Chief of Corporate Affairs Officer from August 2016 to January 2018 and our Acting Chief of Production, Development and Technology Officer from November 2017 to January 2018. Mr. Repsold joined Petrobras in 1985 and has held various positions with us, including the position of Chief Human Resources, HSE and Services Officer from April 2016 to July 2016, Chief Gas and Power Officer from February 2015 to March 2016, Corporate Executive Manager of Gas and Power from May 2012 to January 2015 and Executive Manager of

Performance and Executive Manager of Strategy from September 2011 to May 2012. Mr. Repsold holds a degree in Mechanical Engineering from the Universidade Federal Fluminense-UFF, a degree in economics from the Universidade do Estado do Rio de Janeiro-UERJ and a master's degree in energy planning from the Universidade Federal do Rio de Janeiro (Coppe/PPE-UFRJ).

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*João Adalberto Elek Junior* Mr. João Elek has been our Chief Governance and Compliance Officer since December 2016 and, previously, he was our Chief Governance, Risk and Compliance Officer, from January 2015 to November 2016. Mr. João Elek was Chief Financial Officer at Fibria from August 2010 to February 2012. He has also worked at Telmex and AT&T in Brazil and Latin America, from May 2000 to February 2007, and he served as Chief Financial and Investor Relations Officer at the cable TV and telecommunications firm NET Serviços from March 2007 to July 2010. Mr. João Elek also worked for 20 years at Citibank, where he was Chief Financial Officer for retail services from November 1996 to May 2000. Mr. João Elek holds a bachelor's degree in electronic engineering from Pontifícia Universidade Católica do Rio de Janeiro - PUC-Rio, an MBA in marketing planning from COPPEAD/UFRJ and graduate studies in mergers and acquisitions from Columbia Business School.

*Nelson Luiz Costa Silva* Mr. Silva has been our Chief Strategy and Performance Officer since August 2016. Mr. Silva has had a 40 year career in oil and gas, mining and manufacturing, 25 years of which spent overseas. Prior to joining Petrobras, Mr. Silva was CEO of BG Group in South America and President of BHP Billiton global aluminum business and subsequently Marketing Director based in London and Singapore. Mr. Silva has also held several senior executive positions at Vale, based in Brussels, Tokyo and Rio, he was CEO of America Latina Logística railways based in Buenos Aires and Managing Director of Embraer Europe, based in Paris. Mr. Silva is also a Non-Executive Director of Compass Group Plc. Mr. Silva is graduated in Naval Engineering from Universidade de São Paulo with post-graduation studies at Fundação Getúlio Vargas in São Paulo.

*Eberaldo de Almeida Neto* Mr. Eberaldo de Almeida Neto has been our Chief of Corporate Affairs Officer since January 2018. Mr. Almeida joined Petrobras in 1986 and has held various positions since then. He was our Executive Manager of Supply Chain from 2016 to January 2018, General Manager of Rio de Janeiro Operations Unit from 2012 to 2016, General Manager of Contracting Services Unit from 2006 to 2012 and General Manager of Subsea Services Unit from 1998 to 2006. Mr. Almeida holds a degree in Electrical Engineering from Universidade Federal do Rio de Janeiro-UFRJ, a degree in Advanced Management Program from IESE Business School - University of Navarra, Espanha and an MBA in Advanced Business Management from Coppead.

## **Compensation**

For 2017, the aggregate amount of compensation we paid to all members of our board of directors and executive officers of Petrobras (parent company) was US\$5.5 million. As of December 31, 2017 we had 8 executive officers and 9 board members. The average monthly number of members of our board of directors that received compensation throughout 2017 was 5.75, while the number of executive officers that received compensation during this period was 7.92. See Note 19.3 to our audited consolidated financial statements for further information regarding compensation of our employees and officers.

In addition, the members of our board of directors and executive officers receive medical assistance benefits, as it is generally provided to our employees and their families. Our executive officers also receive supplementary social security benefits and housing allowance.

We have no service contracts with members of our board of directors providing for benefits upon termination of employment. We have a remuneration and succession committee in the form of an advisory committee. See Other Committees.

## **Share Ownership**

As of December 31, 2017, the members of our board of directors, our executive officers, and the members of our fiscal council, as a group, beneficially held a total of 5,148 common shares and 55,031 preferred shares of our

company. Accordingly, on an individual basis, and as a group, our directors, executive officers, and fiscal council members beneficially owned less than one percent of any class of our shares. The shares held by our directors, executive officers, and fiscal council members have the same voting rights as the shares of the same type and class that are held by our other shareholders. None of our directors, executive officers, and fiscal council members holds any options to purchase common shares or preferred shares nor any other person has any option to purchase our common or preferred shares. Petrobras does not have a stock option plan for its directors, officers or employees.

**Table of Contents****Fiscal Council**

We have a permanent fiscal council (*Conselho Fiscal*) in accordance with applicable provisions of the Brazilian Corporate Law, composed of up to five members. As required by the Brazilian Corporate Law our fiscal council is independent of our management and external auditors. The fiscal council's responsibilities include, among others: (i) monitoring management's activities and (ii) reviewing our annual report and financial statements. The members and their respective alternates are elected by the shareholders at the annual general shareholders' meeting. Holders of preferred shares without voting rights and minority common shareholders are each entitled, as a class, to elect one member and his respective alternate to the fiscal council. The Brazilian federal government has the right to appoint the majority of the members of the fiscal council and their alternates. One of these members and his respective alternate are appointed by the Minister of Finance, representing the Brazilian Treasury. The members of the fiscal council are elected at our annual general shareholders' meeting for a one-year term and two consecutive re-elections are permitted.

The following table lists the current members of our fiscal council:

<b>Name</b>	<b>Year of First Appointment</b>
Adriano Pereira de Paula	2017
Eduardo César Pasa	2017
Marisete Fátima Dadald Pereira (Chairman)	2011
Reginaldo Ferreira Alexandre	2013
Walter Luís Bernardes Albertoni	2013

The following table lists the alternate members of our fiscal council:

<b>Name</b>	<b>Year of First Appointment</b>
José Franco Medeiros de Morais	2017
Mauricyo José Andrade Correia	2017
Agnes Maria de Aragão da Costa	2015
Marcelo Gasparino da Silva	2017
José Pais Rangel	2017

**Audit Committee**

We have a statutory Audit Committee that advises our board of directors, composed exclusively of members of our board of directors. Our Audit Committee must be composed by at least three members.

On June 17, 2005, our board of directors approved the appointment of our Audit Committee to satisfy the audit committee requirements of the Sarbanes-Oxley Act of 2002 and Rule 10A-3 under the Securities Exchange Act of 1934. On February 26, 2016, our board of directors approved changes to the written charter of our Audit Committee so that it now adheres to the rules set forth in Instrução CVM No. 509/2011 ( ICVM 509 ) applying to statutory audit committees.

The Audit Committee is responsible for, among other matters:



monitoring, analyzing, and making recommendations to our board of directors with respect to the appointment and dismissal of our independent auditors as well as evaluating the independence of our independent auditors for issuing an opinion on the financial statements and their qualifications and expertise as a whole;

advising our board of directors on the review of our annual and quarterly consolidated financial statements, monitoring compliance with relevant legal and listing requirements and ensuring appropriate disclosure of the Company's economic and financial situation, for filing with the CVM, the SEC and the *Comisión Nacional de Valores* (CNV);

advising our board of directors and our management, in consultation with internal and independent auditors and our risk management and internal controls units, in monitoring the quality and integrity of our internal control over financial reporting systems, our financial statements and related financial disclosures;

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reviewing and submitting proposals to our board of directors relating to the resolution of conflicts between management and the independent auditor relating to our financial statements;

assess and monitor, together with our internal management and audit area, the adequacy of actions to prevent and combat fraud and corruption;

evaluating and monitoring, in conjunction with our management and our internal auditors, our transactions with related parties, including by conducting, at least once a year, a review of all related-party transactions and pre-approving related party transactions above certain levels; and

establishing and reviewing procedures for the receipt, retention and processing of complaints regarding accounting, internal control and auditing matters, including procedures for the confidential submission of internal and external complaints relating to the scope of the committee's activities, as well as receiving, retaining and processing any such complaints.

The current members of our Audit Committee are Jerônimo Antunes, Durval José Soledade Santos and Marcelo Mesquita de Siqueira Filho. All members of our Audit Committee satisfy the requirements set forth in Rule 10A-3 under the Exchange Act.

## **Other Committees**

Our board of directors has a total of five additional statutory advisory committees:

*Comitê de Indicação, Remuneração e Sucessão* (Appointment, Remuneration and Succession Committee), responsible for advising our board of directors with respect to the compensation of members of our senior management and with respect to our general compensation policies and mechanisms, among other matters. Since September 2016, this Committee has also been responsible for advising our board of directors with respect to the changes proposed to our appointment policy; verifying the compliance of the appointment of the members of our fiscal council, our board of directors, our executive board and external participants from our board of directors' advisory committees, among other matters. This Committee is also in charge of acting as eligibility committee for us and some of the entities part of Petrobras Group in compliance with Law 13,303/16 and Decree 8,945/16. As such, the Committee helps our shareholders to nominate members of our board of directors and our fiscal council. The current members of our Appointment, Remuneration and Succession Committee are Francisco Petros Oliveira Lima Papathanasiadis, Durval José Soledade Santos, Jerônimo Antunes and Tales José Bertozzo Bronzato;

*Comitê de Segurança, Meio Ambiente e Saúde* (Health, Safety and Environmental Committee), responsible for advising our board of directors with respect to global policies related to the strategic management of health, safety and environmental issues, among other matters. The current members of our Health, Safety and Environmental Committee are Betania Rodrigues Coutinho, Segen Farid Estefen and Sonia Aparecida Consiglio;

*Comitê Financeiro* (Finance Committee), responsible for advising our board of directors with respect to risks and strategies concerning financial management. The current members of our Finance Committee are Guilherme Affonso Ferreira, Francisco Petros Oliveira Lima Papathanasiadis, Carlos Antonio Rocca and Clemir Carlos Magro;

*Comitê Estratégico* (Strategic Committee), responsible for advising the board of directors on our strategic plan, 2018-2022 Business Plan, and other strategic issues. Since December 2016, the Strategic Committee has held monthly seminars to promote the better understanding of strategic topics, to consolidate its vision and to improve the solidity of its recommendations to our board of directors. The current members of the Strategic Committee are Segen Farid Estefen (Chairman), Guilherme Affonso Ferreira, Reinaldo Guerreiro and Guilherme José Macedo Pinheiro de Lima; and

*Comitê de Minoritários* (Minority Committee), responsible for advising our board of directors on transactions with related parties involving us, the Brazilian federal government, its entities and foundations, and federal state-owned enterprises classified by the independent audit committee as out of our business due course, on a permanent basis including following the revision process of the Assignment Agreement. The current members of the Minority Committee are Mr. Guilherme Affonso Ferreira, who have been elected by preferred shareholders, Mr. Marcelo Mesquita de Siqueira Filho, who have been elected by minority shareholders and Mr. Durval José Soledade Santos, our board member.

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In addition, our board of directors has another advisory committee that contribute to discussions on the topics covered by such committee and, ultimately, to our decision-making process:

*Comitê de Comunicação e Responsabilidade Social* (Communication and Social Responsibility Committee), a permanent non-statutory committee, responsible for discussing topics relating to communication, sponsorship and social responsibility. The current members of our Communication and Social Responsibility Committee are Betania Rodrigues Coutinho, Francisco Petros Oliveira Lima Papatthanasias, Guilherme Affonso Ferreira, Jerônimo Antunes and Segen Farid Estefen, who are chairmen of the permanent committees of our board of directors.

Also, on December 23, 2014, our board of directors announced the formation of a special committee that serves as a reporting line for the internal investigations led by two independent law firms: U.S. firm Gibson, Dunn & Crutcher LLP and Brazilian firm Trench, Rossi e Watanabe Advogados (the Special Committee). These internal investigations are focused on collecting evidence regarding the nature, extent and impact of alleged illegal acts that may have been committed against us, as have been reported in testimony under plea bargain agreements provided to Brazilian courts, as well as to investigate related facts and circumstances that may have a significant impact on our business and results of operations.

This Special Committee acts independently, but it has a direct reporting line to our board of directors. It is responsible for: (i) the approval of independent law firms plan for the internal investigation; (ii) receiving and analyzing information produced by the independent law firms; (iii) ensuring that the independence of the investigations is not compromised; (iv) analyzing, recommending to our board for its approval and enabling the implementation of the recommendations made by the independent law firms; (v) communicating and/or authorizing communication between the independent law firms and the competent authorities, including regulators, regarding the investigation status, its results, as well as measures taken by us in connection with such investigations; (vi) preparing a final report about the results of the independent law firms investigations, as well as providing us with the Special Committee's recommendations to improve our internal policies and procedures.

The Special Committee is composed of three members: two independent individuals from outside the company, a Brazilian and a non-Brazilian, with notable technical expertise, in addition to our Chief Governance and Compliance Officer.

The following table sets forth certain information with respect to the members of the Special Committee:

<b>Name</b>	<b>Date of Birth</b>	<b>Position</b>
Ellen Gracie Northfleet	February 16, 1948	Member of the Special Committee
Andreas Pohlmann	January 24, 1958	Member of the Special Committee
João Adalberto Elek Junior	November 26, 1958	Member of the Special Committee

*Ellen Gracie Northfleet* Chief Justice Northfleet has been a member of our Special Committee since December 2014. She has served as Chief Justice of the Brazilian Supreme Court from 2006 to 2008 and was a Justice of the Brazilian Supreme Court from December 2000 to August 2011. Ms. Northfleet was also a Justice of the Regional Federal Court of Appeals -4th Region (*Tribunal Regional Federal 4ª Região*) from 1989 to 2000 and a Federal Prosecutor (*Procuradora da República*) from 1973 to 1989. Ms. Northfleet is recognized in Brazil and abroad for her expertise and experience with complex legal issues. Ms. Northfleet has an LL.B degree from the Universidade Federal do Rio Grande do Sul-UFRGS and a post-graduate degree in social anthropology from UFRGS as well.

*Andreas Pohlmann* Dr. Pohlmann has been a member of our Special Committee since December 2014 and a partner at Pohlmann & Company since February 2012. Dr. Pohlmann has served as Chief Compliance Officer of Siemens AG from September 2007 to May 2010 and from May 2010 until November 2011 as a member of the executive board of Ferrostaal AG, responsible for compliance and administration. Dr. Andreas Pohlmann was also the Chief Compliance Officer and member of the Executive Committee of SNC-Lavalin Group Inc. in Montreal, Canada, from 2013 to 2014. Dr. Andreas Pohlmann holds a law degree from Goethe University in Frankfurt and a PhD in law from Tuebingen University.

*João Adalberto Elek Junior* Mr. Elek Junior has been a member of our Special Committee since January 2015. For biographical information regarding Mr. Elek Junior, see Executive Officers .

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### **Ombudsman**

The Petrobras General Ombudsman's Office has been an official part of our corporate structure since October 2005, when it became directly linked to the board of directors. The General Ombudsman's Office is the official channel for receiving and responding to denunciations and information regarding possible irregularities in accounting, internal controls and auditing. The General Ombudsman's Office reports directly to our board of directors and guarantees the anonymity of informants.

Our board of directors has approved the Policies and Directives of the Petrobras Ombudsman, which is an important step in aligning the General Ombudsman's practices with those of the other ombudsman offices in our group, contributing to the improvement of our corporate governance. These policies establish a three-year mandate for the Ombudsman Officer, during which he cannot be discretionarily dismissed by the management, ensuring his independence in performing his duties.

The Ombudsman Officer has also been appointed by our management as the person responsible for the implementation of the Public Access to Information Law (Law No. 12,527/2011), which regulates the constitutional right for people to have access to public information. This law states that all information produced or held in custody by the government and not classified as confidential must become accessible to all citizens. In this respect, the General Ombudsman's Office ensures compliance with the rules on access to information by the public, monitors the implementation of this law and submits periodic reports to our board of directors. It also makes recommendations and provides guidance to our business units with respect to the enforcement of this law.

The Ombudsman Officer, together with our Ethics Commission, is also responsible for implementing the Public Federal Employee Conflict of Interest Law (Law No. 12,813/2013) within Petrobras. This law regulates the circumstances in which a conflict may arise between the public interest and the interests of certain current and past employees of the Brazilian federal government, which includes Petrobras, and establishes subsequent restrictions on the activities performed by such people.

The responsibilities of the General Ombudsman Officer includes tasks such as receiving and analyzing demands from our employees concerning the existence of conflict of interests, communicating to stakeholders the results of those analyses, performing preliminary reviews about the existence of potential conflicts of interest, verifying potential conflicts of interest before authorizing employees to engage in certain activities, as well as informing employees on how to prevent or avoid those conflicts.

In May 2015, our board of directors approved an unified Whistleblower Channel applicable for all Petrobras units and all Petrobras subsidiaries. This channel, which began operating in November 2015, and is overseen by the General Ombudsman Office, is in charge of registering formal fraud and reported corruption allegations. Our board of directors also approved the hiring of an independent third party company responsible for receiving any complaints recorded through the Whistleblower Channel. Further information about our Whistleblower program is available at <https://contatoseguro.com.br/petrobras>.

The General Ombudsman Office has established a methodology for classifying allegations of fraud and corruption received by Petrobras based on a risk matrix. This measure has had the key objective of setting up a strategic approach to the areas responsible for investigation and enabling senior management to understand the severity of the fraud and corruption allegations received. In addition, we have been strengthening our internal control over the whistleblower channel process.

### **Employees and Labor Relations**

We attract and retain valuable employees by offering competitive compensation and benefits, merit-based promotions and a profit-sharing plan.

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The table below shows our employee numbers for the last three years:

	As of December 31,		
	2017	2016	2015
<b>Petrobras employees:</b>			
Parent company	46,979	51,255	56,874
Subsidiaries	13,914	13,936	14,740
Abroad	1,810	3,638	6,856
<b>Total Petrobras Group</b>	<b>62,703</b>	<b>68,829</b>	<b>78,470</b>
<b>Parent company by region:</b>			
Southeastern Brazil	34,456	36,883 (1)	40,326
Northeastern Brazil	8,963	10,565 (1)	12,344
Other locations	3,560	3,807 (1)	4,204 (2)
<b>Total parent company</b>	<b>46,979</b>	<b>51,255</b>	<b>56,874</b>

(1) We adjusted the distribution of parent company employees by region in 2016 (all regions) since we identified employees in the Southeastern and Northeastern regions of Brazil that had been identified under the heading Other Locations.

(2) We adjusted the parent company employees by region in 2015 (other locations) since we identified an error of typing (it was 4,205 and the correct number is 4,204).

The table below sets forth the main expenses related to our employees for the last three years:

	2017	2016	2015
	(US\$ million)		
Salaries	5,221.2	5,353.7	5,723.5
Employee training	44.2	41.8	92.8
Profit-sharing distributions	151		

We value transparency in our relationships with all our stakeholders, among which are the workers trade unions. We maintain relationships with 17 trade unions and 1 federation of Oil Workers, as well as with 8 trade unions and 1 federation of Maritime Workers. Of our employees, 42.63% are unionized and all of our employees are covered by collective bargaining agreements. These agreements are composed of social clauses (which relate to labor, safety conditions, benefits, among other matters), that are valid for two years under the current collective bargaining agreement.

In 2017, we began the year finalizing the negotiations of the economic clauses of the collective bargaining agreements with the oil workers unions. Petrobras offered an 8.57% increase in salaries and an 8.97% increase in benefits, as well as the option, for administrative workers, to reduce the daily working hours from 8 hours to 6 hours in exchange for a 25% pay cut. By March, we began negotiations with the maritime unions of the economic clauses of the collective bargaining agreements. This negotiation was closed in August 2017 and maritime employees were guaranteed an



7,63% increase in salaries and an 8.57% increase in benefits, as well as the adoption of the 1 day off for each 1 day boarding regime. In September, we renegotiated both economic and social of the collective bargaining agreement with the oil workers unions in the face of new labor legislation. We concluded this negotiation in January 2018 with 12 out of 17 trade unions, offering an 1,73% increase in salaries and benefits, as well as the option, for administrative workers, to reduce the weekly working days from 5 hours to 4 hours in exchange for a 20% pay cut. During the year, there have been no strikes or protests that affected production.

### *Knowledge Transfer Initiatives*

We have developed knowledge management corporate practices, such as our Mentoring Program, Shadowing, Knowledge Inventory, Communities of Practice, Lessons Learned, Job Rotation, Storytelling, Tutoring and other initiatives in order to ensure the preservation, sharing and use of knowledge within Petrobras.

We systematically include knowledge management actions in our voluntary separation incentive program (PIDV), in order to preserve knowledge within company and ensure the continuity of our operations.

In addition, we have been developing customized projects with our business segments to identify, preserve, share and apply relevant knowledge that may positively impact our results.

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We have been investing efforts to include knowledge management in our management processes, since it is considered an important tool to manage people, culture, projects and processes.

### ***Voluntary Separation Incentive Program PIDV***

In January 2014, we launched a voluntary separation incentive program with the goal of contributing to the achievement of the performance targets set forth under our previous strategic plan, including the improvement of our productivity.

This voluntary separation incentive program has been developed along with knowledge management and managerial succession tools so that all knowledge is retained by Petrobras in this process, allowing a planned and systematic voluntary separation of the employees that enroll in this program. Voluntary separation of employees under this program must achieve the following results: (i) adjust the number of our personnel to our business needs, (ii) achieve our interests in line with employees' expectations, (iii) preserve existing knowledge within Petrobras and (iv) permit the development of leadership succession plans.

The target group of this voluntary separation incentive program was 12,196 of our employees over the age of 55, regardless of their position in our company, that would be eligible to retire under the Brazilian Social Security National Institute rules until the end of incentive program enrollment period (March 31, 2014). Of our employees, 7,634 have taken advantage of our voluntary separation incentive program and were classified into different categories with retirement dates as far into the future as May 2018. From the launch of the program until December 2017, 7,172 employees retired under the program.

In April 2016, we announced a new voluntary separation incentive program the ( 2016 PIDV ), open to all of our employees, and designed to adjust the size of our workforce to our 2017-2021 Plan, raising productivity and adding value for us. The 2016 PIDV was developed based on the premise of preserving a sufficient number of employees to ensure the regular continuity of our operations, while adjusting the size of our workforce in all business segments. We had 11,865 employees enrolled in the 2016 PIDV with departure dates as far into the future as August 2018. Since the program's launch until December 2017, 9,269 employees have left Petrobras under the 2016 PIDV.

A cost savings of US\$16 billion is expected up to 2022 with the resignations from the 2014 and 2016 PIDV.

See Note 22.8 to our audited consolidated financial statements for more information about our voluntary separation incentive programs.

In addition, in January 2016 Petrobras Distribuidora adopted a voluntary separation incentive program to encourage voluntary disconnection. The target group for this program included retired employees over the age of 55 years as of December 30, 2015. In October 2016, Petrobras Distribuidora announced a new voluntary separation incentive program ( PIDV BR 2016 ), which target group included employees with over 10 years of service. Dismissals started in January 2017 and 1,105 employees have already enrolled. Petrobras Distribuidora had 3,714 employees at the end of 2016, which corresponds to a decrease of 341 employees (8.4%) compared to 2015. The number of employees who voluntarily separated under PIDV BR 2016 in 2016 was 705.

### ***Employees Internal Relocation Program Mobiliza***

In 2013, we launched an internal relocation program in order to make our human resources organizational needs compatible with the interests of our employees by offering to our employees relocation opportunities in areas that were expected to demand an increase in the number of employees. In this way, by re-allocating our current human

resources within our organization, we reduced the need for additional short-term hiring. In 2016, we published 266 relocation opportunities and 151 employees were relocated under this program. In light of our 2017-2021 Plan, staff mobility has become especially relevant to our activities. As a consequence, in December 2016, we structured a program to make it continuous (Continuous Corporate Mobility Process). As a result, the number of published opportunities increased 221% to 853 and 458 employees were relocated in 2017.

**Table of Contents*****Pension and Health Care Plan***

We sponsor a defined benefit pension plan, known as Petros, and a variable contribution pension plan, known as Petros 2, which together cover 96.43% of our employees.

The main purpose of our pension plans has been to supplement the social security pension benefits of our retired employees. Employees, as participants of the plans, make mandatory monthly contributions. Our historical funding policy has consisted of making monthly contributions to the plans in the amounts determined by pension fund regulations and actuarial appraisals employees equal amount. Contributions are intended to provide not only for benefits attributed to services rendered up to the present date but also for those expected to be earned in the future.

The table below shows the benefits paid, contributions made, and outstanding pension and medical liabilities for 2017, 2016 and 2015:

	2017	2016	2015
	(US\$ million)		
Total benefits paid pension and medical plans	2,408	1,701	1,569
Total contributions pension and medical plans(1)	767	650	651
Actuarial liabilities(2)	21,830	22,297	12,850

(1) Includes contributions by employees and sponsors (except for contributions under the TFC).

(2) Unfunded pension and medical plans obligations.

As of August 9, 2002, Petros interrupted admitting new participants and since 2003 we have been engaged in complex negotiations with representatives of the Brazilian Oil Workers National Union to address the deficits of the plan and develop a supplementary pension plan. Accordingly, we signed with Petros the terms of financial commitment ( TFC ) to cover obligations under the pension plan, which amounts are due in 20 years, with 6% per year semiannual coupon payments based on the updated balance. As of December 31, 2016, the balance of TFC was US\$3.6 billion\*. We have also been subject to material legal proceedings in connection with the Petros Plan. In August 2007, we approved new regulations for the Petros Plan that readjust benefits based on an inflation index rather than through salary readjustments proposed by the sponsors and retirement benefits readjustments proposed by the Brazilian Social Security National Institute.

In 2007, we also implemented Petros 2, a variable contribution or mixed pension plan, for employees with no supplementary pension plan. A portion of this plan has defined benefits characteristics including risk coverage for disability and death, a guaranty of a minimum benefit and a lifetime income, and the related actuarial obligations are recorded according to the projected unit credit (PUC) method. The portion of the plan with defined contribution characteristics, earmarked for forming a reserve for programmed retirement, is recognized in the results for the year as the contributions are made.

In July 2016, Petros announced a deficit of US\$6.9 billion on Petros Plan, according to what is set out in the Resolution no. 26/2008 of National Manager of Private Pension (CGPC) and complementary normative resolutions, which regulate deficit management issues. Such amount has exceeded the tolerance limit called LTDA (Limit of Accumulated Technical Deficit), which is US\$2.0 billion as applied to Petros. Thus, at least a net amount chosen between US\$4.9 billion to US\$6.9 billion and will have to be borne in equal parts between sponsors (50%) and participants and beneficiaries (50%) pursuant to the parity rules under Brazilian law for government employers. This

equation carries a maturity of 1.5 times the liability duration and its term is estimated to expire in 18 years.

In addition, according to Resolution no. 26/2008 of National Manager of Private Pension (CGPC) and complementary normative resolutions, the Petros Foundation should have developed and approved an adjustment plan (to be approved by the sponsors), by December 31<sup>st</sup>, 2016, to be implemented within 60 days. However, the Petros Foundation has filed a request for an Adjustment Term of Conduct (TAC) with the National Supplementary Pension Authority (PREVIC), requesting a postponement of 210 days after TAC's approval, due to technical and management reasons.

On June 19, 2017, the PREVIC approved and published the TAC for Petros Foundation granting the requested waiver and establishing deadlines for approval and implementation of the Deficit Equalization Plan (PED) related to accumulated actuarial deficit in 2015.

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On September 12, 2017, the Petros Foundation Deliberative Council approved the Petros Plan PED, in the total amount of the deficit recorded in 2015 of US\$6.9 billion, and submitted it to Petrobras for consideration. This amount was adjusted mainly for interest and inflation until December 2017, reaching approximately US\$8.3 billion.

In compliance with the rules of governance established in Brazil, the PED was appraised by Petrobras Board of Directors and forwarded to the Secretary of State Company Control (SEST), which, having analyzed and carried out its considerations and complementary requests, approved the implementation in early 2018.

In this way, the PED began to be implemented in March 2018, with Petrobras totaling US\$3.9 billion and BR Distribuidora, US\$0.3 billion. The disbursement by the sponsors will be decreasing over the next 18 years and is estimated in the first year at US\$0.4 billion for Petrobras and US\$0.03 billion for BR.

In accordance with IAS19 (R1), the deficit adjustment plan did not impact Petrobras 2017 profit and loss account, but was included in the December 2017 financial statements, reducing the amount of remeasured actuarial liabilities and its variations recorded in OCI Other Comprehensive Income. Such implementation will positively influence the profit and loss account of the following year helping to reduce post-employment benefits accounting expenses.

On February 15, 2018, the National Supplementary Pension Authority (PREVIC) has approved the splitting of the Petros Plan into two independent portions, expected for March 31, 2018 namely Petros Renegotiated (PPSP-R) and Petros Non Renegotiated (PPSP-NR). The splitting process derived from new regulations governing the Petros Plan released in 2007 and 2012. Pursuant to such regulations, participants could choose to adopt or not the new rules applicable to benefits. In that way, about 75% of the participants chose to follow the new rules that create those two new particular groups: Petros Renegotiated (PPSP-R) and Petros Non Renegotiated (PPSP-NR). Petros Foundation will evaluate the possible operational impacts derived from the splitting process. The splitting may cause future reviews of assumptions and costs associated to each new group and a potential review of each group's contribution.

We maintain a health care benefit plan (AMS), which offers medical benefits and covers all employees (active and retired) together with their dependents. We manage the plan, with the employees contributing approximately 30% of the total amount to cover principal risks and a portion of the costs relating to other types of coverage in accordance with participation tables defined by certain parameters, including salary levels.

On January 18, 2018, the Interministerial Committee on Corporate Governance of State-Owned Enterprises (CGPAR), through CGPAR Resolutions n° 22/2018 and 23/2018, established new governance and cost guidelines and parameters for self-managed health-care benefits of federal companies, targeting sustainability and financial-actuarial balance. We have 48 months to adjust our AMS contribution practices to the new rules and started some studies to evaluate impacts. Among such impacts, an actuarial liability reduction is expected, since the change implies parity limit of costs between us and our employees, besides other changes which effects will be timely measured and considered.

Our commitment related to future benefits to plan participants is calculated on an annual basis by an independent actuary, based on the Projected Unit Credit method. The health care plan is not funded or otherwise collateralized by assets. Instead, we make benefit payments based on annual costs incurred by plan participants.

In addition, some of our consolidated subsidiaries have their own benefit plans.

In 2017, contributions paid by Petrobras and its subsidiaries (sponsors) to the pension and medical plans with defined benefit characteristics amounted US\$922 million and contributions paid to the variable portion of our Petros 2 pension plan amounted to US\$283 million.

For further information on risks related to Petros Plan, see Item 3. Key Information Risk Factors Risks Relating to Our Operations Our commitment to meet the obligations of our pension plan ( Petros ) and health care benefits may be higher than what is currently anticipated, and we may be required to make additional contributions of resources to Petros. Also, see Notes 4.17, 5.4 and 22 to our audited consolidated financial statements for more information about our Employee Benefits.

**Table of Contents****Item 7. Major Shareholders and Related Party Transactions****Major Shareholders**

Our capital stock is composed of common shares and preferred shares, all without par value. On March 31, 2018, there were 1,411,257,618 outstanding common shares and 779,393,294 outstanding preferred shares represented by ADRs. The ratio of our common and preferred shares to ADRs is two shares to one ADR. Except for the increase of our share capital in the past three fiscal years, due to the absorption of a portion of our tax incentive reserves into our share capital, there has been no change in the past three fiscal years in the amount of our issued share capital, the number of our common and preferred shares or the voting rights of our common and preferred shares. See Exhibit 1.1 for a copy of our bylaws.

As of March 31, 2018, approximately 13.91% of our preferred shares and approximately 18.96% of our common shares were held of record in the United States directly or in the form of ADRs.

Under the Brazilian Corporate Law, as amended, the number of non-voting shares of our company may not exceed two-thirds of the total number of shares. The Brazilian federal government is required by law to own at least a majority of our voting stock and currently owns 50.26% of our common shares, which are our only voting shares. The Brazilian federal government does not have any different voting rights, but as long as it holds a majority of our voting stock, it will have the right to elect a majority of our directors, irrespective of the rights our minority shareholders may have to elect directors, set forth in our bylaws.

The following table, except for PREVI, sets forth information concerning the ownership of our common shares and preferred shares as of March 31, 2018, by the Brazilian federal government, certain public sector entities and our officers and directors as a group. In addition, as of March 5, 2018, BlackRock, Inc. ( BlackRock ) notified us that BlackRock acquired preferred shares issued by us and owns 246,874,144 preferred shares and 19,523,615 ADRs, representing preferred shares. BlackRock owns an aggregate of 285,921,374 preferred shares, representing approximately 5.1% of our preferred shares.

<b>Shareholder</b>	<b>Common Shares</b>	<b>%</b>	<b>Preferred Shares</b>	<b>%</b>	<b>Total Shares</b>	<b>%</b>
Brazilian federal government	3,740,470,811	50.26			3,740,470,811	28.67
BNDES	734,202,699	9.87	161,596,958	2.88	895,799,657	6.87
BNDES Participações S.A. BNDESPar	11,700,392	0.16	1,176,670,796	21.00	1,188,371,188	9.11
Caixa Econômica Federal	241,340,371	3.24	61,401,782	1.10	302,742,153	2.32
All members of the board of directors (permanent and alternate), executive officers and members of our fiscal council (permanent and alternate) (20 people in total)	5,148	0.00	45,014	0.00	50,162	0.00
Caixa de Previdência dos Funcionários do Banco do Brasil PREVI	13,758,215	0.18	327,488,675	5.85	341,246,890	2.62
Others	2,700,976,506	36.29	3,874,839,563	69.17	6,575,816,069	50.41



Total	7,442,454,142	100.00	5,602,042,788	100.00	13,044,496,930	100.00
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### Related Party Transactions

In order to comply with Law No. 13,303/16 and the guidelines of the State-Owned Enterprises Governance Program *Programa Destaque em Governança das Estatais*, the B3's self-regulatory program, of which Petrobras is part, our board of directors approved a review of our policy for related party transactions, which became effective in December 2017, with the aim of transparency in our procedures and better corporate governance practices. This policy also aims to guarantee the adequate and diligent decision-making process by the administration of the company, in situations where there are possible conflicts of interest. The policy is reviewed annually by our board of directors, also due to Law No. 13,303/16.

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Since the beginning of 2017, any related-party transaction we are involved in, that meet the criteria established in our policy that is compliant with the Annex 30-XXXIII of ICVM No. 480/09, must be previously analyzed by our audit committee, which has to report its conclusions to our board of directors on a monthly basis.

Our policy provides for a strict governance procedure for transactions directly or indirectly involving our controlling shareholder. In such cases, the transactions involving directly or indirectly our controlling shareholder will also be analyzed by the Minority Committee, and must be approved by 2/3 of our members present at our board of directors meeting.

Under the process of monitoring related party transactions, our audit committee seeks, in compliance with corporate law, to act in a collaborative and integrative manner with the Petrobras Distribuidora S.A. audit committee.

For additional information regarding our principal outstanding related-party transactions, see Note 19 to our audited consolidated financial statements.

## ***Board of Directors***

Direct transactions with members of our board of directors or our executive officers must follow the conditions of an arms-length transaction and market practice guiding transactions with third parties. None of the members of our board of directors, our executive officers or close members of their families has had any direct interest in any transaction we effected that is or was unusual in its nature or conditions, or material to our business during the year, and which remains in any way outstanding or unperformed. In addition, we have not entered into any transaction with related parties which is or was unusual in its nature or conditions during the current or the three immediately preceding financial years, nor is any such transaction proposed, that is or would be material to our business.

We have no outstanding loans or guarantees to the members of our board of directors, our executive officers, our key management personnel or any close member of their families. For a description of the shares beneficially held by the members of our board of directors and close members of their families, see Item 6. Directors, Senior Management and Employees Share Ownership.

## ***Brazilian Federal Government***

We have engaged, and expect to continue to engage, in the ordinary course of business in numerous transactions with our controlling shareholder, the Brazilian federal government, and with banks and other entities under its control, including financing and banking, asset management and other transactions. The above-mentioned transactions amounted to a net asset of US\$477 million as of December 31, 2017. See Note 19.1 to our audited consolidated financial statements for further information about such transactions.

As of December 31, 2017, we had a receivable (the Petroleum and Alcohol Account) from the Brazilian federal government, our controlling shareholder, of US\$251 million. For further information, see Note 19.2 to our audited consolidated financial statements.

In addition, we are allowed to invest in securities issued by the Brazilian federal government in Brazil and also abroad, provided that the legal and regulatory requirements are met and taking into consideration market's best practices and the conservatism that should guide our investments.

As of December 31, 2017, the value of securities issued by the Brazilian federal government that have been directly acquired and held by us amounted to US\$1,702 million.

*Eletrobras Subsidiaries*

In 2017, we recognized in income statement an allowance for impairment, net of reversals, of US\$250 million (as compared to US\$307million in 2016), to cover certain trade receivables due Eletrobras subsidiaries that operate in the isolated electricity sector in the Northern region of Brazil. See Note 8.4 to our audited consolidated financial statements.

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**Item 8. Financial Information**

**Consolidated Statements and Other Financial Information**

See Item 18. Financial Statements and Index to Financial Statements.

**Legal Proceedings**

We are currently party to numerous legal proceedings relating to civil, administrative, tax, labor, environmental and corporate issues arising in the normal course of our business. These proceedings involve claims for substantial amounts of money and other remedies. Several individual disputes account for a significant part of the total amount of claims against us. Our audited consolidated financial statements only include provisions for probable and reasonably estimable losses and expenses we may incur in connection with pending proceedings. Our material legal proceedings are described in Note 30 to our audited consolidated financial statements included in this annual report, and that description is incorporated by reference under this Item.

On December 29, 2017, Law 13,586 was passed (Law No. 13,586/17), which permits us to settle certain claims with respect to withholding tax due on charter payments for foreign charterers, by making payments in installments. The contingencies related to these proceedings represent some of our most tax exposure, and by settling these claims on January 30, 2018, in accordance with the plan, we will be able to reduce the total amount of our contingent tax liabilities by US\$8,507 million. For additional information on the settlement program under Law No. 13,586/17, see Note 21.2.4 to our audited financial statements ended December 31, 2017.

**Class Action**

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against Petrobras, Petrobras International Finance Company S.A. ( PifCo ), Petrobras Global Finance B.V. ( PGF, and collectively with us and PifCo, the Petrobras Defendants ), certain underwriters of debt securities (the Underwriter Defendants ), among other defendants (the Defendants ), in the United States District Court for the Southern District of New York ( SDNY or the District Court ). These actions were consolidated on February 17, 2015 (the Consolidated Securities Class Action or Class Action ). The Court appointed a lead plaintiff, Universities Superannuation Scheme Limited ( USS ), on March 4, 2015.

In sum and substance, the complaints in the Consolidated Securities Class Action asserted claims under the Securities Exchange Act of 1934, as amended (the Exchange Act ) and Securities Act of 1933, as amended (the Securities Act ), alleging that in the our press releases, filings with the U.S. Securities and Exchange Commission (the SEC ) and other communications, we made materially false and misleading statements and omissions regarding the value of our assets, the amounts of our expenses and net income, the effectiveness of our internal controls over financial reporting, and our anti-corruption policies, due to the alleged corruption purportedly committed in connection with certain contracts, which allegedly artificially inflated the market value of our securities.

In addition to the Consolidated Securities Class Action, 33 lawsuits were filed by individual investors before the same judge in the SDNY, and one was filed in the United States District Court for the Eastern District of Pennsylvania (collectively, the Individual Actions ), consisting of allegations similar to those in the Consolidated Securities Class Action.

Between August 2015 and December 2015, we and certain other defendants made motions to dismiss the complaints and amended complaints in the Consolidated Securities Class Action and certain of the Individual Actions. Certain,

but not all, of the claims were definitively dismissed and others were dismissed but with leave to re-plead. Thus, the actions continued against us and other defendants with respect to certain claims. Following the motion to dismiss stage, the complaint that was then considered operative for the subsequent proceedings in the Class Action was the fourth consolidated amended complaint ( FAC ) filed on November 30, 2015 by plaintiff USS, Employees Retirement System of the State of Hawaii ( Hawaii ), North Carolina Department of State Treasurer ( North Carolina ) (collectively, Class Plaintiffs ), and one other plaintiff whose claims were later dismissed.

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The judge scheduled a consolidated trial for the Class Action and the Individual Actions to begin on September 19, 2016, except that the judge ordered that any Individual Actions filed in the SDNY after December 31, 2015 would be stayed in all respects until after the completion of the trial. Six of the Individual Actions have been stayed as a result of this order.

On February 2, 2016, the judge granted Class Plaintiffs' motion for class certification, certifying a class under the Securities Act represented by Hawaii and North Carolina (the Securities Act Class) and a class under the Exchange Act represented by USS (the Exchange Act Class). The Securities Act Class was defined, in relevant part, as all purchasers who purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in domestic transactions, directly in, pursuant and/or traceable to public offerings on May 15, 2013 and March 11, 2014, and were damaged thereby. The Exchange Act Class was defined, in relevant part, as all purchasers who, between January 22, 2010 and July 28, 2015, purchased or otherwise acquired Petrobras securities, including debt securities issued by PifCo and/or PGF on the New York Stock Exchange or pursuant to other domestic transactions, and were damaged thereby.

On June 15, 2016, the United States Court of Appeals for the Second Circuit (Second Circuit) granted the Petrobras Defendants (and other defendants) motion requesting interlocutory appellate review of the District Court's class certification of the Class Action. The Petrobras Defendants (and other defendants) moved in District Court for a stay of all District Court proceedings, which the district judge denied on June 24, 2016 and, on June 27, 2016, the parties filed motions for summary judgment. The Petrobras Defendants (and other defendants) then moved in the Second Circuit for a stay of all District Court proceedings. On August 2, 2016, the Second Circuit granted the motion to stay all District Court proceedings during the pendency of the appeal.

Between on or about October 21, 2016 and September 13, 2017, our board of directors approved agreements to settle 21 of the Individual Actions (the Settled Individual Actions), leaving 13 remaining pending Individual Actions (six of which had been stayed since filed) (the Pending Individual Actions). The terms of the settlements for the Settled Individual Actions are confidential and we deny all allegations of wrongdoing. The settlements are aimed at eliminating the uncertainties, burdens and expense of ongoing litigation.

Based on the settlements reached in the Settled Individual Actions and advanced stages of negotiations in certain other Pending Individual Actions, we charged US\$448 million to the 2017 statement of income (of which US\$76 million was provisioned in 2017, and US\$372 million had been provisioned in 2016).

On July 7, 2017, the Second Circuit vacated, in part, the class certification decision in the Class Action and remanded the case to the District Court for further proceedings.

The Second Circuit partially granted the appeal by the Petrobras Defendants (and other defendants), reversing some aspects of the District Court's ruling and affirming others. Among other issues, the Second Circuit ruled that the district judge failed to consider whether the question of whether the transactions occurred in the United States could be determined through a common set of evidence, and whether, if not, common issues would predominate over individual ones. The effect of the Second Circuit's decision was to vacate the classes certified by the District Court pending additional proceedings in the District Court on remand.

On July 21, 2017, we filed a request for panel rehearing or en banc rehearing with the Second Circuit regarding portions of the Second Circuit's decision affirming the District Court's order, which was denied on August 24, 2017.

On November 1, 2017, we filed a petition for writ of certiorari in the United States Supreme Court appealing the Second Circuit's decision. On November 3, 2017, the Second Circuit granted our unopposed motion to stay the

mandate, which was filed by Petrobras on August 30, 2017.

At the end of December 2017, we signed an agreement in principle to settle the Consolidated Securities Class Action, which is still subject to court approval (the Class Action Settlement ).

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The Class Action Settlement is intended to resolve all pending and prospective claims by purchasers of Petrobras securities in the United States and by purchasers of Petrobras securities that are listed for trading or that clear or settle through the Depository Trust Company in the United States, including the Pending Individual Actions. Under the Class Action Agreement, the parties have agreed to the certification, for settlement purposes only, of a new class defined as all persons who (i) during the time period between January 22, 2010 and July 28, 2015, inclusive (the Class Period ), purchased or otherwise acquired Petrobras Securities, including debt securities issued by PifCo and/or PGF, on the New York Stock Exchange or pursuant to other Covered Transactions; and/or (ii) purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in Covered Transactions, directly in, pursuant and/or traceable to a May 13, 2013 public offering registered in the United States and/or a March 10, 2014 public offering registered in the United States before Petrobras made available to its security holders an earnings statement covering a period of at least twelve months beginning after the effective date of the offerings (i.e. before August 11, 2014 in the case of the May 13, 2013 public offering and before May 15, 2015 in the case of the March 10, 2014 public offering). Covered Transactions is defined to mean (i) any transaction in a Petrobras Security listed for trading on the New York Stock Exchange ( NYSE ); (ii) any transaction in a Petrobras Security that cleared or settled through the Depository Trust Company s book-entry system; or (iii) any transaction in a Petrobras Security that otherwise qualifies as domestic under the Supreme Court s decision in *Morrison v. National Australia Bank*, 561 U.S. 247 (2010). Excluded from the definition of Covered Transaction are purchases of any Petrobras Security on the B3.

If approved, the Class Action Settlement eliminates the risk of an adverse judgment which, as we have previously reported, could have a material adverse effect on us and our financial situation, and puts an end to the uncertainties, burdens and costs of protracted litigation.

Under the Class Action Settlement, we (together with our subsidiary PGF) have agreed to pay US\$2.95 billion to resolve claims in two installments of US\$983 million and a last installment of US\$984 million. The first installment was paid on March 1, 2018. The second installment will be paid within 10 days of final approval of the Class Action Settlement. The third installment will be paid by the later of (i) six months after final approval, or (ii) January 15, 2019. Accordingly, we charged US\$3.449 million to our statement of income for the last quarter of 2017 as other expenses and income, taking into account the gross up of tax related to our portion of the settlement.

On January 16, 2018, United States Supreme Court granted a joint motion to defer consideration of our petition for a writ of certiorari, pending final approval of the Class Action Settlement.

A stipulation between the settling parties containing the terms of the Class Action Settlement was submitted to the District Court for preliminary approval. On February 23, 2018, the District Court held a hearing on preliminary approval of the settlement, and subsequently granted preliminary approval on February 28, 2018. Notice is being provided to potential class members who will have an opportunity to opt out of the settlement and make any objections to the District Court, which the District Court will then review.

After the notice and objection period, the District Court is scheduled to hold a hearing on June 4, 2018 to determine whether to grant final approval of the Class Action Settlement. If final approval is not granted by the District Court, or if the settlement does not become final for any other reason, we will return to our position prior to the Class Action Settlement and, depending on the outcome of the subsequent litigation, we might be required to pay substantial amounts, which could have a material adverse effect on our financial condition, our consolidated results of operations or our consolidated cash flows for an individual reporting period.

Individuals are seeking measures against Petrobras in Brazil to annul and/or suspend the Class Action Settlement. No adverse action has been taken to date against the settlement. The plaintiffs in the Pending Individual Actions will be eligible to participate in the settlement. These plaintiffs also have the option to opt out of the Class Action Settlement



and, if they do, any such actions will continue.

The Pending Individual Actions involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the information produced in discovery, the timing of court decisions, rulings by the court on key issues, and analysis by retained experts. Except as set forth above, we are unable to determine at this time whether or not the plaintiffs in the Pending Individual Actions will determine to participate in the Class Action Agreement or to make a reliable estimate of eventual loss, if any, arising from certain Pending Individual Actions if they determine to opt out of the Class Action Agreement.

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We intend to defend against these actions vigorously.

### ***Class action in the Netherlands***

On January 23, 2017, the Stichting Petrobras Compensation Foundation ( Foundation ) filed a class action before the district court in Rotterdam, in the Netherlands, against Petrobras and its subsidiaries Petrobras International Braspetro B.V. (PIBBV) and PGF; joint venture Petrobras Oil & Gas B.V. (PO&G), and some former managers of Petrobras.

This Foundation allegedly represents an unidentified group of investors and demands judicial remedies for alleged damages caused to investors who purchased securities issued by Petrobras and PGF outside the United States, before July 28, 2015, due to alleged illegal acts. The Foundation also alleges financial losses are connected to the facts uncovered by the Lava Jato investigation and to purported false and misleading financial information released by us.

Petrobras, PGF, PIBBV and PO&G filed their first response to the claim on May 3, 2017 (first docket date), presenting the law firms that will defend these companies and requesting a hearing to discuss some aspects of the case.

On August 23, 2017, a hearing was held at the District Court in Rotterdam to establish the timeframe for proceedings. Initial arguments were filed by defendants on November 29, 2017 and the Foundation presented its reply on March 28, 2018. An oral hearing will be held on June 28, 2018. The Court ruling is expected to be presented in September 2018.

We (and other defendants) presented preliminary defenses on November 29, 2017.

This class action involves complex issues that are subject to substantial uncertainties and depend on a number of factors such as the legitimacy of the Foundation as the plaintiffs' attorney, the applicable rules to this complaint, the information produced in discovery, analysis by experts, the timing of court decisions and rulings by the court on key issues. Currently, it is not possible to determine if we will be responsible for the payment of compensation as a result of this action as this assessment depends on the outcome of these complex issues. Moreover, it is uncertain which investors are able to file complaints related to this matter against us.

In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and, at the current stage, the impacts of such claims are highly uncertain. The uncertainties inherent in all such matters affect the amount and timing of the ultimate resolution of these actions. As a result, we are unable to make a reliable estimate of eventual loss arising from this action. We are a victim of the corruption scheme uncovered by the Lava Jato investigation and we aim to present and prove this assertion before the Netherlands Authorities.

The uncertainties inherent in all such matters do not enable the Company to identify possible risks related to this action. Compensation for the alleged damages will only be determined by court rulings on complaints to be filed by individual investors, unless agreements to settle Opt-out Claims occur. The Foundation is not able to demand compensation for damages.

We deny the allegations presented by the Foundation and intend to defend ourselves vigorously.

### ***Other Related Investor Claims***

We are also currently a party to arbitration and judicial proceedings in Brazil, all of which are currently in their initial stages. In each case, the proceedings were brought by investors that purchased Petrobras' shares traded on the Brazilian



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**Table of Contents*****Other Legal Proceedings***

We are currently a party in arbitrations in Brazil and a lawsuit in the District Court of the District of Columbia in Washington D.C. against investors of Sete Brasil. In these proceedings, the investors claim that Petrobras induced investors to transfer money to Sete Brasil and that we were among the parties responsible for the financial situation of Sete Brasil, which proposed a judicial recovery action in Brazil (*recuperação judicial*.) The arbitrations in Brazil are confidential. As previously disclosed in a press release dated December 15, 2017, an arbitration award, favorable to the company, rejected a request made by an investor of Sete Brasil, in one of the arbitrations proposed against Petrobras, seeking to obtain reimbursement in connection with the investment made in Sete Brasil. The adjusted amount of this arbitration is approximately US\$96 million (R\$318 million). In the action in the District of Columbia, the district judge partially granted a motion to dismiss on March 30, 2017, allowing the action to proceed as to certain claims. Petrobras has appealed against that decision and oral argument was held on January 19<sup>th</sup>, 2018.

In addition, as disclosed on September 21, 2017, we have initiated an extrajudicial mediation procedure with Sete Brasil. According to Law 13,140/2015, the mediation is performed by an impartial third party, without decision-making power, who assists and encourages the parties to identify or develop consensual solutions to a particular controversy. Pursuant to articles 30 and 31 of the aforementioned Law, any and all information relating to the mediation procedure is confidential in relation to third parties. Irrespective of the result of negotiations, any agreement reached in the mediation will be subject to our corporate governance and compliance standards of Petrobras, as well as approval by our bodies.

On March 1, 2018 our board of directors approved the key terms of a possible settlement, reached through the extrajudicial mediation procedure in progress with Sete Brasil. The main terms are the following: (i) maintenance of charter and operation contracts referring to 4 drilling rigs, with rescission (termination) of signed contracts in relation to the other 24 drilling rigs; (ii) the contracts shall have effect of 10 years, with daily rate of US\$0.299 million, including the chartering and operation of the units; (iii) our removal and removal of our subsidiaries from the shareholding structure of the companies of Grupo Sete Brasil and FIP Sondas, so that we no longer hold any shares in this company, as well as the resulting dissolution of all other contracts that are not compatible with the terms of the agreement. The signing of the agreement between us and Sete Brasil is conditional upon presentation, by Sete Brasil, of an international-class drilling rig operator with experience in deep waters, in accordance our approval criteria. That agreement is further conditioned to the success in the negotiation and approval, by the relevant bodies of both companies, of the final terms and conditions of the documents necessary to the implementation of the agreement.

We filed four arbitrations with the ICC against the ANP's decision to unify unconnected oil fields of Petrobras (i.e., Lula and Cernambi; Baúna and Piracaba; Tartaruga Verde and Tartaruga Mestiça; and Parque das Baleias). However, the ANP has been successful in staying, through judicial injunctions, two of these arbitrations. Related to Parque das Baleias Arbitration, the Brazilian Superior Court of Justice decided in October, 2017, that the Arbitral Tribunal is the competent authority to assess its own jurisdiction and to evaluate the merits of the conflict, allowing this arbitration to proceed. Regarding Tartaruga Mestiça and Tartaruga Verde arbitration, the federal court of Rio de Janeiro also upheld in favor of the Arbitral Tribunal's competence to determine its jurisdiction to hear the case. Thus, the Tartaruga Verde and Mestiça's arbitration was also restarted.

In addition, the BM-S-11 consortium, in which we own (as operator) a participation of 65%, in partnership with BG E&P Brasil (25%), a subsidiary of Royal Dutch Shell plc, and Petrogal Brasil (10%), received a notice on March 30, 2017 from the ANP, charging the consortium the amount of US\$798 million (R\$2.6 billion) with respect to the Lula field, in the Santos Basin's pre-salt layer. The assessment derives from the ANP's recalculation of oil prices and the portion related to the Brazilian federal government take from May 2013 to December 2016. The consortium understands that it complied with the applicable rules, in force since 2000, and will challenge the assessment with the

ANP. In March, 2018, the ANP decided to cancel the assessment and to recognize the nullity of the administrative proceeding.

**Table of Contents*****Investigations Carried out by Authorities***

We have also received a subpoena from the SEC relating to the allegations concerning the Lava Jato investigation and are fully cooperating with the SEC, as well as with the DoJ, as to their investigation into this matter. See Item 3. Key Information Risk Factors Ongoing SEC and DoJ investigations regarding the possibility of non-compliance with the U.S. Foreign Corrupt Practices Act could adversely affect us. Violations of this or other laws may require us to pay fines and expose us and our employees to criminal sanctions and civil suits. Additionally, the São Paulo State Prosecutor's Office initiated an administrative civil proceeding in order to investigate the existence of potential damages caused by us to those investing in our shares listed in the Brazilian stock exchange as a result of the impact caused by the findings identified in the Lava Jato investigation.

***Lava Jato Investigation***

In 2009, the Brazilian federal police began an investigation aimed at criminal organizations engaged in money laundering in several Brazilian states. The Lava Jato investigation is extremely broad and comprises numerous investigations into several criminal practices, spanning crimes and conduct committed by individuals in different parts of the country and different sectors of the Brazilian economy. Beginning in 2014, the Brazilian Federal Prosecutor's Office focused part of its investigation on irregularities involving Petrobras' contractors and suppliers, and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. On March 7, 2018, our former CEO Aldemir Bendine was found guilty for receiving bribes from Odebrecht through an intermediary while he was CEO of Petrobras, in relation to a transaction not involving Petrobras. The criminal case is ongoing and appeals have been filed. It is possible that further information damaging to us and our interests will come to light in the course of the ongoing investigations of corruption by Brazilian authorities.

We were recognized by the Brazilian authorities as a victim of the acts uncovered by the Lava Jato investigation and will continue to pursue legal measures against companies and individuals, including former employees and politicians, who have caused financial and image damage to us. We have been working together with the Brazilian federal prosecutors office, the Brazilian federal police, the Federal Revenue Services and other competent authorities since the beginning of the investigation. On December 7, 2017, Petrobras received US\$201 million through cooperation agreements concluded with individuals and legal entities within the scope of Lava Jato investigation. Including this amount, the total amount of restitution paid to us since the beginning of the Lava Jato investigation has reached the US\$455 million. For further information regarding the Lava Jato investigation and its impacts on us, see Note 3 to our audited consolidated financial statements.

***Legal Proceedings and Preliminary Procedure on TCU Divestments.***

There are some judicial proceedings (mainly civil suits), which allege a supposed lack of publicity and competitiveness in our proceedings for the sale of assets and equity in controlled companies. Ten of such proceedings were suspended due to injunctions granted by judges and relate to: (i) the assignment of concession rights in Baúna and Tartaruga Verde; (ii) the sale of share participation of BR Distribuidora and other subsidiaries, such as (ii.a) PetroquímicaSuape and CITEPE, (ii. b) Nova Transportadora do Sudeste NTS; (iii) the assignment of rights of a set of onshore and offshore oil fields located in the States of Sergipe, Ceará, Rio Grande do Norte, Bahia, Espírito Santo; (iv) the sale of UFN III; (v) the assignment of rights of Carcará Field and (vi) strategic alliances related to Termobahia and to Lapa field and Iara area. By December, 2017, all those injunctions were reversed or suspended. There are other civil suits in which plaintiffs ask for injunctions which are still pending, with the exception of the one regarding the divestment related to shallow waters offshore oil fields located in the state of Rio Grande do Norte, in which, in February 2018, the federal judge granted an injunction in order to suspend it. The injunction was suspended by the president of the Federal Court of Appeals in early March, 2018.

As a result of an audit procedure instituted by the TCU relating to our proceedings for the sale of assets and equity participation in controlled companies, on March 15, 2017, the TCU determined that we should follow the revised divestment process methodology approved by our board of executive officers. The TCU's decision also determined that we should reinitiate our divestments program under modified procedures established by the revised divestment process methodology revised after TCU's inspection. We were allowed to continue with our divestment projects related to the assignment/sale of our participation (i) in Baúna and Tartaruga Verde and (ii) in Campo de Saint Malo Oil Field in the Gulf of Mexico. The current divestment process methodology mainly provides a more detailed and improved process and is now applicable to all of our divestment projects, except in the cases of strategic partnership. We decided not to proceed with: (i) the sale of Baúna and Tartaruga Verde, due to the Brazilian federal judiciary's injunctions in the state of Sergipe, which were revoked on December 18, 2017, as well as the infeasibility of the proposal and (ii) the execution of the sale agreements of our participation in Saint Malo Oil Field given the fact that the expected results from the sale became frustrated.

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At the end of March 2017, in order to comply with the TCU's decision and adopt the revised divestment methodology, we terminated all our ongoing divestment projects. All projects included in our divestment portfolio follow the current methodology, as determined by the TCU.

### **Internal Commissions**

We periodically establish ad hoc internal commissions (*comissões internas de apuração*) to evaluate our compliance with applicable law and regulations. The scope of each internal commission is established by our management. Upon the conclusion of each internal commission's evaluation, its material findings are used to improve our compliance efforts.

During 2017, we established a number of new internal commissions to evaluate past transactions including pursuant to concerns mentioned in public press reports, including:

A commission formed on January 12, 2017 to investigate possible irregularities in contracts executed with Lumina Resíduos Industriais S.A. and Estre Ambiental S.A.;

A commission formed on March 13, 2017 to investigate possible irregularities in contracts executed with AUTO VIAÇÃO 1001 LTDA;

A commission formed on March 27, 2017 to investigate the contracting processes for the Petrobras administrative facilities in Rio de Janeiro known as EDISEN (Edifício Senado) and EDICIN (Edifício Cidade Nova);

A commission formed on April 12, 2017 to investigate possible irregularities in contracts with EBE-ALUSA consortium, ALUSA-CBM consortium and Strabag Energy;

A commission formed on April 17, 2017 to investigate possible irregularities in contract with the company GLOBAL INDUSTRIES OFFSHORE LLC;

A commission formed on May 17, 2017 to investigate possible irregularities in the agreement executed with the State of Rio de Janeiro represented by the Secretariat of State for the Environment (SEA), with the participation of the State Environmental Institute (INEA) and the Fundação BioRio (FBR) at COMPERJ;

A commission formed on June 27, 2017 to investigate possible irregularities in contracts with Akyzo and Liderroll;

A commission formed on August 23, 2017 to investigate possible irregularities in contracts for fuel trading and ships chartering with Trafigura and Glencore;



A commission formed on October 6, 2017 to investigate possible irregularities in chartering contracts of maintenance and safe units executed with Equinox and Sevan Marine;

A commission formed on October 30, 2017 to investigate possible irregularities in contracts executed with companies SALMOIRAGHI, ZIMMER and SOJITZ CORPORATION at Companhia Integrada Têxtil de Pernambuco CITEPE;

A commission formed on November 10, 2017 to investigate suspicion of employees with segregation of duties conflicts in Araucaria Nitrogenados made by a whistleblower;

A commission formed on December 6, 2017 to investigate possible irregularities in the investment agreement with Odebrecht and Braskem for the consolidation of Petrobras investments in the petrochemical segment;

A commission formed on December 21, 2017 to investigate possible irregularities in the contract executed with Bueno Engenharia e Construção in relation COMPERJ.

After analyzing documentation produced internally, the work of each of these commissions will be or has been completed. If the findings in some instances indicate that certain of our former and current employees did not comply with certain of our internal policies, such findings will be or have been sent to applicable Brazilian authorities, as the case may be (including the Federal Prosecutor's Office, Federal Police, CVM and MT-CGU) for their assessment. The Brazilian authorities may take legal measures against the individuals involved, and we may take certain actions in accordance with applicable labor laws and our applicable employment and other policies.

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Regardless of the findings of our internal commissions, and to mitigate potential risks of further non-compliance to our internal policies, we continued to develop and implement a number of measures aimed at improving corporate governance, our management of processes, risk management and controls, including those related to fraud and corruption.

**Dividend Distribution**

In 2016, a policy of distribution of dividends by our board of directors was approved, in accordance with Law No. 13,303/16, with the goal of establishing the rules and procedures related to the matter, in a way that is transparent and in accordance with the legal, statutory norms and other internal regulations.

There was no cash paid in the last three years to our shareholders in the form of dividends and interest on capital. Our board of directors proposed no distribution of dividends in 2018 and 2017 for profits accrued in the years ended December 31, 2017 and 2016 because we reported losses in such fiscal years. See Note 23.5 to our audited consolidated financial statements.

We are currently carrying out studies to analyze possible changes in our bylaws related to our dividend distribution provisions.

For information about dividend distribution requirements under Brazilian Corporate Law and our bylaws, see Item 10. Additional Information Memorandum and Articles of Incorporation Payment of Dividends and Interest on Capital, and Item 10. Mandatory Distribution.

**Item 9. The Offer and Listing**

**Trading Markets**

Our shares and ADSs are listed or quoted on the following markets:

Common Shares	São Paulo Stock Exchange (B3) São Paulo (ticker symbol PETR3);
	Mercado de Valores Latinoamericanos en Euros (Latibex) Madrid, Spain (ticker symbol XPBR);
	Bolsa de Comercio de Buenos Aires (BCBA) Buenos Aires, Argentina (ticker symbol APBR)
Preferred Shares	São Paulo Stock Exchange (B3) São Paulo (ticker symbol PETR4);

Mercado de Valores Latinoamericanos en Euros (Latibex) Madrid, Spain (ticker symbol XPBRA);

Bolsa de Comercio de Buenos Aires (BCBA) Buenos Aires, Argentina (ticker symbol APBRA)

Common ADSs

New York Stock Exchange (NYSE) New York (ticker symbol PBR)

Preferred ADSs

New York Stock Exchange (NYSE) New York (ticker symbol PBRA)

Our common and preferred shares have been traded on the B3 since 1968. Our ADSs representing two common shares and our ADSs representing two preferred shares have been traded on the New York Stock Exchange since 2000 and 2001, respectively. The Bank of New York Mellon serves as depository for both the common and preferred ADSs.

Our common and preferred shares have been traded on the LATIBEX since 2002. The LATIBEX is an electronic market created in 1999 by the Madrid Stock Exchange in order to enable trading of Latin American equity securities in euro denominations.

Our common and preferred shares have been traded on the *Bolsa de Comercio de Buenos Aires* (Buenos Aires Stock Exchange) since 2006.

**Table of Contents****Share Price History**

The following table sets forth information for our common shares and preferred shares, as reported by the B3, and for our common and preferred ADSs, as reported by the New York Stock Exchange, for the periods indicated. The ratio of our common and preferred shares to ADRs is two shares to one ADR.

	<i>Reais Per Common Share</i>		<i>Reais Per Preferred Share</i>		<i>U.S. Dollars Per Common ADS</i>		<i>U.S. Dollars Per Preferred ADS</i>	
	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
<b>2013</b>	<b>16.57</b>	<b>15.57</b>	<b>17.63</b>	<b>16.78</b>	<b>14.20</b>	<b>13.34</b>	<b>15.05</b>	<b>14.33</b>
<b>2014</b>	<b>23.29</b>	<b>8.52</b>	<b>24.56</b>	<b>9.18</b>	<b>20.65</b>	<b>6.26</b>	<b>21.86</b>	<b>6.66</b>
<b>2015</b>	<b>15.66</b>	<b>7.67</b>	<b>14.38</b>	<b>6.44</b>	<b>10.19</b>	<b>3.72</b>	<b>9.38</b>	<b>3.13</b>
<b>2016</b>								
First Quarter	10.70	5.91	8.49	4.20	5.86	2.90	4.63	1.99
Second Quarter	13.57	9.60	10.25	7.58	7.71	5.30	5.90	4.12
Third Quarter	16.39	11.34	14.22	9.29	10.18	6.88	8.82	5.57
Fourth Quarter	19.38	15.59	18.20	13.97	12.41	9.57	11.59	8.22
<b>2017</b>								
First Quarter	18.35	13.70	16.09	13.00	11.54	8.81	10.34	8.36
January	18.35	16.14	16.04	14.66	11.54	10.26	10.14	9.49
February	17.16	15.77	16.09	14.70	11.04	10.08	10.34	9.35
March	16.43	13.70	15.52	13.00	10.58	8.81	9.98	8.36
Second Quarter	16.19	12.78	15.70	11.64	10.45	7.70	10.14	6.96
Third Quarter	16.38	12.68	15.87	11.93	10.42	7.74	10.15	7.27
July	13.84	12.68	13.29	11.93	8.81	7.74	8.50	7.27
August	14.48	13.51	13.88	12.95	9.17	8.47	8.77	8.14
September	16.38	14.60	15.87	14.02	10.42	9.29	10.15	8.93
Fourth Quarter	18.10	15.56	17.43	14.95	11.17	9.43	10.72	9.00
October	17.40	15.90	17.03	15.40	10.73	10.07	10.50	9.74
November	18.10	15.91	17.43	15.33	11.17	9.68	10.72	9.20
December	16.91	15.56	16.10	14.95	10.29	9.43	9.83	9.00
<b>2018</b>								
First Quarter	24.00	17.33	22.39	16.55	14.71	10.70	13.74	10.22
January	21.71	17.33	19.93	16.55	13.83	10.70	12.66	10.22
February	23.18	20.09	21.52	18.77	14.39	12.21	13.39	11.41
March	24.00	22.59	22.39	20.93	14.71	13.73	13.74	12.70

Following a strong recovery in 2016, our market capitalization had a smaller increase in 2017. On the other hand, the first quarter of 2018 not only witnessed another sizeable increase in the prices of our securities but also marked the first time since January 2012 when our market capitalization surpassed our book value.

**B3**

As of December 31, 2017, our common and preferred shares represented approximately 6.8% of the total market capitalization of the B3 and Petrobras was the second most actively traded company of the B3. At December 31, 2017, the aggregate market capitalization of the 344 companies listed on the B3 was approximately US\$956 billion and the

ten largest companies represented approximately 53% of the total market capitalization of all listed companies. All the outstanding shares of an exchange-listed company may trade on the B3, but in most cases, only a portion of the listed shares are actually available for trading by the public. The remainder is held by small groups of controlling persons, by governmental entities or by one principal shareholder.

Trading directly on the B3 by a holder not deemed to be a resident of Brazil for Brazilian tax and regulatory purposes (a non-Brazilian holder) is subject to certain limitations under Brazilian foreign investment legislation. Non-Brazilian holders may only trade on the B3 in accordance with the requirements of CMN Resolution No. 4,373 and ICVM No. 560/2015. CMN Resolution No. 4,373 requires that securities held by non-Brazilian holders be maintained in the custody of, or in deposit accounts with, financial institutions duly authorized by the CVM.

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In addition, CVM Rule 560/2015 establishes limited situations where non-Brazilian holders are allowed to trade securities outside Brazilian stock exchanges or qualified over-the-counter markets, such as in transactions involving subscription, redemption, refund of shares and conversion of debentures into shares.

According to Brazilian regulations, the transfer of the ownership of investments from a non-Brazilian holder to another party through a private transaction is only allowed in limited situations, such as transfers resulting from transactions involving merger, split, amalgamation, corporate reorganizations, stock swaps, or a transfer resulting from bequest or inheritance. Such transfers are also permitted in situations where (i) the final beneficial owner of the transferred investment remains unchanged and (ii) the total amount of securities or financial assets owned, directly or indirectly, by all investors taking part in the transaction remains unchanged. CVM may authorize trades or transfers in other situations upon request by the interested investor. See Item 10. Additional Information Exchange Controls for further information.

***B3 Corporate Governance Initiatives***

The changes in our Corporate Governance and in our decision making processes turned us into a more robust and reliable company, which allowed us to join B3's Programa Destaque em Governança de Estatais and to request authorization to have our securities traded on B3's Corporate Governance Level 2 (Level 2).

In order to apply to Level 2 listing segment, changes in our bylaws were necessary, such as (a) expanding the activities of our committees that advise our board of directors, such as our audit committee and our Minority Committee, (b) including a provision for 100% tag along for preferred shares, under the same conditions granted to common shares; (c) providing for mandatory public offering of shares in the event of withdrawal from Level 2 or noncompliance with its rules; (d) providing for release of an annual calendar of corporate events; and (e) providing for an arbitration procedure for specific matters arising from the B3's Level 2 regulation, except in the cases involving our public interest and non-disposable rights.

Additionally, our bylaws state clearly that we may have our activities guided by the Brazilian federal government in order to contribute to the public interest that justified our creation. However, if the Brazilian federal government's guidelines lead us to undertake obligations and responsibilities under conditions different from those of any other company in the private sector that operates in the same market, such obligations and responsibilities shall be defined in law or regulation and have their costs and revenues broken down and disclosed. In addition, the Brazilian federal government shall compensate us, at each fiscal year, for the difference between market conditions and the operational result or economic return from such obligation.

We have submitted a formal application for Nível 2 to B3 and, if approved, we will enter into a participation agreement together with B3 and the Brazilian federal government, as the controlling shareholder.

**Item 10. Additional Information**

**Memorandum and Articles of Incorporation**

***General***

We are a publicly-traded company duly registered with the CVM under identification number 9512. Article 3 of our bylaws establishes our corporate purposes as research, prospecting, extraction, processing, trade and transportation of crude oil from wells, shale and other rocks, of crude oil derivatives, of natural gas and other fluid hydrocarbons, as well as other related or similar activities, such as activities connected with energy, including research, development,

production, transportation, distribution, sale and trade of all forms of energy, as well as other related or similar purposes.

In addition, Law No. 13,303/16 requires our bylaws to define the public interest we pursue and which publicly-oriented actions we are allowed to take in the pursuit of such public interest. In order to comply with Law No. 13,303/16, we amended our bylaws in December 2017 to include the definition of public interest and to state that the Brazilian federal government may orient our activities to pursue the public interest under certain circumstances, which distinguishes us from any other private company operating in the oil and gas market. More specifically, the Brazilian federal government may guide us to take publicly-oriented obligations or responsibilities, including executing investment projects and undertaking certain operating costs, when two conditions are met. First, the undertaking of obligations or responsibilities must be defined by law or regulation and provided for in a contract or agreement entered into with any public entity with powers to negotiate such contract or agreement. Second, the investment projects must have their cost and revenues broken down and disclosed in a transparent manner.

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Our Financial Committee and our Minority Committee, in their advisory role to our board of directors, are in charge of evaluating whether the obligations and responsibilities undertaken by us, in connection with the pursuit of the public interest, are different from those of any other private company operating in the oil and gas market. The evaluation by our Committees is based on certain technical and economic aspects of the planned investment projects and on the analysis of certain operating costs previously adopted by our management. Subject to the criteria adopted by our Committees and their evaluation, we may request the Brazilian federal government to compensate us for the difference between the amount that would be involved under market conditions and the operating result or economic return derived from the obligations undertaken by us for each fiscal year.

### ***Qualification of Directors and Executive Officers***

Members of our board of executive officers must be Brazilian nationals and reside in Brazil. Under our bylaws, shareholders establish the aggregate compensation, or allocate the compensation on an individual basis, payable to directors, executive officers, members of our fiscal council and of advisory committees to the board of directors. In the event shareholders do not allocate the compensation on an individual basis, our board of directors may do so.

In addition, Law No. 12,353/2010 requires that public and mixed-capital companies with 200 or more employees, and their subsidiaries, in which the Brazilian federal government holds a majority of the voting rights directly or indirectly, include as a member of the board of directors a representative elected by the company's employees by means of a separate voting procedure.

Law No. 13,303/16 and Decree No. 8,945/2016 define new requirements and limitations for the election of our executive officers, members of our management and our board of directors, including prohibiting the election of any person who acted, in the last thirty-six months, as a participant in the decision-making process of a political party or in any work connected to organizing, structuring and performing an electoral campaign.

In addition, under Law No. 13,303/16 and Decree No. 8,945/2016, the board of directors must be composed of at least 30% (thirty percent) independent members, which shall in no case be less than one, in the event there is a decision for the exercise of the right of cumulative voting by minority shareholders, pursuant to Brazilian Corporate Law.

However, the rules of the Programa Destaque em Governança de Estatais, from the B3, requires the minimum of 30% (thirty percent) of independent members in the composition of the board of directors.

Therefore, according to our bylaws, our board of directors must be composed of at least 30% of independent members, pursuant to article 22, paragraph 1, of Law No. 13,303/16 and to article 36, paragraph 1 of Decree No. 8,945, as of December 27<sup>th</sup>,2016 as well as the rules of the State-Owned Enterprise Governance Program *Programa Destaque em Governança de Estatais* from B3 and of B3's Level 2 Regulation, with the more stringent criteria prevailing in case of divergence between the rules. See Item 9. The Offer and Listing B3 B3 Corporate Governance Initiatives for further information on Level 2 listing segment.

### ***Allocation of Net Income***

At each annual general shareholders' meeting, our board of directors and board of executive officers are required to recommend how net income for the preceding fiscal year is to be allocated. Under Brazilian Corporate Law, net income is obtained after deduction of statutory holdings of the employees, managers and beneficiary parties (articles 190 and 191 of the Brazilian Corporate Law). In addition, in accordance with Brazilian Corporate Law, the amounts available for dividend distribution or payment of interest on capital equals net income less any amounts allocated from such net income to the legal reserve.



We are required to maintain a legal reserve, to which we must allocate 5% of net income for each fiscal year until the amount for such reserve equals 20% of our paid-in capital. However, we are not required to make any allocations to our legal reserve in a fiscal year in which the legal reserve, when added to our other established capital reserves, exceeds 30% of our capital. The legal reserve can only be used to offset losses or to increase our capital. After the creation of the legal reserve, the fixed or minimum cumulative dividends to which holders of preferred shares have priority, including those that were not timely distributed, should be distributed.

After the distribution of preferred dividends, a percentage of net income may be allocated to a contingency reserve for anticipated losses that are deemed probable for future years. Any amount so allocated in a prior year must be either (i) reversed in the fiscal year in which the reasons justifying the reserve cease to exist, or (ii) written off in the event that the anticipated loss occurs.

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A portion of the net income from donations or government grants for investments may also be allocated to the creation of a tax incentive reserve.

If the mandatory distributable amount, determined without deducting the amount of unrealized profits from its calculation basis, exceeds the sum of realized net income in a given year, this excess may be allocated to an unrealized revenue reserve. Brazilian Corporate Law defines realized net income as the amount of net income that exceeds the sum of the net positive result of equity adjustments and profits or revenues from operations whose financial results take place after the end of the next succeeding fiscal year. As long as we are able to make the minimum mandatory distribution described below, we must allocate an amount equivalent to 0.5% of subscribed and fully paid-in capital at year-end to a statutory reserve. The reserve is used to fund the costs of research and technological development programs. The accumulated balance of this reserve cannot exceed 5% of the subscribed and fully paid-in capital stock.

Brazilian Corporate Law also provides for the retention of profits, which cannot be approved in the event there is mandatory dividend distribution, and must be in accordance with the terms of our capital budget previously approved by the general meeting.

A portion of our net income that exceeds the minimum mandatory distribution may be allocated to fund working capital needs and investment projects, as long as such allocation is based on a capital budget previously approved by our shareholders. Capital budgets for more than one year must be reviewed at each annual shareholder meeting.

The creation of statutory reserves and the retention of profits cannot be approved to the detriment of the mandatory dividend.

### ***Mandatory Distribution***

Under Brazilian Corporate Law, the bylaws of a Brazilian corporation such as ours may specify a minimum percentage of the amounts available for distribution by such corporation for each fiscal year that must be distributed to shareholders as dividends or interest on capital, also known as the mandatory distributable amount, which cannot be lower than 25% of the adjusted net income for the fiscal year. Under our bylaws, the mandatory distributable amount has been fixed at an amount equal to not less than 25% of our adjusted net income, after deducting allocations to the legal reserve and further allocations that eventually occur or provided for under Brazilian Corporate Law, which the holders of preferred shares have priority in.

As a Brazilian corporation with a class of non-voting shares and pursuant to our bylaws, holders of preferred shares will have priority in the event of the reimbursement of capital and are entitled to minimum annual non-cumulative preferential dividends, to the extent that we declare dividends, equal to the higher of (i) 5% of their pro rata share of our paid-in capital, or (ii) 3% of the book value of their preferred shares (the greater prevailing).

To the extent that we declare dividends on our common shares in any particular year in an amount that exceeds the minimum preferential dividends due to our preferred shares, holders of preferred shares would be entitled to an additional dividend amount per share, such that holders of preferred shares will receive the same additional dividend amount per share paid to holders of common shares. Holders of preferred shares participate equally with common shareholders in share capital increases obtained from the incorporation of reserves and profits.

The Brazilian Corporate Law, however, permits a publicly held company such as ours to suspend the mandatory distribution if the board of directors and the fiscal council report to the annual general shareholders meeting that the distribution would be inadvisable in view of the company's financial condition. In this case, the board of directors must file a justification for such suspension with the CVM. Profits not distributed by virtue of the suspension mentioned

above shall be allocated to a special reserve and, if not absorbed by subsequent losses, shall be distributed as soon as the financial condition of the company permits such payments.

*Payment of Dividends and Interest on Capital*

We have a dividend distribution policy that defines the rules and the procedures related to the distribution of dividends, in a transparent manner. Our dividend distribution policy seeks to grant our short, medium and long-term financial sustainability, and is based on the assumption that we need financial flexibility and stability for the maintenance of our businesses.

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The decision to distribute dividends and other earnings depends on a number of factors, including our financial results and condition, cash necessity, future prospects of current and potential markets in which we operate, existing investment opportunities, maintenance and expansion of our production capacity. We are required by the Brazilian Corporate Law and by our bylaws to hold an annual general shareholders' meeting by the fourth month after the end of each fiscal year at which, among other things, the shareholders have to decide on the distribution of the net profit of the fiscal year and on the amount of dividends and/or interest on capital to be distributed to shareholders based on our management's proposal. The payment of annual dividends is based on the financial statements prepared for the relevant fiscal year.

Law No. 9,249/1995, as amended, provides for distribution of interest on capital to shareholders as an alternative form of distribution. Such interest is limited to the daily *pro rata* variation of the TJLP interest rate, the Brazilian federal government's long-term interest rate. The effective payment or credit of interest is dependent on the existence of profits, calculated before deducting interest, or accumulated profits and profit reserves, in an amount equal to or greater than twice the amount of the interest to be paid or credited.

We may treat these payments as a deductible expense for calculating real profit, but the deduction cannot exceed the greater of:

50% of net income before taking into account such distribution, in case these are considered expense, based on the calculated profit after taking into account any deductions for social contributions on net income and before deducting income tax for the period in respect of which the payment is made; or

50% of profit reserves.

Any payment of interest on capital to holders of ADSs or other shareholders, whether or not they are Brazilian residents, is subject to Brazilian withholding taxes at the rate of 15% or 25%. The 25% rate applies if the beneficiary is resident in a tax haven. See Taxation Relating to Our ADSs and Common and Preferred Shares Brazilian Tax Considerations. The amount paid to shareholders as interest on capital, net of any withholding tax, may be included as part of any mandatory distribution of dividends. Under the Brazilian Corporate Law, we are required to distribute to shareholders an amount sufficient to ensure that the net amount received, after payment by us of applicable Brazilian withholding taxes in respect of the distribution of interest on capital, is at least equal to the mandatory dividend.

Under the Brazilian Corporate Law and our bylaws, dividends generally are required to be paid within 60 days following the date the dividend was declared, unless a shareholders' resolution sets forth another date of payment, which, in either case, must occur prior to the end of the fiscal year in which the dividend was declared. The amounts of dividends due to our shareholders are subject to financial charges at the SELIC rate from the end of each fiscal year through the date we actually pay such dividends. Shareholders have a three-year period from the dividend payment date to claim dividends or interest payments with respect to their shares, after which the amount of the unclaimed dividends reverts to us.

Our board of directors may distribute dividends or pay interest based on the profits reported in interim financial statements. The amount of interim dividends distributed cannot exceed the amount of our capital reserves.

## ***Shareholders Meetings***

Our shareholders have the power, through voting at a general shareholders meeting, to decide on any matters related to our corporate purposes and to pass any resolutions they deem necessary for our protection and development, except for certain powers exclusive to our other corporate governing bodies.

Since 2012, we have convened our shareholders meetings by publishing a notice in the *Diário Oficial do Estado do Rio de Janeiro* and *Jornal Valor Econômico*. The notice must be published no fewer than three times, beginning at least 30 calendar days prior to the scheduled meeting date. The notice must contain the meeting's agenda and, in the case of a proposed amendment to the bylaws, an indication of the subject matter. For ADS holders, we are required to provide notice to the ADS depository at least 30 calendar days prior to a shareholders meeting. Upon receipt of our shareholders meeting notice, the depository must mail a notice, in a form of its choice, to the ADS holders. This notice must contain (i) the information from our notice of meeting sent to the ADS depository; (ii) a statement that owners of record, as of a specific record date, can instruct the depository as to the exercise of their voting rights, subject to Brazilian law as well as our bylaws; and (iii) a statement as to the manner in which these instructions can be given to the depository.

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The board of directors or, in some specific situations set forth in the Brazilian Corporate Law, the shareholders or our fiscal council, call our general shareholders meetings. A shareholder may be represented at a general shareholders meeting by an attorney-in-fact, so long as the attorney-in-fact was appointed within a year of the meeting. The attorney-in-fact must be a shareholder, a member of our management or a lawyer. In the case of public companies, the shareholder may be also represented by a financial institution. The attorney-in-fact's power of attorney must comply with certain formalities set forth by Brazilian law and our bylaws.

Other than the exceptions provided by law, in order for a valid action to be taken at a shareholders meeting, shareholders representing at least one quarter of our issued and outstanding common shares must be present at the meeting. However, in the case of a general meeting to amend our bylaws, shareholders representing at least two-thirds of our issued and outstanding common shares must participate in person. If no such quorum is present, the board may call a second meeting giving at least eight calendar days notice prior to the scheduled meeting in accordance with the rules of publication described above. The quorum requirements will not apply to the second meeting, subject to the voting requirements for certain matters described below. Our shareholders may also register online to exercise their voting rights electronically in shareholders meetings. In addition, our shareholders may also vote electronically in proxy contests (*pedido público de procuração*). Electronic participation in shareholders meetings is not available to our ADS holders. ADS holders may instruct the depositary in advance to vote on their behalf at the shareholders meetings, pursuant to depositary's operational procedures and the deposit agreement.

In 2015, CVM issued Instruction No. 561/15 ( ICVM 561/15 ), considering that the participation of shareholders in certain general meetings is a condition to voting. ICVM 561/15 creates a mechanism that allows for shareholders to exercise their right to vote remotely, prior to the date of the meeting. This rule starts applying to us and our shareholder in 2017.

## ***Voting Rights***

Pursuant to the Brazilian Corporate Law and our bylaws, each of our common shares carries the right to vote at a general meeting of shareholders. The Brazilian federal government is required by law to own at least a majority of our voting stock. Pursuant to Brazilian Corporate Law and our bylaws, except for (i) the right to appoint one member of our board of directors and one member of our fiscal council, and (ii) very few circumstances related to adversely affected preferred shares (as further discussed below), our preferred shares do not confer voting rights.

Holders of common shares, voting at a general shareholders meeting, have the exclusive power to:

amend our bylaws;

approve any capital change;

elect or dismiss members of our board of directors and fiscal council (and its respective alternates), subject to the right of our preferred shareholders to elect or dismiss one member of our board of directors and to elect one member of our fiscal council (and its respective alternates) and to the right of our employees to elect or dismiss one member of our board of directors;

receive the yearly financial statements prepared by our management and accept or reject management's financial statements, including the allocation of net income for payment of the mandatory dividend and allocation to the various reserve accounts;

authorize the issuance of debentures, except for the issuance of non-convertible unsecured debentures or the sale of such debentures when in treasury, which may be approved by our board of directors;

accept or reject the valuation of assets contributed by a shareholder in consideration for increase of capital stock;

approve corporate restructurings, such as mergers and spin-offs;

participate in a centralized group of companies, as defined under the Brazilian Corporate Law;

approve the disposal of the control of our wholly-owned subsidiaries;

approve the disposal of convertible debentures issued by our wholly-owned subsidiaries and held by us;

establish the compensation of the former members of our board of executive officers, our board of directors, our fiscal council, including the compensation due during the period of six months of forfeiture provided for in our bylaws, and of advisory committees to the board of directors;

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approve the cancellation of our registration as a publicly-traded company;

decide on our dissolution;

waive the right to subscribe to shares or convertible debentures issued by our wholly-owned subsidiaries or associates; and

approve the requirements of our nomination policy, in addition to the requirements provided by laws applicable to boards of director and fiscal councils.

Except as otherwise provided by law, resolutions of a general shareholders meeting are passed by the majority of the outstanding common shares. Abstentions are not taken into account.

The approval of holders of at least one-half of the issued and outstanding common shares is required for the following actions involving our company:

reduction of the mandatory dividend distribution;

merger into another company or consolidation with another company, subject to the conditions set forth in the Brazilian Corporate Law;

participation in a group of companies subject to the conditions set forth in the Brazilian Corporate Law;

change of our corporate purpose, which must be preceded by an amendment in our bylaws by federal law as we are controlled by the government and our corporate purpose is established by law;

spin-off of a portion of our company, subject to the conditions set forth in the Brazilian Corporate Law;

transfer of all our shares to another company or receipt of shares of another company in order to make the company whose shares are transferred a wholly-owned subsidiary of such company, known as *incorporação de ações*; and

selection of a specialized company to work out the appraisal of our shares by economic value, in cases of the cancellation of our registry as a publicly-traded company or deviation from the standard rules of corporate governance defined by a stock exchange or an entity in charge of maintaining an organized over-the-counter market registered with the CVM, in order to comply with such corporate governance rules and with contracts that may be executed by un and such entities. See Item 9. The Offer and Listing B3 B3 Corporate Governance Initiatives for further information on Level 2 listing segment.



Under Brazilian Corporate law, if a shareholder has a conflict of interest with the company in connection with any proposed transaction, the shareholder may not vote in any decision regarding such transaction. For example, an interested shareholder may not vote to approve the valuation of assets contributed by that shareholder in exchange for capital stock or, when the shareholder is a member of senior management, to approve the management's report on the company's financial statements. Any transaction approved with the vote of a shareholder having a conflict of interest may be annulled and such shareholder may be liable for any damages caused and be required to return to the company any gain it may have obtained as a result of the transaction.

Under Brazilian Corporate Law, the following actions shall be submitted for approval or ratification by the outstanding adversely affected preferred shares before they are submitted for approval of at least half of the issued and outstanding common shares:

creation of preferred shares or increase in the existing classes of preferred shares, without preserving the proportions to any other class of preferred shares, except as set forth in or authorized by the company's bylaws;

change in the preferences, privileges or redemption or amortization conditions of any class of preferred shares; and

creation of a new class of preferred shares entitled to more favorable conditions than the existing classes. Decisions on our transformation into another type of company are not allowed by Law No. 13,303/16.

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Under Brazilian Corporate Law, minority shareholders representing at least 10% of the company's voting capital have the right to demand that a cumulative voting procedure be adopted to entitle each common share to as many votes as there are board members and to give each common share the right to vote cumulatively for only one candidate of our board of directors or to distribute its votes among several candidates. Pursuant to regulations promulgated by the CVM, the 10% threshold requirement for the exercise of cumulative voting procedures may be reduced depending on the amount of capital stock of the company. For a company like Petrobras, the threshold is 5%. Thus, shareholders representing 5% of our voting capital may demand the adoption of a cumulative voting procedure.

Furthermore, minority common shareholders also have the right to appoint and/or dismiss one member to or from our board of directors and to appoint or dismiss one member to or from our fiscal council (and such members' respective alternate). The shareholders must prove the uninterrupted ownership of the shares held during the period of at least 3 months, immediately prior to the general meeting.

Preferred shareholders holding, individually or as a group, 10% of our total capital also have the right to appoint and/or dismiss one member to or from our board of directors. Preferred shareholders have the right to separately appoint one member to our fiscal council (and such member's respective alternate). The shareholders must prove the uninterrupted ownership of the shares held during the period of at least 3 months, immediately prior to the general meeting.

If neither the holders of voting common shares nor the holders of preferred shares have, respectively, the quorum required above, they may aggregate their shares to elect jointly a member to our board of directors, attending to, in this event, the quorum of 10% (ten percent) of the total share capital.

In addition, pursuant to Law No. 12,353, our employees have the right to appoint or dismiss one member of our board of directors in accordance with a separate voting procedure.

Our bylaws and Brazilian Corporate Law provide that, independently from the exercise of the rights above granted to minority shareholders, through cumulative voting process, the Brazilian federal government always has the right to appoint the majority of our directors and members of our fiscal council.

Subject to the provisions of applicable law, the Ministry of Planning, Development and Management (MPDM) will elect and remove one member to our board of directors.

## ***Preemptive Rights***

Pursuant to the Brazilian Corporate Law, each of our shareholders has a general preemptive right to subscribe for shares or securities convertible into shares in any capital increase, in proportion to the number of shares held by them. In the event of a capital increase in the same proportion of the number of shares of all existing classes, each shareholder shall exercise the preemptive right over shares identical to those owned. If the issued shares are of existing classes but introduce a change in their proportions to the capital stock, the preference will be exercised over shares and classes identical to those owned by the shareholders. Such preference will only extend to the other shares if they are insufficient to assure, in the increased capital, the same proportion of the capital stock as before the increase. If there is an issuance of shares of a class different from the existing classes, each shareholder shall exercise a preference, in proportion to the number of shares held, over the shares of all classes of the increase. In the event of an increase through capitalization of credit or subscription in assets, shareholders will always be assured the preemptive right and, if applicable, the amounts paid by them will be delivered to the holder of the credit to be capitalized or the

asset to be incorporated. The general assembly will fix a period of at least 30 days following the publication of notice of the issuance of new shares or securities convertible into shares for exercise of the right.

In the event of a capital increase by means of the issuance of new shares, holders of ADSs, of common or preferred shares, would have, except under circumstances described above, preemptive rights to subscribe for any class of our newly issued shares. However, holders of ADSs may not be able to exercise the preemptive rights relating to the common and preferred shares underlying their ADSs unless a registration statement under the Securities Act is effective with respect to those rights or an exemption from the registration requirements of the Securities Act is available. See Item 3. Key Information Risk Factors Risks Relating to Our Equity and Debt Securities.

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***Redemption and Rights of Withdrawal***

Brazilian law provides that, under limited circumstances, shareholders have the right to withdraw their equity interest from the company and to receive payment for the portion of shareholder's equity attributable to their equity interest.

This right of withdrawal may be exercised by the holders of the adversely affected common or preferred shares, provided that certain conditions set forth in the Brazilian Corporate Law are met, in the event that we decide:

to increase the existing classes of preferred shares, without preserving the proportions to any other class of preferred shares; or

to change the preferences, privileges, redemption or amortization conditions of any class of preferred shares or to create a new class of preferred shares entitled to more favorable conditions than the existing classes;

to merge into another company or to consolidate with another company; or

to participate in a centralized group of companies as defined under the Brazilian Corporate Law;

to reduce the mandatory distribution of dividends;

to change our corporate purposes;

to spin-off a portion of our company;

to transfer all of our shares to another company or to receive shares of another company in order to make the company whose shares are transferred a wholly owned subsidiary of our company, known as *incorporação de ações*; or

to acquire control of another company at a price that exceeds the limits set forth in the Brazilian Corporate Law.

This right of withdrawal may also be exercised in the event that the entity resulting from a merger, consolidation or spin-off of a listed company and us does not negotiate new shares in the secondary market, within 120 days from the date of the shareholders' meeting approving the transaction, in accordance with the applicable norms given by the SEC.

Considering that our bylaws do not provide for rules to determine any value for redemption, under Brazilian Corporate Law, any redemption of shares arising out of the exercise of such withdrawal rights would be made based on the book value per share, determined on the basis of the last balance sheet approved by our shareholders. However,

if a shareholders' meeting giving rise to redemption rights occurred more than 60 days after the date of the last approved balance sheet, a shareholder would be entitled to demand that his or her shares be valued on the basis of a new balance sheet dated within 60 days of such shareholders' meeting. In this case, we would immediately pay 80% of the amount of reimbursement calculated based on the last balance sheet and, after the special balance sheet has been drawn up, we would pay the balance within 120 days from the date of the shareholders' meeting resolution. The right of withdrawal lapses 30 days after publication of the minutes of the shareholders' meeting that approved the corporate actions described above. We would be entitled to reconsider any action giving rise to withdrawal rights within ten days following the publication of the minutes of the meeting ratifying the decision if the payment of the price of reimbursement of the shares to the dissenting shareholders would jeopardize our financial stability.

### *Other Shareholders' Rights*

According to the Brazilian Corporate Law, neither a company's bylaws nor actions taken at a general meeting of shareholders may deprive a shareholder of some specific rights, such as:

the right to participate in the distribution of profits;

the right to participate in any remaining residual assets in the event of liquidation of the company;

the right to supervise the management of the corporate business as specified in the Brazilian Corporate Law;

the right to preemptive rights in the event of a subscription of shares, debentures convertible into shares or subscription bonuses (other than with respect to a public offering of such securities, as may be set out in the bylaws); and

the right to withdraw from the company in the cases specified in the Brazilian Corporate Law.

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### ***Liquidation***

Under Brazilian corporate law and our bylaws, in the event of a liquidation, holders of preferred shares are entitled to receive, prior to any distribution to shareholders.

### ***Conversion Rights***

According to our bylaws, our common shares are not convertible into preferred shares, nor are preferred shares convertible into common shares.

### ***Liability of Our Shareholders for Further Capital Calls***

Neither Brazilian law nor our bylaws provide liability for our shareholders for further capital calls. Our shareholders liability for capital stock is limited to the payment of the issue price of the shares subscribed or acquired.

### ***Form and Transfer***

Our shares are registered in book-entry form and we have hired Banco do Brasil to perform all the services of safe-keeping and transfer of shares. To make the transfer, Banco do Brasil makes an entry in the register, debits the share account of the transferor and credits the share account of the transferee.

Our shareholders may choose, at their individual discretion, to hold their shares through the *Central Depositária*. Shares are added to the *Central Depositária* system through Brazilian institutions, which have clearing accounts with the *Central Depositária*. Our shareholder registry indicates which shares are listed on the *Central Depositária* system. Each participating shareholder is in turn registered in a registry of beneficial shareholders maintained by the *Central Depositária* and is treated in the same manner as our registered shareholders.

### ***Dispute Resolution***

Our bylaws provide for mandatory dispute resolution through arbitration, in accordance with the rules of the *Câmara de Arbitragem do Mercado*, with respect to any dispute regarding us, our shareholders, the executive officers, directors and fiscal council members and involving the provisions of the Brazilian Corporate Law, our bylaws, the rules of the CMN, the Central Bank of Brazil and the CVM, and to those in the Level 2 Regulation, the Arbitration Rules, the Participation and the Sanctions Regulation, all of Level 2 of the B3, or any other capital markets legislation, including the provisions of any agreement entered into by us with any stock exchange or over-the-counter entity registered with the CVM, relating to adoption of differentiated corporate governance practices established by these entities and their respective corporate regulations, as the case may be. See Item 9. The Offer and Listing B3 B3 Corporate Governance Initiatives for further information on Level 2 listing segment.

In accordance with Law No. 9,307/1996, entities that are part of the direct and indirect public administration, as we and our controlling shareholder are, may use arbitration as a dispute resolution mechanism only for disputes involving negotiable economic rights. As a result, such entities cannot submit to arbitration any non-negotiable rights (*direitos indisponíveis*), such as those deemed to relate to public interest. Therefore, decisions of the Brazilian federal government exercised through voting in any general shareholders meeting, if based or related to public interest, will not be subject to an arbitration proceeding.

### ***Self-Dealing Restrictions***

In accordance with our Relevant Act or Fact Disclosure and Negotiation of Securities Policy, approved by our board of directors in June 2016, the trading by us or any related party of securities issued by us, our subsidiaries or our associates (that are public companies) is forbidden, in the following periods:

- (i) 15 days before the disclosure of our quarterly information and annual information; and
- (ii) in the period between the decision taken by the competent corporate body to increase or reduce the share capital, to distribute dividends, bonus shares or issue other securities by us, and the publication of the respective notices or announcements.

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Our directors, the members of our audit committee, their respective alternates and members with any technical or advisory functions created by statutory provisions, are obliged to inform us in the event of ownership and trading of securities issued by us or our subsidiaries (which are public companies). They should also indicate the securities issued by us and/or our subsidiaries (which are public companies) owned by related persons.

### **Restrictions on Non-Brazilian Holders**

Non-Brazilian holders face no legal restrictions on the ownership of our common or preferred shares or of ADSs based on our common or preferred shares, and are entitled to the rights and preferences of such common or preferred shares, as the case may be.

However, the ability to convert dividend payments and proceeds from the sale of common or preferred shares or preemptive rights into foreign currency and to remit such amounts outside Brazil is subject to restrictions under foreign investment legislation which generally requires, among other steps, the registration of the relevant investment with the Central Bank of Brazil. Nonetheless, any non-Brazilian holder who registers with the CVM in accordance with CMN Resolution No. 4,373 may buy and sell securities directly on the B3. Such non-Brazilian holders must appoint a local representative in Brazil who will be required, among other duties, to register and keep updated with the Central Bank of Brazil the record of all transactions of such investors on the B3.

In addition, Annex II to CMN Resolution No. 4,373 allows Brazilian companies to issue depositary receipts in foreign exchange markets. We currently have an ADR program for our common and preferred shares duly registered with the CVM and the Central Bank of Brazil. The proceeds from the sale of ADSs by holders outside Brazil are free of Brazilian foreign exchange controls.

### **Transfer of Control**

According to Brazilian law, the Brazilian federal government is required to own at least the majority of our voting shares. Therefore, any change in our control would require a change in the applicable legislation. However, our bylaws include rules applicable to any eventual transfer of our control.

The sale of our shareholding control and the subsequent public offering shall comply with the rules set forth in our bylaws.

See Exhibit 1.1 for a copy of our bylaws.

### **Disclosure of Shareholder Ownership**

Brazilian regulations require that (i) direct or indirect controlling shareholders, (ii) shareholders who have elected members of our board of directors or of our fiscal council, as well as (iii) any person or group of persons representing the same interest, in each case that has directly or indirectly acquired or sold an interest that exceeds (either upward or downward) the threshold of 5%, or any multiple thereof, of the total number of shares of any type or class must disclose its share ownership or divestment, immediately after the event, to the CVM and the B3.

### **Material Contracts**

#### ***Assignment Agreement (Contrato de Cessão Onerosa)***



On September 3, 2010, we entered into an agreement with the Brazilian federal government, under which it assigned to us the right to conduct activities for the exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. The Assignment Agreement was entered into pursuant to specific provisions of Law No. 12,276. The draft of the Assignment Agreement was approved by our board of directors on September 1, 2010 and by the CNPE on September 1, 2010, following a negotiation between us and the Brazilian federal government based on independent experts reports obtained by us and the ANP according to a valuation procedure as required by Law No. 12,276. See Exhibit 2.11 for an English translation of the Assignment Agreement.

**Table of Contents****Basic Terms**

*Purpose.* Under the Assignment Agreement, we paid an initial contract price for the right to conduct activities of exploration and production of oil, natural gas and other fluid hydrocarbons in specified pre-salt areas, subject to a maximum production of five bnboe. Although the Assignment Agreement grants certain rights to us that are similar to those of a concession, the Assignment Agreement is a specific regime for exploration and production, not a concession under Brazilian law.

*Area Covered.* The Assignment Agreement covers six firm blocks plus one contingent block, located in the pre-salt areas and identified in the Assignment Agreement. These blocks are located in the Santos Basin and have expected geological characteristics similar to the discoveries made elsewhere in the pre-salt area. On February 7, 2014, we returned to the Brazilian federal government the contingent block related to the Assignment Agreement because we have confirmed that the maximum volume initially provided for in the Assignment Agreement can be reached in the other six firm blocks (i.e., without the need of any contribution from the contingent block).

*Supervision and Inspection.* The ANP has regulatory authority and inspection rights over our activities in the areas subject to the Assignment Agreement, as well as over our compliance with the Assignment Agreement.

*Costs and Risks.* All our exploration, development and production activities under the Assignment Agreement will be conducted at our expense and at our risk.

**Price**

The initial contract price for our rights under the Assignment Agreement was R\$74,807,616,407, which was equivalent to US\$42,533,327,500 as of September 1, 2010. As provided by Law No. 12,276, the contract price was determined by negotiation between us and the Brazilian federal government, based on the reports of independent experts obtained by us and by the ANP, which took into consideration a number of factors, including market conditions, oil prices at that time and industry costs.

We used part of the proceeds from our 2010 global equity offering for the payment of the initial contract price, including the use of LFTs we received from the Brazilian federal government in such global offering. The LFTs were valued at the same price at which they were valued for purposes of the global offering.

The Assignment Agreement sets forth the initial prices and volumes for each block, as follows:

		<b>INITIAL EVALUATIONS</b>		
		<b>Volume</b>	<b>Price</b>	<b>Value</b>
		<b>(millions of boe)</b>	<b>(US\$/boe)</b>	<b>(US\$)</b>
Florim (now Itapu)	<b>Block 1</b>	467	9.0094	4,207,389,800
Franco (now Búzios)	<b>Block 2</b>	3,058	9.0400	27,644,320,000
Guará South (now Sapinhoa South)	<b>Block 3</b>	319	7.9427	2,533,721,300
Surrounding Iara (now Atapu, Berbigão North, Berbigão South, Sururu North and Sururu South)	<b>Block 4</b>	600	5.8157	3,489,420,000
Tupi South(now Lula South)	<b>Block 5</b>	128	7.8531	1,005,196,800
Tupi Northeast (now Sepia)	<b>Block 6</b>	428	8.5357	3,653,279,600

Peroba

**Block 7** (contingent block)**Initial Contract Price of the Assignment Agreement** 42,533,327,500***Duration***

The term of the Assignment Agreement is 40 years, which may be extended for additional five years, upon our request, in cases of (i) force majeure, (ii) delay in obtaining applicable environmental licenses, provided that such delay is attributable only to the relevant environmental authority, (iii) suspension of the activities by determination of the ANP, or (iv) changes in the geological conditions forecast for each area. The extension will only apply to areas in which the ANP identifies the occurrence of one of the events specified above. The ANP will take into account the period of time of the delay occurred to determine the length of the extension, subject to the five-year limit indicated above. In addition, the duration of the Assignment Agreement is subject to the revision process.

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### ***Revision***

The Assignment Agreement is subject to a revision process. We have notified the Brazilian federal government and the ANP ten months before the date for the declaration of commerciality of each area covered by the agreement, in order to initiate the arrangements for such revision process, which began immediately after the declaration of commerciality of each field in each of the blocks. The revision process, for all the areas subject to the Assignment Agreement, is currently ongoing and there is no formal or official date for its conclusion.

The conclusion of the revision process may result in the renegotiation of (i) the contract price, (ii) the maximum production volume of five bnbbl of oil equivalent, (iii) the contract duration, and (iv) the minimum levels of goods and services to be acquired from Brazilian providers.

If the revised contract price is higher than the initial contract price, we may agree with the Brazilian federal government on one or more of the following payment options: (i) a payment to be made by us, in cash or LFTs, to the Brazilian federal government in an amount equal to the difference between the revised contract price (resulting from the revision process) and the initial contract price; or (ii) a reduction in the maximum production volume of five bnbbl of oil equivalent. If the revised contract price is lower than the initial contract price, then the Brazilian federal government will pay us in cash, LFTs, securities issued by us or through other means agreed between us, the difference between the revised contract price and the initial contract price. In either case, the difference between the revised contract price and the initial contract price in U.S. dollars will be converted into *reais*, based on the average PTAX exchange rate for the purchase of U.S. dollars published by the Central Bank of Brazil for the 30 days preceding the revision of each area and will be updated by the interest rate of the Brazilian Special Clearance and Custody System (*Sistema Especial de Liquidação e Custódia*), or the SELIC rate, until the payment date. Payments must be made within three years of the completion of the revision process.

The amounts shall be agreed based on the reports by independent certifiers, hired by us and ANP, as established in the Assignment Agreement. To date, there are neither definitions on the outcome of the review, nor on the compensation method. Only after the conclusion of the certification process and the issuance of the respective reports, will we and the government's representatives start the negotiations concerning the amount of the Assignment Agreement and the payment method.

### ***Phases***

Our activities under the Assignment Agreement are divided into two phases:

*Exploration phase.* This phase comprises the appraisal for purposes of determining the commerciality of any discoveries of oil, natural gas and other fluid hydrocarbons. The exploration phase began upon the execution of the Assignment Agreement and ended with the declaration of commerciality of each respective reservoir discovered in each area covered by the Assignment Agreement.

*Production Phase.* The production phase for a particular discovery begins as of the date of the declaration of commerciality by us to the ANP, and it lasts until the termination of the Assignment Agreement. It comprises a development period, during which we will carry out activities pursuant to a development plan approved by the ANP. Following the development period, we may start production upon notice to the ANP.

### ***Minimum Work Program***

During the exploration phase, which is now concluded, we were required to undertake a minimum work program, as specified in the Assignment Agreement as well as additional activities outside the scope of the minimum work program, that were approved by the ANP. We accomplished the minimum work program in all blocks and performed additional activities in some blocks.

### *Reallocation of Volumes*

After the conclusion of the Assignment Agreement revision process, the Brazilian federal government and us may negotiate the reallocation of the volume of oil and natural gas originally assigned for each block, observing the revised price per barrel of oil equivalent applicable to each area, in the following scenarios: (i) the relevant environmental authority does not grant a permanent license for the performance of oil and natural gas exploration and production activities in a certain block or field, or (ii) the production of the volume allotted for any block is not feasible under petroleum industry best practices due to the geological features of the reservoirs, observing the economic parameters established in the revision process (as discussed above).

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Once reallocations are completed, the number of barrels of oil equivalent to be produced in the new block will equal the product of (i) the number of barrels of oil equivalent that were reallocated from the original block to the new block and (ii) the value of the barrel of oil equivalent in the original block, to be divided by the value of the barrel of oil equivalent in the new block.

If it is not possible to reallocate all of the volumes of oil and natural gas not produced by us, the reallocation procedure will be performed in part, and the Brazilian federal government will pay us the amount resulting from the multiplication of the volume not subject to the reallocation by the value of the barrel in the block to which the reallocation has been made. This dollar amount will be converted to *reais* using the average PTAX exchange rate for the purchase of U.S. dollars for the 30 days preceding the date of the reallocation process of such block, and updated by the SELIC rate during the period between the date of the reallocation process of such block and the date of payment by the Brazilian federal government.

If it is determined that it is not possible to reallocate any volumes of oil, natural gas and other hydrocarbons fluids as described above, the Brazilian federal government will reimburse us for an amount equivalent to total volume of barrels of oil equivalent that was not produced multiplied by the dollar price of barrel of oil equivalent applicable to the relevant block, converted in *reais* using the average PTAX exchange rate for the purchase of U.S. dollars for the 30 days preceding the date of the reallocation process, and updated by the SELIC rate from the date of the reallocation process of such block to the date of payment by the Brazilian federal government.

The manner and terms of payment of the reimbursement in either case will be negotiated by us and the Brazilian federal government. Payments will be made no later than three years after the conclusion of the reallocation process.

## ***Unitization***

A reservoir covered by a block assigned to us under the Assignment Agreement may extend to adjacent areas outside such block. In such case, we must notify the ANP immediately after identifying the extension and we will be prevented from performing the exploration and production activities within such block, until we have negotiated an unitization agreement with the third-party concessionaire or contractor under a different exploration and production regime who has rights over such adjacent areas, unless otherwise authorized by the ANP. The ANP will determine the deadline for the execution of an unitization agreement by the parties. If the adjacent area is not licensed (e.g., not granted for E&P activities to any other party), the Brazilian federal government, represented by PPSA or by ANP, shall negotiate with us.

If the parties are unable to reach an agreement within a deadline established by the ANP, the agency will determine the terms and obligations related to such unitization, on the basis of an expert report, and will also notify us and the third-party or the Brazilian federal government representative, as applicable, of such determination. Until the unitization agreement is approved by the ANP, operations for the development and production of such reservoir must remain suspended, unless otherwise authorized by the ANP. The refusal of any party to execute the unitization agreement will result in the mandatory return to the Brazilian federal government of the area subject to the unitization process.

Extensions to adjacent areas were identified and notified to the ANP in three of the six blocks of the Assignment Agreement. The ANP authorized us to continue our exploratory activities and instructed us to start negotiating the necessary unitization agreements with third-party concessionaires. These negotiations are being conducted for all three blocks, with no impact on the development phase of these projects.

## ***Environmental***

We are required to preserve the environment and protect the ecosystem in the area subject to the Assignment Agreement and to avoid harming local fauna, flora and natural resources. We will be liable for damages to the environment resulting from our operations, including costs related to any remediation measures.

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### ***Brazilian Content***

The Assignment Agreement requires us to purchase a minimum proportion of goods and services from Brazilian providers and to extend equal treatment to such providers to compete with foreign companies. The minimum Brazilian content requirement is included in the Assignment Agreement and specifies certain equipment, goods and services, as well as different levels of required content, in accordance with the different phases and periods of activities under the Assignment Agreement. The minimum Brazilian content requirement is 37% for the exploration phase. For the development period, it is (i) 55% for the development periods beginning production by 2016, (ii) 58% for the development periods beginning production between 2017 and 2019, and (iii) 65% for the development periods beginning production from 2020. Despite the minimum percentages set forth for each development period timeframes, the average global percentage of Brazilian content in the development period shall be at least 65%. If we fail to comply with the Brazilian content obligations, we may be subject to fines imposed by the ANP. The Assignment Agreement allows the ANP to grant waivers from the local content requirements, in cases where any of the Assignment Agreement area operational needs (in terms of technology, pricing and timing) cannot be met by local suppliers.

### ***Royalties and Expenses with Research and Development***

Once we begin commercial production in each field, we will be required to pay monthly royalties of 10% of the oil and natural gas production. We are also required to invest 0.5% of our yearly gross revenues from oil, natural gas and other fluid hydrocarbons production under the Assignment Agreement in research and development activities related to energy and environmental issues being conducted in universities and national research and technical development institutions, public or private, previously registered with the ANP for this purpose.

### ***Miscellaneous Provisions***

We shall not assign our rights under the Assignment Agreement.

The Assignment Agreement shall terminate upon (i) the production of the maximum volume of barrels of oil equivalent as specified in the Assignment Agreement, (ii) the expiration of the term, or (iii) upon the request of the ANP, if we fail to observe the cure period established by the ANP in connection with the breach of an obligation that proves relevant for the continuation of operations in each block. Such cure period may not be less than 90 days, except in cases of extreme emergency.

We and the Brazilian federal government will only be excused from the performance of the activities set forth in the Assignment Agreement in cases of force majeure, which include, among others, delays in the obtaining an environmental license, provided that such delay is attributable only to the relevant environmental authority.

The Assignment Agreement is governed by Brazilian law.



We and the Brazilian federal government will use our best efforts to settle any disputes amicably. If we are unable to do so, we may submit such dispute for arbitral review by the Brazilian Federal Attorney's Office (*Advocacia-Geral da União Federal*), which may rely on independent experts to address technical matters, or initiate a legal proceeding at the Federal Court located in Brasília, Brazil.

***Additional Production in the Assignment Agreement Areas***

In June 2014, the CNPE enacted Resolution No. 1, which established that Petrobras could be directly engaged by the Brazilian federal government under a production sharing regime to produce the volume of oil, natural gas and fluid hydrocarbons from certain designated Assignment Agreement areas that exceeds the maximum production originally agreed for such designated areas under the Assignment Agreement. However, in November 2014, the TCU determined that the execution of these production sharing agreements can be negotiated only after all parameters for the negotiation of the revision process of the Assignment Agreement are agreed between the Brazilian federal government and us.

***Production Sharing Agreements (Contrato de Partilha de Produção)***

First Production Sharing Agreement    ¶1 Production Sharing Bidding Round

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On December 2, 2013, following a public auction held on October 21, 2013, a consortium formed by us (with a 40% interest), Shell (with a 20% interest), Total (with a 20% interest), CNODC (with a 10% interest) and CNOOC (with a 10% interest) (the Libra Consortium), entered into a production sharing agreement with the Brazilian federal government, which holds 41.65% of the Libra Consortium's profit oil, ANP, as regulator and supervisor, and PPSA, as manager of this agreement in accordance with Law No. 12,304/2010 (the First Production Sharing Agreement). Under the First Production Sharing Agreement, the Libra Consortium was awarded the rights and obligations to operate and explore a strategic pre-salt area known as Libra block, located in the ultra-deepwaters of the Santos Basin. This was the first oil and gas production-sharing agreement signed in Brazil under Law 12,351/2010, which implemented in Brazil a new regime for exploration and production of oil and gas in the pre-salt area and in strategic areas. This regime coexists with the concession regime (subject to Law No. 9,478/1997), applied for the non pre-salt areas, and the assignment agreements, regulated under Law No. 12,276/2010. For further information about Law 12,351/2010, see Item 4. Information on the Company Regulation of the Oil and Gas Industry in Brazil Production-Sharing Contract Regime for Unlicensed Pre-Salt and Potentially Strategic Areas. See also Exhibit 2.48 for an English translation of the Production Sharing Agreement.

#### Second and Third Production Sharing Agreements and 2<sup>nd</sup> and 3<sup>rd</sup> Production Sharing Bidding Rounds

On October 27, 2017, we acquired, in partnership with other international oil companies, three offshore blocks in the 2<sup>nd</sup> and 3<sup>rd</sup> bidding rounds under the production sharing system, held by the ANP, and we will be the operator of all blocks (Second and Third Production Sharing Agreements and, together with the First Production Sharing Agreement, Productions Sharing Agreements).

Under the production sharing system, the consortium submits to the government a percentage of the so-called surplus in oil profit for the Brazilian federal government, which is applied to revenue discounted of the production costs and royalties. The offer of oil profit to the Brazilian federal government is the only criterion the ANP adopted to define the winning bid, whereas the fixed value of the signing bonus, the minimum exploratory program, and the local content commitments have already been provided by the bidding rules.

The following table summarizes the blocks we acquired, in partnership, in the 2<sup>nd</sup> and 3<sup>rd</sup> Bidding Rounds in the production sharing system:

Area	Consortium composition	Petrobras Bonus (R\$ million)	Surplus in profit oil (%)
Entorno de Sapinhoá	Petrobras (45%)	90	80.00
	Shell (30%)		
Peroba	Repsol Sinopec (25%)	800	76.96
	Petrobras (40%)		
Alto de Cabo Frio Central	CNODC (20%)	250	75.86
	Petrobras (50%)		
	BP (50%)		

We, our partners, together with the ANP, PPSA and the Brazilian federal government signed the Second and Third Production Sharing Agreements with the ANP for exploration and production of oil and natural gas on January 31, 2018.

***Basic Terms***

*Purpose.* The purpose of the Production Sharing Agreements is to execute and manage the exploration and production rights over oil and gas reserves in the blocks. In accordance with Law No. 12,351/2010, recently modified by Law 13,365/2016, Petrobras have the option to exercise a preemptive right to be the operator of, or to hold a 30% interest in, the future areas to be offered for bidding under the sharing production regime. As such, it is no longer mandatory for us to be the exclusive operator of exploration and production activities under this regime.

*Operating Committee.* The PSA Consortia are managed by an Operating Committee in which Petrobras, its partners and PPSA all participate, where PPSA represents the interests of the Brazilian federal government. The PPSA will not invest in the blocks, but it holds 50% of the Operating Committee voting rights and also has a casting vote and veto powers, as defined in the Production Sharing Agreements.

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*Risks, Costs and Compensation.* All exploration, development and production activities under the Production Sharing Agreements will be conducted at the expense and risk of the members of the Consortium. For commercial discoveries of crude oil and/or natural gas in the blocks, the Consortium will be entitled to recover, on a monthly basis, (i) a portion of the production of oil and gas in the block corresponding to its royalty expenses and (ii) the cost oil corresponding to costs incurred (which is the amount associated with capital expenditures incurred and operating costs of the Consortiums' exploration and production activities), subject to the conditions, proportions and terms set forth on the Production Sharing Agreements. In addition, for each commercial discovery, the consortiums are entitled to receive, on a monthly basis, its share of profit oil as defined under the Production Sharing Agreements.

### ***Duration***

The term of the Production Sharing Agreements is 35 years.

### ***Phases***

Our activities under the Production Sharing Agreements are divided into two phases:

*Exploration phase.* This phase comprises appraisal activities for purposes of determining the commerciality of any discoveries of crude oil and natural gas. The exploration phase began upon the execution of the Production Sharing Agreements and will end for each discovery upon the declaration of commerciality. We will have four years (which may be extended upon ANP's prior approval, according to the terms and conditions set forth in the Production Sharing Agreements) to comply with the minimum work program and other ANP-approved activities provided for in the Production Sharing Agreements.

*Production Phase.* The production phase for each particular discovery begins as of the date of the declaration of commerciality by the Consortiums to the ANP, and lasts until the termination of the Production Sharing Agreements. It comprises a development period, during which we will carry out activities pursuant to a development plan approved by the ANP. We will have a period of five years, counted from the date of the declaration of commerciality, to begin production from the Libra block.

### ***Minimum Work Program***

During the exploration phase, we are required to undertake a minimum work program, as specified in the Production Sharing Agreements. We may perform other activities outside the scope of the minimum work program, provided that such activities are approved by the ANP.

### ***Unitization***

A reservoir covered by a block assigned to us in the Production Sharing Agreements may extend to adjacent areas outside such block. In such case, we must notify the ANP immediately after identifying the extension and we will be prevented from performing development and production activities within such block, until we have negotiated an unitization agreement with the third-party concessionaire or contractor who has rights over such adjacent area, unless otherwise authorized by the ANP. The ANP will determine the deadline for the execution of an unitization agreement by the parties. If the adjacent area is not licensed (i.e., not granted for E&P activities to any other party), the Brazilian federal government, represented by PPSA or by the ANP, shall negotiate with us.

If the parties are unable to reach an agreement within a deadline established by the ANP, the agency will determine the terms and obligations related to such unitization, on the basis of an expert report, and will also notify us and the

third-party or the Brazilian federal government representative, as applicable, of such determination. Until the unitization agreement is approved by the ANP, operations for the development and production of such reservoir must remain suspended, unless otherwise authorized by the ANP. The refusal of any party to execute the unitization agreement will result in the termination of the Production Sharing Agreements and the return to the Brazilian federal government of the area subject to the unitization process.

*Environmental*

We are required to preserve the environment and protect the ecosystem in the area subject to the Production Sharing Agreements and to avoid harming local fauna, flora and natural resources. We will be liable for damages to the environment resulting from our operations, including costs related to any remediation measures.

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### ***Brazilian Content***

The Production Sharing Agreements require us to purchase a minimum proportion of goods and services from Brazilian providers and to extend equal treatment to such providers to compete with foreign companies. The minimum Brazilian content requirement is included in the Production Sharing Agreements and specifies certain equipment, goods and services, as well as different levels of required content, in accordance with the different phases and periods of activities under the Production Sharing Agreements. There is a minimum Brazilian content requirement for the exploration phase and for the development period. If we fail to comply with the Brazilian content obligations, we may be subject to fines imposed by the ANP. The Libra's Production Sharing Agreement allows the ANP to grant waivers from the local content requirements, in cases where any of the Libra Consortium's operational needs (in terms of technology, pricing and timing) cannot be met by local suppliers. In 2016, the Libra Consortium requested a waiver from the ANP of the local content commitment with respect to the stationary production unit, due to the lack of suppliers' capability to meet local content requirements and accomplish the desired deadlines. In 2017, the ANP decided to exempt the Libra Consortium from complying with local content requirements for all items of the hull and certain items of the plants (with the exception of basic engineering and certain additional items), in addition to adjusting the minimum commitments for other items needed for plant construction, installation and integration of modules. According to Resolution no. 7, enacted by CNPE of April, 2017, the percentage of the local content requirement was reduced in the 3<sup>rd</sup> bidding round under the production sharing regime and the possibility of waiver was excluded.

### ***Royalties and Expenses with Research and Development***

Once we begin production in each field, members of the Consortia (other than PPSA) will be required to pay monthly royalties of 15% of the oil and natural gas production, to be recovered from a portion of the production of oil and gas in the block. All members of the Consortia (other than PPSA) will also be required to invest 1.0% of their annual gross revenues from crude oil and natural gas production under the Production Sharing Agreement in research and development activities related to the oil, gas and biofuel sectors.

### ***Miscellaneous Provisions***

We can assign our rights and obligations under the Production Sharing Agreement.

All members of the Consortia (other than PPSA) have a right of first refusal with respect to an eventual assignment of rights and obligations to be made by any other member of the Consortium (other than PPSA).

The Production Sharing Agreements shall be terminated in the following circumstances: (i) the expiration of their terms; (ii) if the minimum work program has not been completed by the end of the Exploration Phase; (iii) if there has not been any commercial discovery by the end of the Exploration Phase; (iv) if the Consortium members (other than PPSA) exercise their withdrawal rights during the Exploration Phase; (v) if the Consortium refuses to execute a production individualization agreement after the ANP makes such determination (which termination may be complete or partial) and (vi) any other basis described in the Production Sharing Agreements.

Any breach of the Production Sharing Agreement or of any regulations issued by the ANP may result in sanctions and fines imposed by the ANP on the relevant party, in accordance with applicable legislation and the terms of the Production Sharing Agreements.

If any breach of the Production Sharing Agreements are considered by the Brazilian federal government not to be significant, intentional, or a result of negligence, imprudence or recklessness, or it is proved that the consortium has worked diligently to cure such breach, the Brazilian federal government may, instead of terminating the Production Sharing Agreements, propose that ANP apply designated sanctions on the relevant parties.

Petrobras and other consortium members will use our best efforts to settle any disputes amicably. If we are unable to do so, any consortium member may submit such dispute or controversy to an *ad hoc* arbitration following the rules established by the United Nations Commission on International Trade Law (UNCITRAL), or by the consent of the parties in interest, to the International Chamber of Commerce, or the ICC, or any other well-regarded arbitration chamber. If a dispute involves only public administration entities, it may be submitted to conciliation service of the *Câmara de Conciliação e Arbitragem da Administração Federal*, or CCAF, under the Brazilian Federal Attorney-General's Office administration (*Advocacia Geral da União*), or AGU. In event of a dispute involving non-negotiable rights, the parties shall submit the dispute to the Federal Courts in Brasília, Brazil.

The Production Sharing Agreements are governed by Brazilian law.

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For information concerning our other material contracts, see Item 4. Information on the Company and Item 5. Operating and Financial Review and Prospects.

## **Exchange Controls**

There are no restrictions on ownership of the common or preferred shares by individuals or legal entities domiciled outside Brazil.

The right to convert dividend payments and proceeds from the sale of shares into foreign currency and to remit such amounts outside Brazil may be subject to restrictions under foreign investment legislation, which generally requires, among other things, that the relevant investments be registered with the Central Bank of Brazil. If any restrictions are imposed on the remittance of foreign capital abroad, they could hinder or prevent the *Central Depositária*, as custodian for the common and preferred shares represented by the ADSs, or registered holders who have exchanged ADSs for common shares or preferred shares, from converting dividends, distributions or the proceeds from any sale of such common shares or preferred shares, as the case may be, into U.S. dollars and remitting the U.S. dollars abroad.

Foreign investors may generally register their investment under Law No. 4,131/1962 (foreign direct investment) or CMN Resolution No. 4,373 (portfolio investments in regulated market, such as stock exchanges). Registration under CMN Resolution No. 4,373 affords a more favorable tax treatment to foreign investors who are not residents of tax havens, as defined by Brazilian tax laws. See Taxation Relating to Our ADSs and Common and Preferred Shares Brazilian Tax Considerations.

Under CMN Resolution No. 4,373, foreign investors may invest in almost all financial assets and engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are fulfilled. In accordance with CMN Resolution No. 4,373, the definition of foreign investor includes individuals, legal entities, mutual funds and other collective investment entities, domiciled or headquartered abroad.

Under CMN Resolution No. 4,373, a foreign investor must:

- (i) appoint at least one representative in Brazil, with powers to perform actions relating to its investment;
- (ii) register as a foreign investor with the CVM;
- (iii) appoint at least one authorized custodian in Brazil for its investments; and

(iv) register all of its portfolio investments in Brazil, through its representative, with the Central Bank of Brazil. Securities and other financial assets held by CMN Resolution No. 4,373 investors must be registered or maintained in deposit accounts or under the custody of an entity duly licensed by the Central Bank of Brazil or the CVM. In addition, any transfer of securities held under CMN Resolution No. 4,373 and ICVM No. 560/2015 must be carried out in the stock exchanges or through organized over-the-counter markets licensed by the CVM, except for transfers resulting from transactions involving merger, split, amalgamation, corporate reorganizations, stock swaps, or a transfer resulting from bequest or inheritance.



Annex II of CMN Resolution No. 4,373 provides for the issuance of depositary receipts in foreign markets with respect to shares of Brazilian issuers. The depositary of the ADSs has obtained from the Central Bank of Brazil an electronic certificate of registration with respect to our existing ADR program. Pursuant to the registration, the custodian and the depositary will be able to convert dividends and other distributions with respect to the relevant shares represented by ADSs into foreign currency and to remit the proceeds outside Brazil.

In the event that a holder of ADSs exchanges such ADSs for the underlying common or preferred shares, the holder will be required to obtain registration as a foreign investor in Brazil pursuant to CMN Resolution No. 4,373 (Annex I), by appointing a local representative and obtaining a certificate of registration from the Central Bank of Brazil. Failure to take these measures may subject the holder to the inability of converting the proceeds from the disposition of, or distributions with respect to, the relevant shares, into foreign currency and to remit proceeds outside of Brazil. Additionally, the holder may be subjected to a less favorable Brazilian tax treatment than a holder of ADSs. In addition, if the foreign investor resides in a tax haven jurisdiction, the investor will be also subject to less favorable tax treatment. See Item 3. Key Information Risk Factors Risks Relating to Our Equity and Debt Securities and Taxation Relating to Our ADSs and Common and Preferred Shares Brazilian Tax Considerations.

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### **Taxation Relating to Our ADSs and Common and Preferred Shares**

The following summary contains a description of material Brazilian and U.S. federal income tax considerations that may be relevant to the purchase, ownership and disposition of preferred or common shares or ADSs by a holder. This summary does not describe any tax consequences arising under the laws of any state, locality or taxing jurisdiction other than Brazil and the United States.

This summary is based upon the tax laws of Brazil and the United States as in effect on the date of this annual report, which are subject to change (possibly with retroactive effect). This summary is also based upon the representations of the depository and on the assumption that the obligations in the deposit agreement and any related documents will be performed in accordance with their respective terms.

This description is not a comprehensive description of the tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules that are generally applicable to all taxpayers or to certain classes of investors or rules that investors are generally assumed to know. Prospective purchasers of common or preferred shares or ADSs should consult their own tax advisors as to the tax consequences of the acquisition, ownership and disposition of common or preferred shares or ADSs.

There is no income tax treaty between the United States and Brazil. In recent years, the tax authorities of Brazil and the United States have held discussions that may culminate in such a treaty. We cannot predict, however, whether or when a treaty will enter into force or how it will affect the U.S. Holders of common or preferred shares or ADSs.

### ***Brazilian Tax Considerations***

#### ***General***

The following discussion summarizes the material Brazilian tax consequences of the acquisition, ownership and disposition of preferred or common shares or ADSs, as the case may be, by a holder that is not deemed to be domiciled in Brazil for purposes of Brazilian taxation, also called a non-Brazilian holder.

Under Brazilian law, investors (non-Brazilian holders) may invest in the preferred or common shares under CMN Resolution No. 4,373 or under Law No. 4,131/1962. The rules of CMN Resolution No. 4,373 allow foreign investors to invest in almost all instruments and to engage in almost all transactions available in the Brazilian financial and capital markets, provided that certain requirements are met. In accordance with CMN Resolution No. 4,373, the definition of foreign investor includes individuals, legal entities, mutual funds and other collective investment entities, domiciled or headquartered abroad.

Pursuant to this rule, foreign investors must: (i) appoint at least one representative in Brazil with powers to perform actions relating to their foreign investment (such as registration and keeping updated records of all transactions with the Central Bank of Brazil); (ii) complete the appropriate foreign investor registration form; (iii) register as a foreign investor with the CVM; and (iv) register the foreign investment with the Central Bank of Brazil.

Securities and other financial assets held by foreign investors pursuant to CMN Resolution No. 4,373 must be registered or maintained in deposit accounts or under the custody of an entity duly licensed by the CVM. In addition, securities trading is restricted to transactions carried out in the stock exchanges or organized over-the-counter markets authorized by the CVM.

#### ***Taxation of Dividends***

Generally speaking, dividends paid by us, including stock dividends and other dividends paid in property to the depositary in respect of the ADSs, or to a non-Brazilian holder in respect of the preferred or common shares, are not subject to withholding income tax in Brazil, to the extent that such amounts are related to profits generated after January 1, 1996.

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We must pay to our shareholders (including non-Brazilian holders of common or preferred shares or ADSs) interest on the amount of dividends payable to them, updated by the SELIC rate, from the end of each fiscal year through the date of effective payment of those dividends. These interest payments are considered fixed-yield income and are subject to withholding income tax at varying rates depending on the length of period of interest accrual. The tax rate varies from 15%, in case of interest accrued for a period greater than 720 days, 17.5% in case of interest accrued for a period between 361 and 720 days, 20% in case of interest accrued for a period between 181 and 360 days, and to 22.5%, in case of interest accrued for a period up to 180 days. However, the applicable withholding income tax rate over interest is 15% in the case of a non-Brazilian holder of ADSs or direct holder of common or preferred shares who is not resident or domiciled in a country or other jurisdiction that does not impose income tax or imposes it at a maximum income tax rate lower than 17% (a Low or Nil Tax Jurisdiction) or, based on the position of the Brazilian tax authorities, a country or other jurisdiction where the local legislation does not allow access to information related to the shareholding composition of legal entities, to their ownership or to the identity of the effective beneficiary of the income attributed to shareholders (the Non-Transparency Rule). See Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.

***Taxation on Interest on Capital***

Any payment of interest on capital to holders of ADSs or preferred or common shares, whether or not they are Brazilian residents, is subject to Brazilian withholding income tax at the rate of 15% at the time we record such liability, whether or not the effective payment is made at that time. See Memorandum and Articles of Incorporation Payment of Dividends and Interest on Capital. In the case of non-Brazilian residents that are resident in a Low or Nil Tax Jurisdiction (including in the view of Brazilian authorities the jurisdictions to which the Non-Transparency Rule applies), the applicable withholding income tax rate is 25%. See Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction. The payment of interest with respect to updating recorded distributions by the SELIC rate that is applicable to payments of dividends applies equally to payments of interest on capital. The determination of whether or not we will make distributions in the form of interest on capital or in the form of dividends is made by our board of directors at the time distributions are to be made. We cannot determine how our board of directors will make these determinations in connection with future distributions.

***Taxation of Gains***

For purposes of Brazilian taxation on capital gains, two types of non-Brazilian holders have to be considered: (i) non-Brazilian holders of ADSs, preferred shares or common shares that are not resident or domiciled in a Low or Nil Tax Jurisdiction, and that, in the case of preferred or common shares, have registered before the Central Bank of Brazil and the CVM in accordance with CMN Resolution No. 4,373; and (ii) any other non-Brazilian holder, including non-Brazilian holders who invest in Brazil not in accordance with CMN Resolution No. 4,373 (including registration under Law No. 4,131/1962) and who are resident or domiciled in a Low or Nil Tax Jurisdiction. See Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.

According to Law No. 10,833/2003, capital gains realized on the disposition of assets located in Brazil by non-Brazilian holders, whether or not to other non-residents and whether made outside or within Brazil, may be subject to taxation in Brazil. With respect to the disposition of common or preferred shares, as they are assets located in Brazil, the non-Brazilian holder may be subject to income tax on any gains realized, following the rules described below, regardless of whether the transactions are conducted in Brazil or with a Brazilian resident. We understand the ADSs do not fall within the definition of assets located in Brazil for the purposes of this law, but there is still neither pronouncement from tax authorities nor judicial court rulings in this respect. Therefore, we are unable to predict whether such understanding will prevail in the courts of Brazil.

Although there are grounds to sustain otherwise, the deposit of preferred or common shares in exchange for ADSs may be subject to Brazilian taxation on capital gains if the acquisition cost of the preferred or common shares is lower than the average price per preferred or common share.

The difference between the acquisition cost and the market price of the preferred or common shares will be considered realized capital gain that is subject to taxation as described below. There are grounds to sustain that such taxation is not applicable with respect to non-Brazilian holders registered under the rules of CMN Resolution No. 4,373 and not resident or domiciled in a Low or Nil Tax Jurisdiction.

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The withdrawal of ADSs in exchange for preferred or common shares should not be considered as giving rise to a capital gain subject to Brazilian income tax, provided that on receipt of the underlying preferred or common shares, the non-Brazilian holder complies with the registration procedure with the Central Bank of Brazil as described below in Registered Capital.

Capital gains realized by a non-Brazilian holder on a sale or disposition of preferred or common shares carried out on a Brazilian stock exchange (which includes transactions carried out on the organized over-the-counter market) are:

exempt from income tax when the non-Brazilian holder (i) has registered its investment in accordance with CMN Resolution No. 4,373 and (ii) is not resident or domiciled in a Low or Nil Tax Jurisdiction;

subject to an income tax at a 25% rate, in cases of gains realized by a non-Brazilian holder resident or domiciled in a Low or Nil Tax Jurisdiction or a jurisdiction to which the Non-Transparency Rule applies. In this case, a withholding income tax at a rate of 0.005% of the sale value is levied on the transaction which can be offset against the eventual income tax due on the capital gain; or

in all other cases, including a case of capital gains realized by a non-Brazilian holder that is not registered in accordance with CMN Resolution No. 4,373, subject to income tax at a 15% rate. In these cases, a withholding income tax at a rate of 0.005% of the sale value is levied on the transaction which can be offset against the eventual income tax due on the capital gain.

Any capital gains realized on a disposition of preferred or common shares that is carried out outside the Brazilian stock exchange are subject to income tax at the rate of 15%, or 25% in case of gains realized by a non-Brazilian holder that is domiciled or resident in a Low or Nil Tax Jurisdiction or a jurisdiction to which the Non-Transparency Rule applies. In this last case, for the capital gains related to transactions conducted on the Brazilian non-organized over-the-counter market with intermediation, the withholding income tax of 0.005% will also apply and can be offset against the eventual income tax due on the capital gain.

In the case of a redemption of preferred or common shares or ADSs or a capital reduction made by us, the positive difference between the amount received by the non-Brazilian holder and the acquisition cost of the preferred or common shares or ADSs redeemed or reduced is treated as capital gain derived from the sale or exchange of shares not carried out on a Brazilian stock exchange market and is therefore generally subject to income tax at the rate of 15% or 25%, as the case may be. See Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction.

Any exercise of preemptive rights relating to the preferred or common shares will not be subject to Brazilian taxation. Any gain on the sale or assignment of preemptive rights will be subject to Brazilian income taxation according to the same rules applicable to the sale or disposition of preferred or common shares.

No assurance can be made that the current preferential treatment of non-Brazilian holders of the ADSs and some non-Brazilian holders of the preferred or common shares under CMN Resolution No. 4,373 will continue to apply in the future.

## ***Additional Recent Rules Regarding Taxation of Gains***

On March 16, 2016, the Brazilian federal government converted the Provisional Measure No. 692 into Law No. 13,259, which established progressive income tax rates applicable to capital gains derived from the disposition of assets by Brazilian individuals. Law No. 13,259 provides for new rates that range from 15% to 22.5% depending on the amount of the gain recognized by the Brazilian individual, as follows: (i) 15% on gains not exceeding R\$5,000,000.00; (ii) 17.5% on gains that exceed R\$5,000,000.00 and do not exceed R\$10,000,000.00; (iii) 20% on gains that exceed R\$10,000,000.00 and do not exceed R\$30,000,000.00; and (iv) 22.5% on gains exceeding R\$30,000,000.00. Pursuant to Section 18 of Law No. 9,249/95, the tax treatment applicable to capital gains earned by Brazilian individuals also applies to capital gains earned by non-Brazilian residents (except in cases that remain subject to the application of specific rules, as explained in Section 149 of the law).

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**Table of Contents*****Clarifications on Non-Brazilian Holders Resident or Domiciled in a Low or Nil Tax Jurisdiction***

Law No. 9,779/1999 states that, except for limited prescribed circumstances, income derived from transactions by a person resident or domiciled in a Low or Nil Tax Jurisdiction will be subject to withholding income tax at the rate of 25%. A Low or Nil Tax Jurisdiction is generally considered to be a country or other jurisdiction which does not impose any income tax or which imposes such tax at a maximum rate lower than 17%. Under certain circumstances, the Non-Transparency Rule is also taken into account for determining whether a country or other jurisdiction is a Low or Nil Tax Jurisdiction. In addition, Law No. 11,727/2008 introduced the concept of a *privileged tax regime*, which is defined as a tax regime which (i) does not tax income or taxes it at a maximum rate lower than 17%; (ii) grants tax benefits to non-resident entities or individuals (a) without the requirement to carry out a substantial economic activity in the country or other jurisdiction or (b) contingent on the non-exercise of a substantial economic activity in the country or other jurisdiction; (iii) does not tax or that taxes foreign source income at a maximum rate lower than 17%; or (iv) does not provide access to information related to shareholding composition, ownership of assets and rights or economic transactions carried out. We believe that the best interpretation of Law No. 11,727/2008 is that the concept of a *privileged tax regime* will apply solely for purposes of the transfer pricing rules in export and import transactions, deductibility for Brazilian corporate income taxes and the thin capitalization rules and, would therefore generally not have an impact on the taxation of a non-Brazilian holder of preferred or common shares or ADSs, as discussed herein. However, we are unable to ascertain whether the *privileged tax regime* concept will also apply in the context of the rules applicable to Low or Nil Tax Jurisdictions, although the Brazilian tax authorities appear to agree with our position, in view of the provisions of the Withholding Income Tax Manual (MAFON 2016), issued by the Brazilian Revenue Service.

***Taxation of Foreign Exchange Transactions (IOF/Exchange)***

Brazilian law imposes the IOF/Exchange on the conversion of *reais* into foreign currency and on the conversion of foreign currency into *reais*. Currently, for most foreign currency exchange transactions, the rate of IOF/Exchange is 0.38%. However, foreign exchange transactions related to inflows of funds to Brazil for investments made by foreign investors in the Brazilian financial and capital markets are generally subject to IOF/Exchange at a zero percent rate. Foreign exchange transactions related to outflows of proceeds from Brazil in connection with investments made by foreign investors in the Brazilian financial and capital markets are also subject to the IOF/Exchange tax at a zero percent rate. This zero percent rate applies to payments of dividends and interest on capital received by foreign investors with respect to investments in the Brazilian financial and capital markets, such as investments made by a non-Brazilian holder as provided for in CMN Resolution No. 4,373. The Brazilian Executive Branch may increase such rates at any time, up to 25% of the amount of the foreign exchange transaction, but not with retroactive effect.

***Taxation on Bonds and Securities Transactions (IOF/Bonds)***

Brazilian law imposes IOF/Bonds on transactions involving equity securities, bonds and other securities, including those carried out on a Brazilian stock exchange. The rate of IOF/Bonds applicable to transactions involving preferred or common shares is currently zero. However, the Brazilian federal government may increase such rate at any time up to 1.5% of the transaction amount per day, but the tax cannot be applied retroactively.

The IOF on transfer of shares, which are admitted to trading on a stock exchange located in Brazil, with the specific purpose of backing the issuance of depositary receipts traded abroad have been reduced from 1.5% to zero, as of December 24, 2013.

***Other Brazilian Taxes***



There are no Brazilian inheritance, gift or succession taxes applicable to the ownership, transfer or disposition of preferred or common shares or ADSs by a non-Brazilian holder, except for gift and inheritance taxes which are levied by certain states of Brazil on gifts made or inheritances bestowed by a non-Brazilian holder to individuals or entities resident or domiciled within such states in Brazil. There are no Brazilian stamp, issue, registration, or similar taxes or duties payable by holders of preferred or common shares or ADSs.

**Table of Contents*****Registered Capital***

The amount of an investment in preferred or common shares held by a non-Brazilian holder who obtains registration under CMN Resolution No. 4,373, or by the depositary representing such holder, is eligible for registration with the Central Bank of Brazil; and such registration allows the remittance outside Brazil of foreign currency, converted at the commercial market rate, acquired with the proceeds of distributions on, and amounts realized with respect to dispositions of, such preferred or common shares. The amount registered ( registered capital ) for each preferred or common share purchased as part of the international offering or purchased in Brazil after the date hereof, and deposited with the depositary, will be equal to its purchase price (in U.S. dollars). The registered capital for a preferred or common share that is withdrawn upon surrender of an ADS will be the U.S. dollar equivalent of:

- (a) the average price of a preferred or common share on the Brazilian stock exchange on which the highest volume of such shares were traded on the day of withdrawal; or
- (b) if no preferred or common shares were traded on that day, the average price on the Brazilian stock exchange on which the highest volume of preferred or common shares were traded in the 15 trading sessions immediately preceding the date of such withdrawal.

The U.S. dollar value of the average price of preferred or common shares is determined on the basis of the average of the U.S. dollar/*real* commercial market rates quoted by the Central Bank of Brazil information system on that date (or, if the average price of preferred or common shares is determined under the second option above, price will be determined by the average quoted rates verified on the same 15 preceding trading sessions as described above).

A non-Brazilian holder of preferred or common shares may be subject to delays in effecting such registration, which in turn may delay remittances abroad. Such a delay may adversely affect the amount, in U.S. dollars, received by the non-Brazilian holder. See Item 3. Key Information Risk Factors Risks Relating to Our Equity and Debt Securities.

***U.S. Federal Income Tax Considerations***

This summary describes the material U.S. federal income tax consequences of the ownership and disposition of common or preferred shares or ADSs, based on the U.S. Internal Revenue Code of 1986, as amended (the Code), its legislative history, existing and proposed U.S. Treasury regulations promulgated thereunder, published rulings by the U.S. Internal Revenue Service (IRS), and court decisions, all as in effect as of the date hereof, and all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary does not purport to be a comprehensive description of all of the tax consequences that may be relevant to a decision to hold or dispose of common or preferred shares or ADSs. This summary applies only to purchasers of common or preferred shares or ADSs who hold the common or preferred shares or ADSs as capital assets (generally, property held for investment), and does not apply to special classes of holders such as dealers or traders in securities or currencies, holders whose functional currency is not the U.S. dollar, holders of 10% or more of our shares, measured by voting power or value (taking into account shares held directly or through depositary arrangements), tax-exempt organizations, partnerships or partners therein, financial institutions, holders liable for the alternative minimum tax, securities traders who elect to account for their investment in common or preferred shares or ADSs on a mark-to-market basis, persons that enter into a constructive sale transaction with respect to common or preferred shares or ADSs, and persons holding common or preferred shares or ADSs in a hedging transaction or as part of a straddle or conversion transaction.

EACH HOLDER SHOULD CONSULT ITS OWN TAX ADVISOR CONCERNING THE OVERALL TAX CONSEQUENCES IN ITS PARTICULAR CIRCUMSTANCES, INCLUDING THE CONSEQUENCES UNDER LAWS OTHER THAN U.S. FEDERAL INCOME TAX LAWS, OF AN INVESTMENT IN COMMON OR PREFERRED SHARES OR ADSs.

Shares of our preferred stock will be treated as equity for U.S. federal income tax purposes. In general, a holder of an ADS will be treated as the holder of the shares of common or preferred stock represented by those ADSs for U.S. federal income tax purposes, and no gain or loss will be recognized if you exchange ADSs for the shares of common or preferred stock represented by that ADS.

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In this discussion, references to ADSs refer to ADSs with respect to both common and preferred shares, and references to a U.S. Holder are to a holder of a common or preferred share or ADS that is:

an individual who is a citizen or resident of the United States;

a corporation organized under the laws of the United States, any state thereof, or the District of Columbia; or

otherwise subject to U.S. federal income taxation on a net basis with respect to the shares or the ADS.

### *Taxation of Distributions*

A U.S. Holder will recognize ordinary dividend income for U.S. federal income tax purposes in an amount equal to the amount of any cash and the value of any property we distribute as a dividend to the extent that such distribution is paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes, when such distribution is received by the custodian, or by the U.S. Holder in the case of a holder of common or preferred shares. The amount of any distribution will include distributions characterized as interest on capital and the amount of Brazilian tax withheld on the amount distributed, and the amount of a distribution paid in *reais* will be measured by reference to the exchange rate for converting *reais* into U.S. dollars in effect on the date the distribution is received by the custodian, or by a U.S. Holder in the case of a holder of common or preferred shares. If the custodian, or U.S. Holder in the case of a holder of common or preferred shares, does not convert such *reais* into U.S. dollars on the date it receives them, it is possible that the U.S. Holder will recognize foreign currency loss or gain, which would be U.S. source ordinary loss or gain, when the *reais* are converted into U.S. dollars. Dividends paid by us will not be eligible for the dividends received deduction allowed to corporations under the Code.

Subject to certain exceptions for short-term and hedged positions, the U.S. dollar amount of dividends received by a non-corporate U.S. Holder with respect to the ADSs will generally be subject to taxation at preferential rates if the dividends are qualified dividends. Dividends paid on the ADSs will be treated as qualified dividends if (i) the ADSs are readily tradable on an established securities market in the United States and (ii) Petrobras was not, in the year prior to the year in which the dividend was paid, and is not, in the year in which the dividend is paid, a passive foreign investment company as defined for U.S. federal income tax purposes (a PFIC). The ADSs are listed on the NYSE, and will qualify as readily tradable on an established securities market in the United States so long as they are so listed. Based on our audited financial statements and relevant market and shareholder data, we believe that we should not be treated as a PFIC for U.S. federal income tax purposes with respect to the 2017 or 2016 taxable year. In addition, based on our audited financial statements and our current expectations regarding the value and nature of our assets, the sources and nature of our income, and relevant market and shareholder data, we do not anticipate becoming a PFIC for our 2018 taxable year. Based on existing guidance, it is not clear whether dividends received with respect to the shares will be treated as qualified dividends, because the shares are not themselves listed on a U.S. exchange. U.S. Holders of our ADSs should consult their own tax advisors regarding the availability of the reduced dividend tax rate in the light of their particular circumstances.

Distributions out of earnings and profits with respect to the shares or ADSs generally will be treated as dividend income from sources outside of the United States and generally will be treated as passive category income for U.S. foreign tax credit purposes. Subject to certain limitations, Brazilian income tax withheld in connection with any distribution with respect to the shares or ADSs may be claimed as a credit against the U.S. federal income tax liability of a U.S. Holder, or, at the U.S. Holder's election, such Brazilian withholding tax may be taken as a deduction against

taxable income (provided that the U.S. Holder elects to deduct, rather than credit, all foreign income taxes paid or accrued for the relevant taxable year). A U.S. foreign tax credit may not be allowed for Brazilian withholding tax imposed in respect of certain short-term or hedged positions in securities or in respect of arrangements in which a U.S. Holder's expected economic profit is insubstantial. U.S. Holders should consult their own tax advisors regarding the availability of the U.S. foreign tax credit, including the translation of *reais* into U.S. dollar for these purposes, in light of their particular circumstances.

Holders of ADSs that are foreign corporations or nonresident alien individuals (non-U.S. Holders) generally will not be subject to U.S. federal income tax, including withholding tax, on distributions with respect to shares or ADSs that are treated as dividend income for U.S. federal income tax purposes unless such dividends are effectively connected with the conduct by the holder of a trade or business in the United States.

Holders of shares and ADSs should consult their own tax advisors regarding the availability of the reduced dividend tax rate in the light of the considerations discussed above and their own particular circumstances.

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***Taxation of Capital Gains***

Upon the sale or other disposition of a share or an ADS, a U.S. Holder will generally recognize U.S. source capital gain or loss for U.S. federal income tax purposes, equal to the difference between the amount realized on the disposition and the U.S. Holder's tax basis in such share or ADS. Any gain or loss will be long-term capital gain or loss if the shares or ADSs have been held for more than one year. Non-corporate U.S. Holders of shares or ADSs may be eligible for a preferential rate of U.S. federal income tax in respect of long-term capital gains. Capital losses may be deducted from taxable income, subject to certain limitations. For U.S. federal income tax purposes, such disposition would not result in foreign source-income to a U.S. Holder. As a result, a U.S. Holder may not be able to use the foreign tax credit associated with any Brazilian income taxes imposed on such gains, unless such holder can use the credit against U.S. tax due on other foreign-source income. U.S. Holders should consult their own tax advisors regarding the availability of the U.S. foreign tax credit, including the translation of *reais* into U.S. dollar for purposes of their investment in our shares or ADSs.

A non-U.S. Holder will not be subject to U.S. federal income tax or withholding tax on gain realized on the sale or other disposition of a share or an ADS, unless:

such gain is effectively connected with the conduct by the holder of a trade or business in the United States;  
or

such holder is an individual who is present in the United States for 183 days or more in the taxable year of the sale and certain other conditions are met.

***Information Reporting and Backup Withholding***

The payment of dividends on, and proceeds from the sale or other disposition of, the ADSs or common or preferred shares to a U.S. Holder within the United States (or through certain U.S. related financial intermediaries) will generally be subject to information reporting, and may be subject to backup withholding unless the U.S. Holder (i) is an exempt recipient, and demonstrates this fact when so required, or (ii) timely provides a taxpayer identification number and certifies that no loss of exemption from backup withholding has occurred and otherwise complies with applicable requirements of the backup withholding rules. Backup withholding is not an additional tax. The amount of any backup withholding collected from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle the U.S. Holder to a refund, so long as the required information is furnished to the IRS in a timely manner.

U.S. Holders should consult their own tax advisors about any additional reporting requirements that may arise as a result of their purchasing, holding or disposing of our ADSs, or common or preferred shares.

A non-U.S. Holder generally will be exempt from these information reporting requirements and backup withholding tax, but may be required to comply with certain certification and identification procedures in order to establish its eligibility for such exemption.

***Specified Foreign Financial Assets***

Certain U.S. Holders that own specified foreign financial assets with an aggregate value in excess of US\$50,000 are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect

to such assets. Specified foreign financial assets include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include our common and preferred shares and ADSs) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. Holders who fail to report the required information could be subject to substantial penalties. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment, including the application of the rules to their particular circumstances.

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***Taxation Relating to PGF's Notes***

The following summary contains a description of material Brazilian, Dutch, European Union and U.S. federal income tax considerations that may be relevant to the purchase, ownership, and disposition of PGF's debt securities. This summary does not describe any tax consequences arising under the laws of any state, locality or taxing jurisdiction other than the Netherlands, Brazil and the United States.

This summary is based on the tax laws of the Netherlands, Brazil and the United States as in effect on the date of this annual report, which are subject to change (possibly with retroactive effect). This description is not a comprehensive description of all tax considerations that may be relevant to any particular investor, including tax considerations that arise from rules generally applicable to all taxpayers or to certain classes of investors or that investors are generally assumed to know. Prospective purchasers of notes should consult their own tax advisors regarding the tax consequences of the acquisition, ownership and disposition of the notes.

There is no tax treaty to avoid double taxation between Brazil and the United States. In recent years, the tax authorities of Brazil and the United States have held discussions that may culminate in such a treaty. We cannot predict, however, whether or when a treaty will enter into force or how it will affect the U.S. Holders of notes.

***Dutch Taxation***

The following generally outlines certain material Dutch tax consequences to holders of the notes in connection with the acquisition, ownership and disposal of notes in a Dutch company. This section does not purport to describe all possible Dutch tax consequences that may be relevant to a holder and does not purport to deal with the tax consequences applicable to all categories of investors, some of which may be subject to special rules. In view of its general nature, this general summary should therefore be treated with appropriate caution.

This section is based on the tax laws of the Netherlands, published regulations thereunder and published authoritative case law, all as in effect on the date hereof, and all of which are subject to change or to different interpretation, possibly with retroactive effect. Where the text refers to the Netherlands, it refers only to the part of the Kingdom of the Netherlands located in Europe.

For Dutch tax purposes, a holder of notes may include, without limitation:

an owner of one or more notes who, in addition to the title to such notes, has an economic interest in such notes;

a person or an entity that holds the entire economic interest in one or more notes;

a person or an entity that holds an interest in an entity, such as a partnership or a mutual fund, that is transparent for Dutch tax purposes, the assets of which comprise one or more notes; and

an individual or an entity who does not have the legal title to the notes, but to whom the notes are attributed based either on such individual or entity holding a beneficial interest in the notes or based on specific



statutory provisions, including statutory provisions pursuant to which the notes are attributed to an individual who is, or who has directly or indirectly inherited the notes from a person who was, the settlor, grantor or similar originator of a trust, foundation or similar entity that holds the notes.

Holders of notes should consult their own tax advisers as to the consequences of purchasing, including, without limitation, the consequences of the receipt of interest and the sale or other disposition of notes or coupons. The discussion below is included for general information purposes only.

*Dutch Withholding Tax*

All payments of interest and principal made by PGF under the notes can be made free of withholding or deduction for any taxes of any nature imposed, levied, withheld or assessed by the Netherlands or any political subdivision or taxing authority thereof or therein, unless the notes qualify as equity of PGF for Dutch tax purposes.

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***Taxes on Income and Capital Gains***

Please note that this section does not describe the tax considerations for:

holders of the notes if such holders, and in the case of an individual, his or her partner or certain of his or her relatives by blood or marriage in the direct line (including foster children), have a substantial interest (*aanmerkelijk belang*) or deemed substantial interest (*fictief aanmerkelijk belang*) in PGF under the Dutch Income Tax Act 2001 (*Wet inkomstenbelasting 2001*). Generally speaking, a holder of notes has a substantial interest in PGF if it has, directly or indirectly (and, in the case of an individual, alone or together with certain relatives) (I) the ownership of, a right to acquire the ownership of, or certain rights over, shares representing 5 per cent. or more of either the total issued and outstanding capital of PGF or the issued and outstanding capital of any class of shares of PGF, or (II) the ownership of, or certain rights over, profit participating certificates (*winstbewijzen*) that relate to 5 per cent. or more of either the annual profit or the liquidation proceeds of PGF. A deemed substantial interest may arise if a substantial interest (or part thereof) has been disposed of, or is deemed to have been disposed of, on a non-recognition basis;

pension funds, investment institutions (*fiscale beleggingsinstellingen*), exempt investment institutions (*vrijgestelde beleggingsinstellingen*) (as defined in the Dutch Corporate Income Tax Act 1969 (*Wet op de vennootschapsbelasting 1969*)) and other entities that are, in whole or in part, not subject to or exempt from Dutch corporate income tax;

holders of securities who are individuals and for whom the securities or any benefit derived from the securities are a remuneration or deemed to be a remuneration for activities performed by such holders or certain individuals related to such holders (as defined in the Dutch Income Tax Act 2001).

A holder of notes will not be subject to any Dutch taxes on income or capital gains in respect of the notes, including such tax on any payment under the notes or in respect of any gain realized on the disposal, deemed disposal, redemption or exchange of the notes, provided that:

such holder is neither a resident nor deemed to be a resident of the Netherlands;

such holder does not have, and is not deemed to have, an enterprise or an interest in an enterprise that, in whole or in part, is either effectively managed in the Netherlands or carried on through a (deemed) permanent establishment (*vaste inrichting*) or a permanent representative (*vaste vertegenwoordiger*) in the Netherlands and to which enterprise or part of an enterprise the notes are attributable;

if such holder is an individual, such income or capital gains do not form benefits from miscellaneous activities in the Netherlands (*resultaat uit overige werkzaamheden* in Nederland), including without limitation activities in the Netherlands with respect to the notes that exceed normal asset management (normal, *actief vermogensbeheer*);

if such holder is an entity, the holder is not entitled to a share in the profits of an enterprise nor a co-entitlement to the net worth of an enterprise, which is effectively managed in the Netherlands, other than by way of securities, and to which enterprise the notes are attributable; and

if such holder is an individual, the holder is not entitled to a share in the profits of an enterprise that is effectively managed in the Netherlands, other than by way of securities, and to which enterprise the notes are attributable.

A holder of notes will not be treated as a resident of the Netherlands by reason only of the execution, delivery and/or enforcement of its rights and obligations connected to the notes, the issue of the notes or the performance by PGF of its obligations under the notes.

### *Dutch Gift and Inheritance Taxes*

No gift or inheritance taxes will arise in the Netherlands with respect to an acquisition or deemed acquisition of notes by way of a gift by, or on the death of, a holder of notes who is neither resident, deemed to be resident for Dutch inheritance and gift tax purposes, unless:

in case of a gift of the notes under a suspensive condition by an individual who at the date of the gift was neither resident nor deemed to be resident in the Netherlands, such individual is resident or deemed to be resident in the Netherlands at the date of (i) the fulfillment of the condition or (ii) his death and the condition of the gift is fulfilled after the date of his death; or

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in case of a gift of notes by an individual who at the date of the gift or, in case of a gift under a suspensive condition, at the date of the fulfillment of the condition was neither resident nor deemed to be resident in the Netherlands, such individual dies within 180 days after the date of the gift or fulfillment of the condition, while being resident or deemed to be resident in the Netherlands.

For purposes of Dutch gift and inheritance taxes, among others, a person that holds Dutch nationality will be deemed to be resident in the Netherlands if such person has been resident in the Netherlands at any time during the 10 years preceding the date of the gift or his/her death. Additionally, for purposes of Dutch gift tax, among others, a person not holding Dutch nationality will be deemed to be resident in the Netherlands if such person has been resident in the Netherlands at any time during the twelve months preceding the date of the gift. Applicable tax treaties may override deemed residency.

### *Turnover Tax*

No Dutch turnover tax will arise in respect of any payment in consideration for the issue of the notes or with respect to any payment by PGF of principal, interest or premium (if any) on the notes.

### *Other Taxes and Duties*

No other Dutch registration taxes, or any other similar taxes of a documentary nature, such as capital tax or stamp duty, are payable in the Netherlands by or on behalf of a holder of the notes by reason only of the purchase, ownership and disposal of the notes.

### *FATCA*

Pursuant to certain provisions of the U.S. Internal Revenue Code of 1986, commonly known as FATCA, a **foreign financial institution** may be required to withhold on certain payments it makes ( **foreign passthru payments** ) to persons that fail to meet certain certification, reporting, or related requirements.

Pursuant to FATCA, holders and beneficial owners of the notes may be required to provide to a financial institution in the chain of payments on the notes information and tax documentation regarding their identities, and in the case of a holder that is an entity, the identities of their direct and indirect owners, and this information may be reported to relevant tax authorities, including the IRS. Moreover, starting at the earliest on January 1, 2019, financial institutions through which payments are made, may be required to withhold U.S. tax at a 30% rate on foreign passthru payments (a term not yet defined) paid to an investor who does not provide information sufficient for the institution to determine whether the investor is a U.S. person or should otherwise be treated as holding a United States account of the institution, or to an investor that is, or holds the notes directly or indirectly through, a non-U.S. financial institution that is not in compliance with FATCA. Under a grandfathering rule, this withholding tax will not apply unless the notes are issued or materially modified after the date that is six months after the date on which final United States Treasury Regulations defining the term foreign passthru payment are filed with the United States Federal Register.

A number of jurisdictions, including the Netherlands, have entered into, or have agreed in substance to, intergovernmental agreements with the United States to implement FATCA ( IGAs ), which modify the way in which FATCA applies in their jurisdictions. Certain holders of the notes therefore may be required to provide information and tax documentation regarding their identities, as well as that of their direct and indirect owners, and this information may be reported to the Dutch tax authorities and ultimately to the IRS.

Holders should consult their own tax advisors regarding how these rules may apply to their investment in the notes.

*The Proposed Financial Transactions Tax (FTT)*

On February 14, 2013, the European Commission has published a proposal, or the Commission's Proposal, for a Directive for a common financial transaction tax, or FTT, in Austria, Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovenia, Slovakia and Spain, or the participating Member States. However, Estonia has since stated that it will not participate.

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The Commission's Proposal has a very broad scope and could, if introduced in its current form, apply to certain dealings in notes in certain circumstances. This could, accordingly, affect the market value of notes and/or limit the ability to resell notes.

Under the Commission's Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, established in a participating Member State in a broad range of circumstances, including (1) by transacting with a person established in a participating Member State or (2) where the financial instrument which is subject to the dealings is issued in a participating Member State.

However, the FTT remains subject to negotiation between the participating Member States and the legality of the proposal is uncertain. The FTT may therefore be altered prior to any implementation, the timing of which remains unclear. Additional European Union Member States may decide to participate and/or certain of the participating Member States may decide to withdraw.

Prospective holders of notes are advised to seek their own professional advice in relation to the FTT.

***Brazilian Taxation***

The following discussion is a summary of the Brazilian tax considerations relating to an investment in the notes by a non-resident of Brazil. The discussion is based on the tax laws of Brazil as in effect on the date hereof and is subject to any change in Brazilian law that may come into effect after such date. The information set forth below is intended to be a general discussion only and does not address all possible consequences relating to an investment in the notes.

**INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISERS AS TO THE CONSEQUENCES OF PURCHASING THE NOTES, INCLUDING, WITHOUT LIMITATION, THE CONSEQUENCES OF THE RECEIPT OF INTEREST AND THE SALE, REDEMPTION OR REPAYMENT OF THE NOTES OR COUPONS.**

Generally, an individual, entity, trust or organization domiciled for tax purposes outside Brazil, or a Non-resident, is taxed in Brazil only when income is derived from Brazilian sources or when the transaction giving rise to such earnings involves assets in Brazil. Therefore, any gains or interest (including original issue discount), fees, commissions, expenses and any other income paid by PGF in respect of the notes issued by them in favor of non-resident holders are not subject to Brazilian taxes.

Interest, fees, commissions, expenses and any other income payable by Petrobras as guarantor resident in Brazil to a Non-resident are generally subject to income tax withheld at source. The rate of withholding income tax in respect of interest payments is generally 15%, unless (i) the holder of the notes is resident or domiciled in a tax haven jurisdiction (that is deemed to be a country or jurisdiction which does not impose any tax on income or which imposes such tax at a maximum effective rate lower than 17% or where the local legislation imposes restrictions on disclosing the identities of shareholders, the ownership of investments, or the ultimate beneficiary of earnings distributed to the Non-resident tax haven jurisdiction), in which case the applicable rate is 25% or (ii) such other lower rate as provided for in an applicable tax treaty between Brazil and another country where the beneficiary is domiciled. In case the guarantor is required to assume the obligation to pay the principal amount of the notes, Brazilian tax authorities could attempt to impose withholding income tax at the rate of up to 25% as described above. Although Brazilian legislation does not provide a specific tax rule for such cases and there is no official position from tax authorities or precedents from the Brazilian court regarding the matter, we believe that the remittance of funds by Petrobras as a guarantor for the payment of the principal amount of the notes will not be subject to income tax in Brazil, because the mere fact that

the guarantor is making the payment does not convert the nature of the principal due under the notes into income of the beneficiary.

If the payments with respect to the notes are made by Petrobras, as provided for in the guaranties, the Non-resident holders will be indemnified so that, after payment of all applicable Brazilian taxes collectable by withholding, deduction or otherwise, with respect to principal, interest and additional amounts payable with respect to the notes (plus any interest and penalties thereon), a Non-resident holder will receive an amount equal to the amount that such Non-resident holder would have received as if no such Brazilian taxes (plus interest and penalties thereon) were withheld. The Brazilian obligor will, subject to certain exceptions, pay additional amounts in respect of such withholding or deduction so that the Non-resident holder receives the net amount due.

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Gains on the sale or other disposition of the notes made outside of Brazil by a Non-resident, other than a branch or a subsidiary of Brazilian resident, to another Non-resident are not subject to Brazilian income tax.

In addition, payments made from Brazil are subject to the tax on foreign exchange transactions (*IOF/Câmbio*), which is levied on the conversion of Brazilian currency into foreign currency and on the conversion of foreign currency into Brazilian currency at a general rate of 0.38%. Other IOF/Câmbio rates may apply to specific transactions. In any case, the Brazilian federal government may increase, at any time, such rate up to 25% but only with respect to future transactions.

Generally, there are no inheritance, gift, succession, stamp, or other similar taxes in Brazil with respect to the ownership, transfer, assignment or any other disposition of the notes by a Non-resident, except for gift and inheritance taxes imposed by some Brazilian states on gifts or bequests by individuals or entities not domiciled or residing in Brazil to individuals or entities domiciled or residing within such states.

### ***U.S. Federal Income Taxation***

The following summary sets forth material United States federal income tax considerations that may be relevant to a holder of a note that is, for U.S. federal income purposes, a citizen or resident of the United States or a domestic corporation or that otherwise is subject to U.S. federal income taxation on a net income basis in respect of the notes (a U.S. Holder ). This summary is based upon the Code, its legislative history, existing and proposed U.S. Treasury regulations promulgated thereunder, published rulings by the IRS, and court decisions, all as in effect as of the date hereof, all of which are subject to change or differing interpretations, possibly with retroactive effect. This summary does not purport to discuss all aspects of the U.S. federal income taxation which may be relevant to special classes of investors, such as financial institutions, insurance companies, dealers or traders in securities or currencies, securities traders who elect to account for their investment in notes on a mark-to-market basis, regulated investment companies, tax-exempt organizations, partnerships or partners therein, holders that are subject to the alternative minimum tax, certain short-term holders of notes, persons that hedge their exposure in the notes or hold notes as part of a position in a straddle or as part of a hedging transaction or conversion transaction for U.S. federal tax purposes, persons that enter into a constructive sale transaction with respect to the notes or U.S. Holder whose functional currency is not the U.S. dollar. U.S. Holders should be aware that the U.S. federal income tax consequences of holding the notes may be materially different for investors described in the prior sentence.

In addition, this summary does not discuss any foreign, state or local tax considerations. This summary only applies to original purchasers of notes who have purchased notes at the original issue price and hold the notes as capital assets (generally, property held for investment).

**EACH INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR CONCERNING THE OVERALL TAX CONSEQUENCES IN ITS PARTICULAR CIRCUMSTANCES, INCLUDING THE CONSEQUENCES UNDER LAWS OTHER THAN U.S. FEDERAL INCOME TAX LAWS, OF AN INVESTMENT IN THE NOTES.**

### ***Payments of Interest***

Payment of qualified stated interest, as defined below, on a note (including additional amounts, if any) generally will be taxable to a U.S. holder as ordinary interest income when such interest is accrued or received, in accordance with the U.S. holder's applicable method of accounting for U.S. federal tax purposes. In general, if the issue price of a note is less than the stated redemption price at maturity by more than a *de minimis* amount, such note will be considered to have original issue discount, or OID. The issue price of a note is the first price at which a substantial amount of such notes are sold to investors. The stated redemption price at maturity of a note generally includes all payments other



than payments of qualified stated interest.

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In general, each U.S. Holder of a note, whether such holder uses the cash or the accrual method of tax accounting, will be required to include in gross income as ordinary interest income the sum of the daily portions of OID on the note, if any, for all days during the taxable year that the U.S. Holder owns the note. The daily portions of OID on a note are determined by allocating to each day in any accrual period a ratable portion of the OID allocable to that accrual period. In general, in the case of an initial holder, the amount of OID on a note allocable to each accrual period is determined by (i) multiplying the adjusted issue price, as defined below, of the note at the beginning of the accrual period by the yield to maturity of the note, and (ii) subtracting from that product the amount of qualified stated interest allocable to that accrual period. U.S. Holders should be aware that they generally must include OID in gross income as ordinary interest income for U.S. federal income tax purposes as it accrues, in advance of the receipt of cash attributable to that income. The adjusted issue price of a note at the beginning of any accrual period will generally be the sum of its issue price (generally including accrued interest, if any) and the amount of OID allocable to all prior accrual periods, reduced by the amount of all payments other than payments of qualified stated interest (if any) made with respect to such note in all prior accrual periods. The term qualified stated interest generally means stated interest that is unconditionally payable in cash or property (other than debt instruments of the issuer) at least annually during the entire term of a note at a single fixed rate of interest, or subject to certain conditions, based on one or more interest indices.

Interest income, including OID, in respect of the notes will constitute foreign source income for U.S. federal income tax purposes and, with certain exceptions, will be treated separately, together with other items of passive category income, for purposes of computing the foreign tax credit allowable under the U.S. federal income tax laws. The calculation of foreign tax credits involves the application of complex rules that depend on a U.S. Holder's particular circumstances. U.S. Holders should consult their own tax advisors regarding the availability of foreign tax credits and the treatment of additional amounts.

***Sale or Disposition of Notes***

A U.S. Holder generally will recognize capital gain or loss upon the sale, exchange, retirement or other disposition of a note in an amount equal to the difference between the amount realized upon such sale, exchange, retirement or other disposition (other than amounts attributable to accrued qualified stated interest, which will be taxed as such) and such U.S. Holder's adjusted tax basis in the note. A U.S. Holder's adjusted tax basis in the note generally will equal the U.S. Holder's cost for the note increased by any amounts included in gross income by such U.S. Holder as OID, if any, and reduced by any payments other than payments of qualified stated interest on that note. Gain or loss realized by a U.S. Holder on the sale, exchange, retirement or other disposition of a note generally will be U.S. source gain or loss for U.S. federal income tax purposes unless it is attributable to an office or other fixed place of business outside the United States and certain other conditions are met. The gain or loss realized by a U.S. Holder will be capital gain or loss, and will be long-term capital gain or loss if the notes were held for more than one year. The net amount of long-term capital gain recognized by an individual holder generally is subject to taxation at preferential rates. Capital losses may be deducted from taxable income, subject to certain limitations.

***Backup Withholding and Information Reporting***

A U.S. Holder may, under certain circumstances, be subject to backup withholding with respect to certain payments to that U.S. Holder, unless the holder (i) is an exempt recipient, and demonstrates this fact when so required, or (ii) provides a correct taxpayer identification number, certifies that it is not subject to backup withholding and otherwise complies with applicable requirements of the backup withholding rules. Any amount withheld under these rules generally will be creditable against the U.S. Holder's U.S. federal income tax liability. While non-U.S. Holders generally are exempt from backup withholding, a non-U.S. Holder may, in certain circumstances, be required to comply with certain information and identification procedures in order to prove entitlement to this exemption.

U.S. Holders should consult their own tax advisors about any additional reporting requirements that may arise as a result of their purchasing, holding or disposing of the notes.

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### ***Specified Foreign Financial Assets***

Certain U.S. Holders that own specified foreign financial assets with an aggregate value in excess of US\$50,000 are generally required to file an information statement along with their tax returns, currently on Form 8938, with respect to such assets. Specified foreign financial assets include any financial accounts held at a non-U.S. financial institution, as well as securities issued by a non-U.S. issuer (which would include the notes) that are not held in accounts maintained by financial institutions. Higher reporting thresholds apply to certain individuals living abroad and to certain married individuals. Regulations extend this reporting requirement to certain entities that are treated as formed or availed of to hold direct or indirect interests in specified foreign financial assets based on certain objective criteria. U.S. Holders who fail to report the required information could be subject to substantial penalties. Prospective investors should consult their own tax advisors concerning the application of these rules to their investment in the notes, including the application of the rules to their particular circumstances.

### ***Non-U.S. Holder***

A holder or beneficial owner of a note that is not a U.S. Holder (a non-U.S. Holder) generally will not be subject to U.S. federal income or withholding tax on interest received on the notes. In addition, a non-U.S. Holder will not be subject to U.S. federal income or withholding tax on gain realized on the sale of notes unless such gain is effectively connected with the conduct by such holder of a trade or business in the United States or, in the case of gain realized by an individual non-U.S. Holder, the non-U.S. Holder is present in the United States for 183 days or more in the taxable year of the sale and certain other conditions are met.

### ***Documents on Display***

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended, and accordingly file reports and other information with the SEC. Reports and other information filed by us with the SEC may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You can obtain further information about the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. You may also inspect our reports and other information at the offices of the NYSE, 11 Wall Street, New York, New York 10005, on which our ADSs are listed. Our SEC filings are also available to the public from the SEC's Web site at <http://www.sec.gov>. For further information about obtaining copies of our public filings at the New York Stock Exchange, call (212) 656-5060.

We also file financial statements and other periodic reports with the CVM.

## ***Item 11. Qualitative and Quantitative Disclosures about Market Risk***

### ***Risk Management***

We are exposed to a number of risks arising from our operations. Such risks include the possibility that changes in prices of oil and oil products, foreign currency exchange rates or interest rates will adversely affect the value of our financial assets, liabilities, future cash flows and earnings.

We practice integrated risk management. Risks are considered in every decision making process and we manage them in an integrated manner. Thus, we do not focus on the individual risks of operations or business units, but, rather, we take a broader view of our consolidated activities, capturing possible natural hedges where available. For the management of financial risks, including market risks, we tend to apply more structural actions through the management of our equity and indebtedness levels, instead of the use of financial derivative instruments.

We rather maintain exposure to the price cycle than using financial derivatives to systematically protect purchase and sales transactions that focus on fulfilling our operation needs. However, based on crude oil market conditions and prospects of realization of our business plan, we may decide to implement protection strategies using financial instruments to fix or floor prices to portion of our production. The operations with derivatives conducted in 2017 aimed at protecting our expected results for short-term commercial transactions. During February and March 2018, we deployed a hedging strategy for part of our expected oil production in 2018, in a volume equivalent to 128 million barrels. Put options have been purchased with exercise price referenced to the average price of Brent oil from February and March through the end of 2018, with an average cost of US\$3.48 per barrel and average exercise price of around \$65 per barrel. The options mature at the end of the year.

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Acceptable limits for market risks depend on the conditions of the business environment (prices level, rates and volatility of risk factors, political, macroeconomic and other uncertainties that significantly influence our economic and financial performance) and should be defined for each new Business Plan, considering our strategic objectives, goals, expected value and the liquidity of financial resources required for the implementation of our 2018-2022 Business Plan. The use of derivative financial instruments may be necessary to meet these needs.

In order to further improve our risk management governance practices, our board of directors has established an organizational structure for risk management composed of (i) an Executive Manager for Corporate Risks, who is under the supervision of our Chief Strategy, Organization and Management System Officer. Our Executive Manager for Corporate Risks is responsible for:

identifying, monitoring and reporting periodically to our board of executive officers and board of directors on the effects of major risks on our integrated results;

encouraging integration and synergy of risk management actions taken in the organizational units, as well as in other business processes, support and management;

establishing a corporate methodology for risk management guided by an integrated and systemic view, which allows for a continuous monitoring environment of risks in various hierarchical levels;

disseminating knowledge in risk management; and

encouraging managers to develop and implement the necessary measures to align our exposure to acceptable risk levels.

In November 2017, our board of directors approved a revised Business Risk Management Policy, which specifies authorities, responsibilities, the five principles and 10 guidelines that should guide our initiatives related to risk management. Our current Business Risk Management Policy is fully adherent to worldwide recognized methodological references such as COSO-ERM (Committee of Sponsoring Organizations of the Treadway Commission Enterprise Risk Management Integrated Framework) and ISO 31000. In addition, it meets the guidelines provided by the Guide for Corporate Risks Management issued by the Brazilian Institute of Corporate Governance IBGC.

This policy has a comprehensive approach to corporate risk management, which combines the traditional economic and financial risk management approach with other relevant areas of interest, such as protection of life, health and environment, assets and business information protection (property security) and combating fraud and corruption (legal compliance), among other corporate risks. Aimed at integrating these risk management actions, this policy allows any employee to have access to the terms and concepts common to the subject as well as to the measures taken and parties responsible for the management of each of the risks we are exposed to. For further information regarding our revised Business Risk Management Policy, please visit our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobras-business-risk-management>.

## ***Commodity Price Risk***

We operate in an integrated manner throughout the various stages of the oil industry. A great part of our results relate directly to oil exploration and production, refining and the sale of natural gas, biofuels and electricity in Brazil. As our purchases and sales of crude oil and oil products are related to international commodity prices, we are exposed to their price fluctuations, which may influence our profitability, our cash flow from operations and our financial situation.

The existing derivatives transactions are intended to protect the expected results of the transactions carried out abroad. Our derivatives contracts provide economic hedges for anticipated crude oil and oil product purchases and sales in the international markets, generally expected to occur within a 30- to 360-day period. See Note 33 to our audited consolidated financial statements for more information about our commodity derivatives transactions, including a sensitivity analysis demonstrating the net change in fair value of a 25% (or 50%) adverse change in the price of the underlying commodity for options and futures.

**Table of Contents****Interest Rate and Exchange Rate Risk**

The table below provides summary information regarding our exposure to interest rate and exchange rate risk in our total debt portfolio for 2017 and 2016, including short-term and long-term debt.

	<b>Total Debt Portfolio (1)</b>	
	<b>2017</b>	<b>2016</b>
	(%)	
<b>Real denominated:</b>		
Fixed rate	3.3	3.5
Floating rate	16.4	17.0
Sub-total	19.7	20.5
<b>U.S.dollar-denominated:</b>		
Fixed rate	40.7	35.0
Floating rate	32.4	36.9
Sub-total	73.1	71.9
<b>Other currencies:</b>		
Fixed rate	6.9	7.3
Floating rate	0.3	0.3
Sub-total	7.2	7.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>Floating rate debt:</b>		
Real-denominated	16.4	17.0
Foreign currency-denominated	32.6	37.2
<b>Fixed rate debt:</b>		
Real-denominated	3.3	3.5
Foreign currency denominated	47.7	42.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
U.S. dollars	73.1	72.0
Euro	4.9	5.6
GBP	2.2	1.8
Japanese Yen	0.1	0.1
Brazilian reais	19.7	20.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>



(1) Short term and long term.

In general, our foreign currency floating rate debt is principally subject to fluctuations in LIBOR. Our floating rate debt denominated in *reais* is principally subject to fluctuations in the *Depósito Interbancário* (Brazilian interbank offering rate, or DI), *Taxa de Juros de Longo Prazo* (Brazilian long-term interest rate, or TJLP), as fixed by the CMN, and *Índice Nacional de Preço ao Consumidor Amplo* (National Consumer Price Index, or IPCA).

We generally do not utilize derivative instruments to manage our exposure to interest rate fluctuation. However, we continuously consider various forms of derivatives to reduce our exposure to interest rate fluctuations and may utilize these financial instruments in the future.

The exchange rate risk to which we are exposed has greater impact on the balance sheet and derives principally from the incidence of non-*real* denominated obligations in our debt portfolio. With respect to the management of foreign exchange risks, we seek to identify them and treat them in an integrated analysis of natural protections (hedges), benefiting from the correlation between our income and expenses. For the short term, the management of our foreign exchange risk involves allocating our cash investments between the *real* and other foreign currencies. Our strategy, reevaluated annually in the revision of the 2018-2022 Plan, may also involve the use of derivative financial instruments to hedge certain liabilities, minimizing foreign exchange rate risk exposure, especially when we are exposed to a foreign currency in which no cash inflows are expected, for example, Pound Sterling.

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We have designated cash flow hedging relationships to reflect the economic essence of the structural hedge mechanism between dollar-denominated debt and future sales revenues. See Item 5. Operating and Financial Review and Prospects Inflation and Exchange Rate Variation and Notes 4.3.6 and 33.2(a) to our audited consolidated financial statements for further information about our cash flow hedge.

See Note 33 to our audited consolidated financial statements for more information about our interest rate and exchange rate risks, including a sensitivity analysis demonstrating the potential impact of a 25% (or 50%) adverse change in the underlying variables as of December 31, 2017.

For further information regarding expected maturity schedule and currency, the principal and interest cash flows, related average interest rates of our debt obligations, credit risk and liquidity risk, see Notes 17 and 33.6 to our audited consolidated financial statements.

**Item 12. Description of Securities other than Equity Securities*****American Depositary Shares***

The Bank of New York Mellon is the Depositary for both of our common and preferred ADSs. In its capacity as Depositary, The Bank of New York Mellon will register and deliver the ADSs, each of which represents (i) two shares (or a right to receive two shares) deposited with the principal São Paulo office of Itaú Unibanco S.A., as custodian for the Depositary, and (ii) any other securities, cash or other property which may be held by the Depositary. The Depositary's corporate trust office at which the ADSs will be administered is located at 101 Barclay Street, 22 West, New York, New York 10286.

***Fees Payable by holders of our ADSs***

ADS holders are required to pay various fees to the Depositary, and the Depositary may refuse to provide any service for which a fee is assessed until the applicable fee has been paid.

ADS holders are required to pay the Depositary: (i) an annual fee of US\$0.02 (or less) per ADS for administering the ADR program, and (ii) amounts in respect of expenses incurred by the Depositary or its agents on behalf of ADS holders, including expenses arising from compliance with applicable law, taxes or other governmental charges, facsimile transmission, or conversion of foreign currency into U.S. dollars. In both cases, the depositary may decide in its sole discretion to seek payment by directly billing investors, by deducting the applicable amount from cash distributions or by charging the book-entry system accounts of ADS holders or their representatives. ADS holders may also be required to pay additional fees for certain services provided by the depositary, as set forth in the table below.

**Depositary service****Fee payable by ADS holders**

Issuance and delivery of ADSs, including issuances resulting from a distribution of shares or rights or other property	US\$5.00 per 100 ADSs (or portion thereof)
Distribution of dividends	US\$0.02 (or less) per ADS per year
Cancellation of ADSs for the purpose of withdrawal	US\$5.00 per 100 ADSs (or portion thereof)

***Fees Payable by the Depositary to Petrobras***

The Depositary reimburses us for certain expenses we incur in connection with the administration and maintenance of the ADR program. These reimbursable expenses comprise investor relations expenses, listing fees, legal fees and other expenses related to the administration and maintenance of the ADR program. In addition, the Depositary has agreed to provide us with an additional reimbursement per annum equal to 80% of the dividend fee collected by the Depositary. For the year ended December 31, 2017, the gross aggregate amount of such reimbursements was approximately US\$15 million.

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**PART II**

**Item 13. Defaults, Dividend Arrearages and Delinquencies**

None.

**Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds**

None.

**Item 15. Controls and Procedures**

**Disclosure Controls and Procedures**

We have evaluated, with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of December 31, 2017. Based on our evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective to provide reasonable assurance that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act was being recorded, processed, summarized and reported within the time periods specified in the applicable rules and forms, and that it was accumulated for and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding the required disclosure.

**Management Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for assessing the effectiveness of internal control over financial reporting.

Our internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and our Chief Financial Officer, and effected by our board of directors, management and other employees, and is designed to provide reasonable assurances regarding the reliability of financial reporting and of the preparation of our consolidated financial statements for external purposes, in accordance with IFRS, as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with our policies or procedures may deteriorate.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2017, based upon the criteria established in *Internal Controls Integrated Framework* (2013), issued by the Committee of Sponsoring Organizations of Treadway Commission (COSO). Based on this assessment and criteria, our management has concluded that our internal control over financial reporting was effective as of December 31, 2017.

**Remediation Activities related to Material Weaknesses in Internal Control over Financial Reporting as of December 31, 2016**

During our management's assessment of internal control over financial reporting as of December 31, 2016, our management identified certain material weaknesses. A material weakness is a deficiency, or a combination of

deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement in our annual or interim consolidated financial statements will not be prevented or detected on timely basis.

With the support of our audit committee, we took significant measures to successfully remediate the material weaknesses reported in our annual report on Form 20-F for prior fiscal years, as described below. As a result, our management's assessment of internal control over financial reporting as of December 31, 2017 did not identify any material weaknesses.

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***Remediation Activities related to Property, Plant and Equipment***

During 2017, we improved our procedures to analyze on a timely basis situations, in which our contractors and suppliers could possibly be in default, or be facing adverse economic and financial conditions, in particular with respect to advances granted to suppliers. Furthermore, we reviewed our internal control over financial reporting to enhance our procedures and strengthen controls related to the dissolution of contracts in service with suppliers.

Based upon the measures adopted and tests performed on internal control over financial reporting, our management concluded that this deficiency was remediated as of December 31, 2017.

***Remediation Activities related to System Access Management and Segregation of Duties in Business and Information Technology Processes***

During 2017, in addition to the actions and controls implemented in prior years, we performed measures to remedy control deficiencies, including improvement of procedures and automation in the management of access to users in the ERP environment. Our remediation actions included the following:

Review of our risk evaluation methodology related to the ERP access control environment, intending to implement a process of risk assessment of segregation of duties and critical access to systems, which were evaluated by the respective managers regarding transactions, authorization objects and values. This review included our Risk Management, Compliance, IT Security and Business areas. We put in place rules for risk classification (critical, high, medium or low) that consider probability of occurrence and possible impacts. With this new process, such evaluation is carried out continuously, throughout the year, in order to detect any new risks and possible changes in our business environment;

Reduction of the number of conflicting profiles associated with critical risks of segregation of duties. As a result of this effort, we achieved relevant reductions in conflicts, and significantly reduced our exposure to these risks;

Redesign of the monitoring controls in order to analyze the reason for the materializations of segregation of duties throughout the entire year;

Implementation of interfaces between ERP and the access control systems for some non-ERP critical systems;

Redesign of preventive controls in order to improve the rules of different levels of approval to grant critical access and conflicting systems profiles; and

Continuous improvement in the quality of guidance, training and assistance to those responsible for monitoring and reviewing risks associated with the segregation of duties and critical access.

Our management recognized that the actions taken to remedy the material weakness of access restriction and segregation of duties represent an improvement in the mitigation of risks and in the control environment over this process. Due to the changes implemented, our management determined that our environment has reached the maturity required to conclude that the material weakness was remedied as of December 31, 2017.

*Remediation Activities related to Calculation of Net Actuarial Liabilities*

During 2017, in response to material weaknesses related to actuarial liabilities, we improved our internal control over the healthcare plan (AMS) and pension plan (Petros) databases as follows:

Enhancement of internal controls, focusing on analysis and revision of information stored in the database;

Implementation of procedures to improve the reliability of information arising from the AMS and Petros systems; and

Re-registration of AMS participants that are manually billed.

In our supervisory role with respect to the pension plan assets managed by Fundação Petros, we accessed information from them and periodically evaluated it, through the Petros Executive Committee, analyzing matters related to the supervision process of Fundação Petros. These actions improved the control environment of Fundação Petros, with the objective of preserving our interests as a sponsor.

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Based upon the measures adopted, our management concluded that the actions implemented represented an improvement in the mitigation of risks in the control environment over this process and concluded that this deficiency was remediated as of December 31, 2017.

### **Audit of the Effectiveness of Internal Control over Financial Reporting**

Our independent registered public accounting firm, KPMG Auditores Independentes, has audited the effectiveness of our internal control over financial reporting, as stated in their report as of December 31, 2017, which is included herein.

### **Changes in Internal Control over Financial Reporting**

Except as described above, there were no changes in our internal control over financial reporting during the fiscal year 2017, which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

### **Item 16A. Audit Committee Financial Expert**

We have an Audit Committee that complies with the requirements of the Sarbanes-Oxley Act of 2002. Mr. Jerônimo Antunes is our Audit Committee financial expert and is independent, as defined in 17 CFR 240.10A-3.

### **Item 16B. Code of Ethics**

Our business and our relations with third parties are guided by ethical principles. In 1998, our board of executive officers approved the Petrobras Code of Ethics, which was extended to all Petrobras subsidiaries, and which in 2002 was renamed to Code of Ethics for the Petrobras Group.

In 2006, after undergoing a revision process with wide participation from our business segments, employees and subsidiaries, the current version of the Code of Ethics was approved by the board of executive officers and the board of directors. The Code of Ethics is applicable to our workforce, executive officers and board of directors. It is a v a i l a b l e o n o u r w e b s i t e a t <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/code-ethics>.

Our executive officers further developed our ethics management through the creation of the Petrobras Ethics Commission in 2008 which has since become responsible for promoting corporate compliance with ethical principles, as well as acting as a forum for discussion of subjects related to ethics.

Our Ethics Commission is composed of employees appointed after an internal selective process of interviews and résumé review. Each appointment is approved by our board of directors, which our Ethics Commission is responsible for orienting, instructing and ensuring compliance with our ethical principles and codes of conduct. Our Ethics Commission also serves in a consulting capacity for our management and workforce, providing recommendations with respect to topics related to ethics management, proposing the creation of new rules for the incorporation of new concepts, and adopting measures to comply with legislation and follow best practices that reinforce the zero tolerance policy applicable to misconducts.

In connection with our compliance programs, in July 2013, our board of executive officers approved our Corruption Prevention Program (*Programa Petrobras de Prevenção da Corrupção* PPPC), which is focused on the prevention, detection and penalization of acts of fraud and corruption committed against Petrobras. The program is managed



across areas of Petrobras, and is designed to improve our governance structure and operational accountability and to foster our commitment to good governance. This program is currently managed by our Governance and Compliance Department. A copy of our Corruption Prevention Program Manual is available on our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobras-corruption-prevention-program>. The information included on this website is not incorporated by reference herein.

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In November 2014, our board of executive officers also approved our Conduct Guide, which contains the guidelines to implement the Code of Ethics for the Petrobras Group (Code of Ethics) and other internal regulations. Our Conduct Guide establishes the basic rules for ethical behavior and professional conduct to be adopted within our company. A copy of our Conduct Guide is available on our website at <http://www.investidorpetrobras.com.br/en/corporate-governance/governance-instruments/petrobrasu-guide-ethical-conduct>. In February 2015, our procurement guidelines were amended to subject all of our suppliers and service providers to our Conduct Guide.

In December 2016, after undergoing a revision process, it was renamed as the Conduct Guide for the Petrobras Group, and our board of executive officers and our board of directors approved the current version of the Conduct Guide.

In March 2017, our Ethics Commission promoted training for the members of our board of directors and our board of executive officers on ethics management. In May 2017, our compliance area promoted training for the members of our board of directors and our executive board and for the executive managers about the PPPC and specifically related to conflicts of interest.

From June to December 2017, members of our workforce, including our senior management, had the opportunity to conduct e-learning, promoted by the Ethics Commission, with situations based on real examples, addressing ethical principles and standards of conduct, focused on behaviors that reflect everyday situations at work and the most appropriate way of dealing with them. The initiative was implemented to reinforce the culture of ethics in the company.

**Item 16C. Principal Accountant Fees and Services****Audit and Non-Audit Fees**

The following table sets forth the fees billed to us by our principal accountant KPMG during the fiscal year ended December 31, 2017:

	<b>2017</b> <b>(US\$ million)</b>
Audit fees	7.2
Audit-related fees	2.4
Tax fees	0.3
<b>Total fees</b>	<b>7.9</b>

The total fees presented in the above table comprises fees billed by KPMG as our principal accountant amounting to US\$7.8 million, and by PwC as our predecessor accountant.

Audit fees comprise fees billed in connection with the audit of our annual financial statements (IFRS and Brazilian GAAP), interim reviews (IFRS and Brazilian GAAP), audits of our subsidiaries (IFRS and Brazilian GAAP, among others), comfort letters, consents and review of periodic documents filed with the SEC. In 2017, audit fees billed by KPMG include US\$1.1 million related to the audit of internal controls.

Audit-related fees refer to assurance and related services that are reasonably related to the performance of the audit or reviews of our financial statements and are not reported under audit fees.

Tax fees are fees billed for services related to tax compliance reviews conducted in connection with the audit procedures on the financial statements.

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### **Audit Committee Approval Policies and Procedures**

As provided in our bylaws, our board of directors is responsible for deciding, among other matters the appointment and dismissal of independent auditors. Our Audit Committee has the authority to recommend pre-approval policies and procedures to our board of directors for the engagement of our independent auditor's services. At present, our board of directors has decided not to establish such pre-approval policies and procedures for matters within its competence. Our board of directors expressly approves, in cases within its competence, the engagement of our independent auditors for services provided to our subsidiaries or to us. Our bylaws prohibit our independent auditor from providing consulting services to us during the term of such audit's contract.

### **Item 16D. Exemptions from the Listing Standards for Audit Committees**

Under the listed company audit committee rules of the NYSE and the SEC, we must comply with Exchange Act Rule 10A-3, which requires that we establish an audit committee, composed of members of the board of directors, that meets specified requirements. In reliance on the exemption in Rule 10A-3(b)(iv)(E), we have designated one member to our Audit Committee, Jerônimo Antunes, who is a designee of the Brazilian federal government, which is our controlling shareholder and therefore one of our associates. In our assessment, Mr. Antunes acts independently in performing the responsibilities of an audit committee member under the Sarbanes-Oxley Act and satisfies the other requirements of Exchange Act Rule 10A-3.

### **Item 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers**

During the fiscal year ended December 31, 2017, neither any affiliated purchaser, as defined in Rule 10b-18(a)(3) under the Securities Exchange Act, nor we have purchased any of our equity securities.

### **Item 16F. Change in Registrant's Certifying Accountant**

Not applicable.

### **Item 16G. Corporate Governance**

#### **Comparison of Petrobras Corporate Governance Practices with NYSE Corporate Governance Requirements Applicable to U.S. Companies**

Under the rules of the NYSE, foreign private issuers are subject to a more limited set of corporate governance requirements than U.S. domestic issuers. As a foreign private issuer, we must comply with four principal NYSE corporate governance rules: (i) we must satisfy the requirements of Exchange Act Rule 10A-3; (ii) our Chief Executive Officer must promptly notify the NYSE in writing after any executive officer becomes aware of any material non-compliance with the applicable NYSE corporate governance rules; (iii) we must provide the NYSE with annual and interim written affirmations as required under the NYSE corporate governance rules; and (iv) we must provide a brief description of any significant differences between our corporate governance practices and those followed by U.S. companies under NYSE listing standards.

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The table below briefly describes the significant differences between our corporate governance practices and the NYSE corporate governance rules.

<b>New York Stock Exchange Corporate Governance</b>		
<b>Section</b>	<b>Rules for U.S. Domestic Issuers</b>	<b>Petrobras Practices</b>
<b>Director Independence</b>		
303A.01	Listed companies must have a majority of independent directors.  Controlled companies are not required to comply with this requirement.	Petrobras is a controlled company because more than a majority of its voting power is controlled by the Brazilian federal government. As a controlled company, Petrobras would not be required to comply with the majority of independent directors requirement if it were a U.S. domestic issuer. According to our bylaws, we are required to have at least 30% of independent directors.
303A.03	The non-management directors of each listed company must meet at regularly scheduled executive sessions without management.	With the exception of the CEO of the company (who is also a director), all of Petrobras directors are non-management directors. The regulation of Petrobras board of directors provides that if a particular matter may represent a conflict of interests, the CEO must recuse himself from the meeting, which will continue without his presence.
<b>Nominating/Corporate Governance Committee</b>		
303A.04	Listed companies must have a nominating/corporate governance committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties.  Controlled companies are not required to comply with this requirement.	Petrobras has a statutory committee that verifies the compliance of the appointment of members of the Fiscal Council, the Executive Board, and the Board of Directors of Petrobras and the external members of the committees that advise our board of directors. The nominating committee has a written charter that requires the majority of its members to be independent.

Petrobras board of directors develops, evaluates and approves corporate governance principles. As a controlled company, Petrobras would not be required to comply with the nominating/corporate governance committee requirement if it were a U.S. domestic issuer.

### Compensation Committee

303A.05

Listed companies must have a compensation committee composed entirely of independent directors, with a written charter that covers certain minimum specified duties.

Controlled companies are not required to comply with this requirement.

Petrobras has a committee that advises the board of directors with respect to compensation and management succession. The Compensation Committee has a written charter that requires the majority of its members to be independent.

As a controlled company, Petrobras would not be required to comply with the compensation committee requirement if it were a U.S. domestic issuer.

**Table of Contents****New York Stock Exchange Corporate  
Governance**

<b>Section</b>	<b>Rules for U.S. Domestic Issuers</b>	<b>Petrobras Practices</b>
	<b>Audit Committee</b>	
303A.06	Listed companies must have an audit committee with a minimum of three independent directors that satisfy the independence requirements of Rule 10A-3 under the Exchange Act, with a written charter that covers certain minimum specified duties.	Petrobras Audit Committee is a statutory advisory committee to the board of directors and is composed of members that satisfy the independence requirements set forth in Rule 10A-3 under the Exchange Act. The Audit Committee has a written charter that sets forth its responsibilities that include, among other things: (i) strengthening ties with the external auditors, permitting closer supervision of their work and of issues regarding their competency and independence, (ii) assuring legal and regulatory compliance, including with respect to internal controls, compliance procedures and ethics, and (iii) monitoring the financial position of the company, especially as to risks, internal auditing work and financial disclosure.
303A.07		
	<b>Equity Compensation Plans</b>	
303A.08	Shareholders must have the opportunity to vote for compensation plans through shares and material reviews, with limited exceptions as set forth by the NYSE's rules.	Under the Brazilian Corporate Law, shareholder approval is required for the adoption and revision of any equity compensation plans. Petrobras does not currently have any equity compensation plans.
	<b>Corporate Governance Guidelines</b>	
303A.09	Listed companies must adopt and disclose corporate governance guidelines.	Petrobras has a set of Corporate Governance Guidelines ( <i>Diretrizes de Governança Corporativa</i> ) that address director qualification standards, responsibilities, compensation, orientation, appraisals and access to information by the management. The guidelines do not reflect the independence requirements set forth in Sections 303A.01 and 303A.02 of the NYSE rules. Certain portions of the guidelines,

including the responsibilities and compensation sections, are not discussed with the same level of detail set forth in the commentaries to the NYSE rules. The guidelines are available on Petrobras website.

**Code of Ethics for Directors, Officers and Employees**

303A.10 Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers.

Petrobras has a Code of Ethics (*Código de Ética*) and a Conduct Guide (*Guia de Conduta*), applicable to its directors, executive officers, senior management, employees, interns and service providers within the Petrobras Group, and a Code of Good Practices (*Código de Boas Práticas*) applicable to its directors, executive officers, senior management, employees and collaborators. No waivers of the provisions of the Code of Ethics, Conduct Guide or Code of Good Practices are permitted. These documents are available on Petrobras website.



**Table of Contents****New York Stock Exchange Corporate  
Governance****Section Rules for U.S. Domestic Issuers Petrobras Practices****Certification Requirements**

303A.12	Each listed company CEO must certify to the NYSE each year that he or she is not aware of any violation by the company of NYSE corporate governance listing standards.	Our CEO will promptly notify the NYSE in writing if any executive officer becomes aware of any material noncompliance with any applicable provisions of the NYSE corporate governance rules.
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**Item 16H. Mine Safety Disclosure**

Not applicable.

**PART III****Item 17. Financial Statements**

Not applicable.

**Item 18. Financial Statements**

See pages F-2 through F-132, incorporated herein by reference.

Pursuant to Rule 3-09 of Regulation S-X, we are required to file financial statements of our investee Braskem S.A. in this annual report. We plan to do so in an amendment to this annual report, as permitted by Rule 3-09, unless we receive a waiver to such requirement.

**Item 19. Exhibits**

<b>No.</b>	<b>Description</b>
1.1	<u>Amended Bylaws of Petróleo Brasileiro S.A.-Petrobras, dated as of December 15, 2017</u>
2.1	<u>Indenture, dated as of July 19, 2002, between Petrobras International Finance Company and JPMorgan Chase Bank, as Trustee (incorporated by reference to Exhibit 4.5 of the Registration Statement of Petrobras International Finance Company and Petrobras on Form F-3, filed with the Securities and Exchange Commission on July 5, 2002, and amendments to which were filed on July 19, 2002 and August 14, 2002 (File Nos. 333-92044 and 333-92044-01)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000095013002005170/dex45.txt">https://www.sec.gov/Archives/edgar/data/1119639/000095013002005170/dex45.txt</a>.</u>
2.2	<u>Indenture, dated as of December 15, 2006, between Petrobras International Finance Company and The Bank of New York, as Trustee (incorporated by reference to Exhibit 4.9 to the Registration Statement of Petrobras and Petrobras International Finance Company on Form F-3, filed with the Securities and Exchange Commission on December 18, 2006 (File Nos. 333-139459 and 333-139459-01)) and available at:</u>

<https://www.sec.gov/Archives/edgar/data/1119639/000095012306015330/y28071exv4w9.htm>.

- 2.3 Amended and Restated Fifth Supplemental Indenture, initially dated as of October 6, 2006, as amended and restated as of February 7, 2007, as amended and restated as of March 31, 2010, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon (as successor to JPMorgan Chase Bank), as Trustee, relating to the 6.125% Global Notes due 2016 (incorporated by reference to Exhibit 2.14 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit214.htm>.
- 2.6 Third Supplemental Indenture, dated as of October 30, 2009, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.75% Global Notes due 2020 (incorporated by reference to Exhibit 2.35 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit235.htm>.

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No.	Description
2.7	<u>Fourth Supplemental Indenture, dated as of October 30, 2009, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.875% Global Notes due 2040 (incorporated by reference to Exhibit 2.36 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit236.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit236.htm</a>.</u>
2.8	<u>Guaranty for the 5.75% Global Notes due 2020, dated as of October 30, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.37 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit237.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit237.htm</a>.</u>
2.9	<u>Guaranty for the 6.875% Global Notes due 2040, dated as of October 30, 2009, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.38 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit238.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit238.htm</a>.</u>
2.10	<u>Amended and Restated First Supplemental Indenture, initially dated as of November 1, 2007, as amended and restated as of January 11, 2008, as amended and restated as of March 31, 2010, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.875% Global Notes due 2018 (incorporated by reference to Exhibit 2.15 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 20, 2010 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit215.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281410001665/exhibit215.htm</a>.</u>
2.11	<u>Assignment Agreement, dated as of September 3, 2010, among Petrobras, the Brazilian federal government and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to Exhibit 2.47 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on May 26, 2011 (File Nos. 001-15106 and 001-33121)) and available here: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281411001552/exhibit247.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281411001552/exhibit247.htm</a>.</u>
2.12	<u>Eighth Supplemental Indenture, dated as of December 9, 2011, among Petrobras International Finance Company, Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as Principal Paying Agent and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg Paying Agent, relating to the 4.875% Global Notes due 2018 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 9, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex42.htm</a>.</u>
2.13	<u>Ninth Supplemental Indenture, dated as of December 9, 2011, among Petrobras International Finance Company, Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as Principal Paying Agent and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg Paying Agent, relating to the 5.875% Global Notes due 2022 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 9, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex45.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex45.htm</a>.</u>
2.14	

Guaranty for the 4.875% Global Notes due 2018, dated as of December 9, 2011, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 9, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex41.htm>.

- 2.15 Guaranty for the 5.875% Global Notes due 2022, dated as of December 9, 2011, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 9, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312511336528/d267683dex44.htm>.

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No.	Description
2.16	<u>Tenth Supplemental Indenture, dated as of December 12, 2011, among Petrobras International Finance Company, Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as Principal Paying Agent and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg Paying Agent, relating to the 6.250% Global Notes due 2026 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 12, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312511337940/d267680dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312511337940/d267680dex42.htm</a>.</u>
2.17	<u>Guaranty for the 6.250% Global Notes due 2026, dated as of December 12, 2011, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on December 12, 2011 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312511337940/d267680dex41.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312511337940/d267680dex41.htm</a>.</u>
2.18	<u>Amended and Restated Deposit Agreement, dated as of January 3, 2012, among Petrobras, The Bank of New York Mellon, as depository, and registered holders and beneficial owners from time to time of the ADSs, representing the common shares of Petrobras, and Form of ADR evidencing ADSs representing the common shares of Petrobras (incorporated by reference to Exhibit 2.1 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit21.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit21.htm</a>.</u>
2.19	<u>Amended and Restated Deposit Agreement, dated as of January 3, 2012, among Petrobras, The Bank of New York Mellon, as depository, and registered holders and beneficial owners from time to time of the ADSs, representing the preferred shares of Petrobras, and Form of ADR evidencing ADSs representing the preferred shares of Petrobras (incorporated by reference to Exhibit 2.2 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit22.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit22.htm</a>.</u>
2.20	<u>Amended and Restated Sixth Supplemental Indenture, dated as of February 6, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.375% Global Notes due 2021 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex42.htm</a>.</u>
2.21	<u>Amended and Restated Seventh Supplemental Indenture, dated as of February 6, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.750% Global Notes due 2041 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex45.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex45.htm</a>.</u>
2.22	<u>Twelfth Supplemental Indenture, dated as of February 6, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee, relating to the 3.500% Global Notes due 2017 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at:</u>

<https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex411.htm>.

- 2.23 Amended and Restated Guaranty for the 5.375% Global Notes due 2021, dated as of February 6, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex41.htm>.
- 2.24 Amended and Restated Guaranty for the 6.750% Global Notes due 2041, dated as of February 6, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex44.htm>.

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No.	Description
2.25	<u>Guaranty for the 3.500% Global Notes due 2017, dated as of February 6, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras and Petrobras International Finance Company, furnished to the Securities and Exchange Commission on February 6, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex410.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312512040841/d293114dex410.htm</a>.</u>
2.26	<u>Sixth Supplemental Indenture, dated as of February 10, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.11 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit211.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit211.htm</a>.</u>
2.27	<u>Thirteenth Supplemental Indenture, dated as of February 10, 2012, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.60 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit260.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit260.htm</a>.</u>
2.28	<u>Amended and Restated Guaranty for the 6.125% Global Notes due 2016, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.31 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit231.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit231.htm</a>.</u>
2.29	<u>Amended and Restated Guaranty for the 8.375% Global Notes due 2018, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.16 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit216.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit216.htm</a>.</u>
2.30	<u>Amended and Restated Guaranty for the 5.875% Global Notes due 2018, dated as of February 10, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 2.33 to the Annual Report on Form 20-F of Petrobras and Petrobras International Finance Company, filed with the Securities and Exchange Commission on April 2, 2012 (File Nos. 001-15106 and 001-33121)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit233.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412000786/exhibit233.htm</a>.</u>
2.31	<u>Indenture, dated as of August 29, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.3 to the Registration Statement of Petrobras, Petrobras International Finance Company and Petrobras Global Finance B.V. on Form F-3, filed with the Securities and Exchange Commission on August 29, 2012 (File Nos. 333-183618, 333-183618-01 and 333-183618-02)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412002203/exhibit4_3.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412002203/exhibit4_3.htm</a>.</u>
2.32	<u>Indenture, dated as of August 29, 2012, between Petrobras Global Finance B.V. and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.5 to the Registration Statement on Form F-3 of Petrobras, Petrobras International Finance Company and Petrobras Global Finance B.V., filed with the Securities and Exchange Commission on August 29, 2012 (File Nos. 333-183618, 333-183618-01 and 333-183618-02)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412002203/exhibit4_5.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412002203/exhibit4_5.htm</a>.</u>
2.33	

Second Supplemental Indenture, dated as of October 1, 2012, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 4.25% Global Notes due 2023 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4\\_5.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_5.htm).

2.34 Third Supplemental Indenture, dated as of October 1, 2012, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 5.375% Global Notes due 2029 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4\\_8.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_8.htm).



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No.	Description
2.35	<u>Guaranty for the 4.25% Global Notes due 2023, dated as of October 1, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_4.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_4.htm</a>.</u>
2.36	<u>Guaranty for the 5.375% Global Notes due 2029, dated as of October 1, 2012, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on October 1, 2012 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_7.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281412002356/exhibit4_7.htm</a>.</u>
2.37	<u>Amended and Restated Third Supplemental Indenture, initially dated as of December 10, 2003, as amended and restated as of March 31, 2010, and as further amended and restated as of March 25, 2013, among Petrobras International Finance Company, Petrobras and The Bank of New York Mellon (as successor to JPMorgan Chase Bank), as Trustee, relating to the 8.375% Global Notes due 2018 (incorporated by reference to Exhibit 2.41 to the Annual Report on Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 29, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413000928/exhibit_241.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413000928/exhibit_241.htm</a>.</u>
2.38	<u>Fourth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 2.000% Global Notes due 2016 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_2.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_2.htm</a>.</u>
2.39	<u>Sixth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 4.375% Global Notes due 2023 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_8.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_8.htm</a>.</u>
2.40	<u>Seventh Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 5.625% Global Notes due 2043 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_11.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_11.htm</a>.</u>
2.41	<u>Eighth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the Floating Rate Global Notes due 2016 (incorporated by reference to Exhibit 4.14 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_14.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_14.htm</a>.</u>
2.42	<u>Ninth Supplemental Indenture, dated as of May 20, 2013, between Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the Floating Rate Global Notes due 2019 (incorporated by reference to Exhibit 4.17 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_17.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_17.htm</a>.</u>
2.43	<u>Guaranty for the 2.000% Global Notes due 2016, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras,</u>

furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4\\_1.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_1.htm).

- 2.44 Guaranty for the 4.375% Global Notes due 2023, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4\\_7.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_7.htm).

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<b>No.</b>	<b>Description</b>
2.45	<u>Guaranty for the 5.625% Global Notes due 2043, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_10.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_10.htm</a>.</u>
2.46	<u>Guaranty for the Floating Rate Global Notes due 2016, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.13 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_13.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_13.htm</a>.</u>
2.47	<u>Guaranty for the Floating Rate Global Notes due 2019, dated as of May 20, 2013, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.16 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 20, 2013 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_16.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281413001223/exhibit4_16.htm</a>.</u>
2.48	<u>Production Sharing Agreement, dated as of December 2, 2013, among Petrobras, Shell Brasil Petróleo Ltda., Total E&amp;P do Brasil Ltda., CNODC Brasil Petróleo e Gás Ltda. and CNOOC Petroleum Brasil Ltda., the Brazilian federal government, Pré-Sal Petróleo S.A. PPSA and the National Petroleum, Natural Gas and Biofuels Agency (incorporated by reference to the Annual Report on Form 20-F of Petrobras, filed with the Securities and Exchange Commission on April 30, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414001060/pbraform20f_2013.htm#_Toc383779449">https://www.sec.gov/Archives/edgar/data/1119639/000129281414001060/pbraform20f_2013.htm#_Toc383779449</a>.</u>
<p>The amount of long-term debt securities of Petrobras authorized under any given instrument does not exceed 10% of its total assets on a consolidated basis. Petrobras hereby agrees to furnish to the SEC, upon its request, a copy of any instrument defining the rights of holders of its long-term debt or of its subsidiaries for which consolidated or unconsolidated financial statements are required to be filed.</p>	
2.49	<u>Tenth Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 2.750% Global Notes due 2018 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_2.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_2.htm</a>.</u>
2.50	<u>Eleventh Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 3.750% Global Notes due 2021 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_5.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_5.htm</a>.</u>
2.51	<u>Twelfth Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 4.750% Global Notes due 2025 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_8.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_8.htm</a>.</u>

- 2.52 Thirteenth Supplemental Indenture, dated as of January 14, 2014, among Petrobras Global Finance B.V., Petrobras, The Bank of New York Mellon, as Trustee, The Bank of New York Mellon, London Branch, as principal paying agent, and The Bank of New York Mellon (Luxembourg) S.A., as Luxembourg paying agent, relating to the 6.625% Global Notes due 2034 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4\\_11.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_11.htm).

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No.	Description
2.53	<u>Guaranty for the 2.750% Global Notes due 2018, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_1.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_1.htm</a>.</u>
2.54	<u>Guaranty for the 3.750% Global Notes due 2021, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_4.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_4.htm</a>.</u>
2.55	<u>Guaranty for the 4.750% Global Notes due 2025, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_7.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_7.htm</a>.</u>
2.56	<u>Guaranty for the 6.625% Global Notes due 2034, dated as of January 14, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 14, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_10.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000076/exhibit4_10.htm</a>.</u>
2.57	<u>Fourteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 3.250% Global Notes due 2017 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_02.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_02.htm</a>.</u>
2.58	<u>Fifteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 4.875% Global Notes due 2020 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_05.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_05.htm</a>.</u>
2.59	<u>Sixteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.250% Global Notes due 2024 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_08.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_08.htm</a>.</u>
2.60	<u>Seventeenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 7.250% Global Notes due 2044 (incorporated by reference to Exhibit 4.11 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_11.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_11.htm</a>.</u>
2.61	<u>Eighteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the Floating Rate Global Notes due 2017 (incorporated by reference to Exhibit 4.14 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_14.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_14.htm</a>.</u>
2.62	

Nineteenth Supplemental Indenture, dated as of March 17, 2014, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the Floating Rate Global Notes due 2020 (incorporated by reference to Exhibit 4.17 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4\\_17.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_17.htm).

- 2.63 Guaranty for the 3.250% Global Notes due 2017, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4\\_01.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_01.htm).

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No.	Description
2.64	<u>Guaranty for the 4.875% Global Notes due 2020, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_04.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_04.htm</a>.</u>
2.65	<u>Guaranty for the 6.250% Global Notes due 2024, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.7 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_07.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_07.htm</a>.</u>
2.66	<u>Guaranty for the 7.250% Global Notes due 2044, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.10 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_10.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_10.htm</a>.</u>
2.67	<u>Guaranty for the Floating Rate Global Notes due 2017, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.13 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_13.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_13.htm</a>.</u>
2.68	<u>Guaranty for the Floating Rate Global Notes due 2020, dated as of March 17, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.16 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on March 17, 2014 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_16.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281414000596/exhibit4_16.htm</a>.</u>
2.69	<u>Seventh Supplemental Indenture, dated as of December 28, 2014, among Petrobras International Finance Company S.A., Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex41_0112.htm">https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex41_0112.htm</a>.</u>
2.70	<u>Fourteenth Supplemental Indenture, dated as of December 28, 2014, among Petrobras International Finance Company S.A., Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex42_0112.htm">https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex42_0112.htm</a>.</u>
2.71	<u>First Amendment to the Guaranties, dated as of December 28, 2014, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.3 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 15, 2015 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex43_0112.htm">https://www.sec.gov/Archives/edgar/data/1119639/000090342315000014/petrobras-6kex43_0112.htm</a>.</u>
2.72	<u>Twentieth Supplemental Indenture, dated as of June 5, 2015, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 6.850% Global Notes due 2115 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281415001448/exhibit4_2.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281415001448/exhibit4_2.htm</a>.</u>
2.73	

Guaranty for the 6.850% Global Notes due 2115, dated as of June 5, 2015, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on June 5, 2015 (File No. 001-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281415001448/exhibit4\\_1.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281415001448/exhibit4_1.htm).

- 2.74 Twenty-First Supplemental Indenture, dated as of May 23, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.375% Global Notes due 2021 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)) and available at: [https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4\\_2.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_2.htm).



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No.	Description
2.75	<u>Amended and Restated Twenty-First Supplemental Indenture, dated as of July 13, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.375% Global Notes due 2021 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_2.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_2.htm</a>.</u>
2.76	<u>Twenty-Second Supplemental Indenture, dated as of May 23, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.750% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_5.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_5.htm</a>.</u>
2.77	<u>Amended and Restated Twenty-Second Supplemental Indenture, dated as of July 13, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 8.750% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_5.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_5.htm</a>.</u>
2.78	<u>Twenty-Third Supplemental Indenture, dated as of January 17, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 6.125% Global Notes due 2022 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex42.htm</a>.</u>
2.79	<u>Twenty-Fourth Supplemental Indenture, dated as of January 17, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 7.375% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex45.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex45.htm</a>.</u>
2.80	<u>Guaranty for the 8.375% Global Notes due 2021, dated as of May 23, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_1.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_1.htm</a>.</u>
2.81	<u>Amended and Restated Guaranty for the 8.375% Global Notes due 2021, dated as of July 13, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_1.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_1.htm</a>.</u>
2.82	<u>Guaranty for the 8.750% Global Notes due 2026, dated as of May 23, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 23, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_4.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_4.htm</a>.</u>
2.83	<u>Amended and Restated Guaranty for the 8.750% Global Notes due 2026, dated as of July 13, 2016, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on July 13, 2016 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_4.htm">https://www.sec.gov/Archives/edgar/data/1119639/000129281416004816/exhibit4_4.htm</a>.</u>

[https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4\\_4.htm](https://www.sec.gov/Archives/edgar/data/1119639/000129281416005278/exhibit4_4.htm).

- 2.84 Guaranty for the 6.125% Global Notes due 2022, dated as of January 17, 2017, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex41.htm>.
- 2.85 Guaranty for the 7.375% Global Notes due 2027, dated as of January 17, 2017, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.4 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on January 17, 2017 (File No. 01-15106)) and available at: <https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex44.htm>.

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No.	Description
2.86	<u>Eighth Supplemental Indenture, dated as of July 13, 2016, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 8.375% Global Notes due 2018 (incorporated by reference to Exhibit 2.90 to Form 20-F, furnished to the Securities and Exchange Commission on April 27, 2017 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517140235/d375139dex290.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517140235/d375139dex290.htm</a>.</u>
2.87	<u>Second Amendment to the Guaranty, dated as of July 13, 2016, between Petrobras and The Bank of New York Mellon, as Trustee, relating to the 8.375% Global Notes due 2018 (incorporated by reference to Exhibit 2.91 to Form 20-F of Petrobras, furnished to the Securities and Exchange Commission on April 27, 2017 (File No. 001-15106)) and available at <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517140235/d375139dex291.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517140235/d375139dex291.htm</a>.</u>
2.88	<u>Amended and Restated Twenty-Third Supplemental Indenture, dated as of January 17, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 6.125% Global Notes due 2022 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517011044/d268745dex42.htm</a>.</u>
2.89	<u>Amended and Restated Twenty-Fourth Supplemental Indenture, dated as of May 22, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 7.375% Global Notes due 2027 (incorporated by reference to Exhibit 4.5 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517177810/d384099dex45.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517177810/d384099dex45.htm</a>.</u>
2.90	<u>Amended and Restated Seventeenth Supplemental Indenture, dated as of May 22, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as Trustee, relating to the 7.250% Global Notes due 2044 (incorporated by reference to Exhibit 4.8 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on May 22, 2017 (File No. 01-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312517177810/d384099dex48.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312517177810/d384099dex48.htm</a>.</u>
2.91	<u>Indenture, dated as of September, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as trustee, relating to the 5.299% Global Notes due 2025.</u>
2.92	<u>Indenture, dated as of September, 2017, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, as trustee, relating to the 5.999% Global Notes due 2028.</u>
2.93	<u>Twenty-Fifth Supplemental Indenture, dated as of February 1, 2018, among Petrobras Global Finance B.V., Petrobras and The Bank of New York Mellon, relating to the 5.750% Global Notes due 2029 (incorporated by reference to Exhibit 4.2 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on February 1, 2018 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312518028743/d526818dex42.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312518028743/d526818dex42.htm</a>.</u>
2.94	<u>Guaranty for the 5.750% Global Notes due 2029, dated as of February 1, 2018, between Petrobras and The Bank of New York Mellon, as Trustee (incorporated by reference to Exhibit 4.1 to Form 6-K of Petrobras, furnished to the Securities and Exchange Commission on February 1, 2018 (File No. 001-15106)) and available at: <a href="https://www.sec.gov/Archives/edgar/data/1119639/000119312518028743/d526818dex41.htm">https://www.sec.gov/Archives/edgar/data/1119639/000119312518028743/d526818dex41.htm</a>.</u>
4.1	Form of Concession Agreement for Exploration, Development and Production of crude oil and natural gas executed between Petrobras and the ANP (incorporated by reference to Exhibit 10.1 of Petrobras's Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)). This was a paper filing, and is not available on the SEC website.

- 4.2 Purchase and Sale Agreement of natural gas, executed between Petrobras and Yacimientos Petroliferos Fiscales Bolivianos-YPFB (together with and English version) (incorporated by reference to Exhibit 10.2 to Petrobras' s Registration Statement on Form F-1 filed with the Securities and Exchange Commission on July 14, 2000 (File No. 333-12298)). This was a paper filing, and is not available on the SEC website.

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8.1	<u>List of subsidiaries.</u>
12.1	<u>Certifications Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
13.1	<u>Certifications Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
15.1	<u>Consent letter of KPMG.</u>
15.2	<u>Consent Letter of PwC.</u>
15.3	<u>Consent letter of DeGolyer and MacNaughton.</u>
99.1	<u>Third Party Reports of DeGolyer and MacNaughton.</u>
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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**SIGNATURES**

The registrant hereby certifies that it meets all the requirements for filing on Form 20-F and has duly caused this annual report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Rio de Janeiro, on April 18, 2018.

Petróleo Brasileiro S.A. PETROBRAS

By: /s/ Pedro Pullen Parente

Name: Pedro Pullen Parente

Title: Chief Executive Officer

By: /s/ Ivan de Souza Monteiro

Name: Ivan de Souza Monteiro

Title: Chief Financial Officer and Chief Investor

Relations Officer

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***FINANCIAL***

***STATEMENTS***

*December 31, 2017, 2016 and 2015*

*with report of independent registered*

*public accounting firm*

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KPMG Auditores Independentes

Rua do Passeio, 38 - Setor 2 - 17º andar - Centro

20021-290 - Rio de Janeiro/RJ - Brasil

Caixa Postal 2888 - CEP 20001-970 - Rio de Janeiro/RJ - Brasil

Telefone +55 (21) 2207-9400, Fax +55 (21) 2207-9000

www.kpmg.com.br

**Report of Independent Registered Public Accounting Firm**

The Shareholders and Board of Directors of

Petróleo Brasileiro S.A. - Petrobras

Rio de Janeiro - RJ

***Opinions on the Consolidated Financial Statements and Internal Control Over Financial Reporting***

We have audited the accompanying consolidated statement of financial position of Petroleo Brasileiro S.A. - Petrobras and subsidiaries (the Company) as of December 31, 2017, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the year then ended, and the related notes (collectively, the consolidated financial statements). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and the results of its operations and its cash flows for the year then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

***Estimates related to overpayments on the acquisition of property plant and equipment***

As discussed in Note 3 to the financial statements, on September 30, 2014, the Company wrote off US\$2,527 million of overpayments on the acquisition of property plant and equipment incorrectly capitalized according to testimony obtained from Brazilian criminal investigations. The note also describes that no additional information has been identified through this date which could materially impact the estimation methodology adopted for the write off previously recorded.

***Basis for Opinion***

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits. 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 audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

KPMG Auditores Independentes, uma sociedade simples brasileira e firma-membro da rede KPMG de firmas-membro independentes e afiliadas à KPMG International Cooperative (KPMG International), uma entidade suíça.

*KPMG Auditores Independentes, a Brazilian entity and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (KPMG International), a Swiss entity.*

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Our audit of the consolidated financial statements 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control Over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG Auditores Independentes

We have served as the Company's auditor since 2017.

Rio de Janeiro

March 14, 2018

KPMG Auditores Independentes, uma sociedade simples brasileira e firma-membro da rede KPMG de firmas-membro independentes e afiliadas à KPMG International Cooperative ( KPMG International ), uma entidade suíça.

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**Report of Independent Registered Public Accounting Firm**

The Shareholders and Board of Directors of

Petróleo Brasileiro S.A. - Petrobras

In our opinion, the accompanying consolidated statement of financial position as of December 31, 2016 and the related consolidated statements of income, comprehensive income, cash flows and changes in shareholders' equity for each of the two years in the period ended December 31, 2016 present fairly, in all material respects, the financial position of Petróleo Brasileiro S.A. - Petrobras and its subsidiaries (the Company) at December 31, 2016, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2016, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 3 to the financial statements, in 2014, the Company wrote off US\$ 2,527 million of overpayments on the acquisition of property plant and equipment incorrectly capitalized according to testimony obtained from Brazilian criminal investigations.

/s/ PricewaterhouseCoopers

Auditores Independentes

Rio de Janeiro, Brazil

April 26, 2017

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### **Petróleo Brasileiro S.A. Petrobras**

Management Report on Internal Control over Financial Reporting

#### **Management Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting and for assessing the effectiveness of internal control over financial reporting.

Our internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and our Chief Financial Officer, and effected by our board of directors, management and other employees, and is designed to provide reasonable assurance regarding the reliability of financial reporting and of the preparation of our consolidated financial statements for external purposes, in accordance with IFRS, as issued by the IASB.

Due to its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with our policies or procedures may deteriorate.

Our management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2017, based upon the criteria established in Internal Controls – Integrated Framework (2013), issued by the Committee of Sponsoring Organizations of Treadway Commission (COSO). Based on this assessment and criteria, our management has concluded that our internal control over financial reporting was effective as of December 31, 2017.

#### **Remediation activities related to material weaknesses in internal control over financial reporting as of December 31, 2016**

During our management's assessment of internal control over financial reporting as of December 31, 2016, our management identified certain material weaknesses. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement in our annual or interim consolidated financial statements will not be prevented or detected on timely basis.

We took significant measures to successfully remediate the material weaknesses reported in our Management Report on Internal Control over Financial Reporting for prior fiscal years, as described below. As a result, our management's assessment of internal control over financial reporting as of December 31, 2017 did not identify any material weaknesses.

#### **Remediation activities related to Property, Plant and Equipment**

During 2017, we improved our procedures to analyze on a timely basis possible situations of contractors and suppliers in default, or facing adverse economic and financial conditions, in particular with respect to advances granted to suppliers. Furthermore, we reviewed our internal control over financial reporting to enhance our procedures and strengthen controls related to the dissolution of contracts in service with suppliers.

Based upon the measures adopted and tests performed on internal control over financial reporting, our management concluded that this deficiency was remediated as of December 31, 2017.

**Remediation activities related to System Access Management and Segregation of Duties in Business and Information Technology Processes**

In 2017, in addition to the actions and controls implemented in prior years, we performed measures to remedy control deficiencies, including improvement of procedures and automation in the management of access to users in the ERP environment. Our remediation actions included the following:

Review of our risk evaluation methodology related to the ERP access control environment, intending to implement a process of risk assessment of segregation of duties and critical access to systems, which were evaluated by the respective managers regarding transactions, authorization objects and values. This review included our Risk Management, Compliance, IT Security and Business areas. We put in place rules for risk classification (critical, high, medium or low) that consider probability of occurrence and possible impacts. With this new process, such evaluation is carried out continuously, throughout the year, in order to detect any new risks and possible changes in our business environment;

Reduction of the number of conflicting profiles associated with critical risks of segregation of duties. As a result of this effort, we achieved relevant reductions in conflicts, and significantly reduced our exposure to these risks;

Redesign of the monitoring controls in order to analyze the reason for the materializations of segregation of duties throughout the entire year;

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### **Petróleo Brasileiro S.A. Petrobras**

#### **Management Report on Internal Control over Financial Reporting**

Implementation of interfaces between ERP and the access control systems for some non-ERP critical systems;

Redesign of preventive controls in order to improve the rules of different levels of approval to grant critical access and conflicting systems profiles; and

Continuous improvement in the quality of guidance, training and assistance to those responsible for monitoring and reviewing risks associated with the segregation of duties and critical access.

Our management recognized that the actions taken to remedy the material weakness of access restriction and segregation of duties represent an improvement in the mitigation of risks and in the control environment over this process. Due to the changes implemented, our management concluded that our environment has reached the maturity required to conclude that the material weakness was remedied as of December 31, 2017.

#### **Remediation activities related to Calculation of Net Actuarial Liabilities**

In 2017, in response to material weaknesses related to actuarial liabilities, we improved our internal control over the healthcare plan (AMS) and pension plan (Petros) databases as follows:

Enhancement of internal controls, focusing on analysis and revision of information stored in the database;

Implementation of procedures to improve the reliability of information arising from the AMS and Petros systems; and

Re-registration of AMS participants that are manually billed.

In our supervisory role with respect to the pension plan assets managed by Fundação Petros, we accessed information from them and periodically evaluated it, through the Petros Executive Committee, analyzing matters related to the supervision process of Fundação Petros. These actions improved the control environment of Fundação Petros, with the objective of preserving our interests as a sponsor.

Based upon the measures adopted, our management concluded that the actions implemented represented an improvement in the mitigation of risks in the control environment over this process and concluded that this deficiency was remediated as of December 31, 2017.

#### **Audit of the Effectiveness of Internal Control over Financial Reporting**



Our independent registered public accounting firm, KPMG Auditores Independentes, has audited the effectiveness of our internal control over financial reporting, as stated in their report as of December 31, 2017, which is included herein.

Pedro Pullen Parente

Chief Executive Officer

Ivan de Souza Monteiro

Chief Financial Officer and Chief Investor Relations Officer

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**Table of Contents****Petróleo Brasileiro S.A. Petrobras**

## Consolidated Statement of Financial Position

December 31, 2017 and 2016

*(Expressed in millions of US Dollars, unless otherwise indicated)*

<b>Assets</b>	<b>Note</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>Liabilities</b>	<b>Note</b>	<b>12.31.2017</b>	<b>12.31.2016</b>
<b>Current assets</b>				<b>Current liabilities</b>			
Cash and cash equivalents	7	22,519	21,205	Trade payables	16	5,767	5,762
Marketable securities	7	1,885	784	Finance debt	17	7,001	9,755
Trade and other receivables, net	8	4,972	4,769	Finance lease obligations	18.1	25	18
Inventories, net	9	8,489	8,475	Income taxes payable	21.1	299	127
Recoverable income taxes	21.1	479	602	Other taxes payable	21.1	4,548	3,628
Other recoverable taxes	21.1	1,958	1,900	Payroll and related charges		1,309	2,197
Advances to suppliers		78	166	Pension and medical benefits	22	844	820
Others		1,433	1,140	Provisions for legal proceedings	30.1	2,256	
		41,813	39,041	Others		2,508	2,104
Assets classified as held for sale	10.2	5,318	5,728			24,557	24,411
		47,131	44,769	Liabilities related to assets classified as held for sale	10.2	391	492
						24,948	24,903
<b>Non-current assets</b>				<b>Non-current liabilities</b>			
Long-term receivables				Finance debt	17	102,045	108,371
Trade and other receivables, net	8	5,175	4,551	Finance lease obligations	18.1	204	226
Marketable securities	7	64	90	Income taxes payable	21.1	671	
Judicial deposits	30.2	5,582	3,999	Deferred income taxes	21.5	1,196	263
Deferred income taxes	21.5	3,438	4,307	Pension and medical benefits	22	20,986	21,477

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Other tax assets	21.1	3,075	3,141	Provisions for legal proceedings	30.1	4,770	3,391
Advances to suppliers		1,032	1,148	Provision for decommissioning costs	20	14,143	10,252
Others		3,084	3,184	Others		901	550
		21,450	20,420			144,916	144,530
				Total liabilities		169,864	169,433
				<b>Equity</b>			
				Share capital (net of share issuance costs)	23.1	107,101	107,101
Investments	11	3,795	3,052	Capital transactions	23.2	1,067	628
Property, plant and equipment	12	176,650	175,470	Profit reserves	23.3	53,056	53,143
Intangible assets	13	2,340	3,272	Accumulated other comprehensive (deficit)	23.4	(81,422)	(84,093)
		204,235	202,214	Attributable to the shareholders of Petrobras		79,802	76,779
				Non-controlling interests		1,700	771
						81,502	77,550
Total assets		251,366	246,983	Total liabilities and equity		251,366	246,983

The notes form an integral part of these financial statements.

**Table of Contents****Petróleo Brasileiro S.A. Petrobras**

## Consolidated Statement of Income

December 31, 2017, 2016 and 2015

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	<b>Note</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Sales revenues	24	88,827	81,405	97,314
Cost of sales		(60,147)	(55,417)	(67,485)
<b>Gross profit</b>		<b>28,680</b>	<b>25,988</b>	<b>29,829</b>
Income (expenses)				
Selling expenses		(4,538)	(3,963)	(4,627)
General and administrative expenses		(2,918)	(3,319)	(3,351)
Exploration costs	15	(800)	(1,761)	(1,911)
Research and development expenses		(572)	(523)	(630)
Other taxes		(1,843)	(714)	(2,796)
Impairment of assets	14	(1,191)	(6,193)	(12,299)
Other income and expenses	25	(5,599)	(5,207)	(5,345)
		(17,461)	(21,680)	(30,959)
<b>Income before finance income (expense), results in equity-accounted investments and income taxes</b>		<b>11,219</b>	<b>4,308</b>	<b>(1,130)</b>
Finance income		1,047	1,053	1,412
Finance expenses		(7,395)	(6,958)	(6,437)
Foreign exchange gains (losses) and inflation indexation charges		(3,547)	(1,850)	(3,416)
<b>Net finance income (expense)</b>	<b>27</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(8,441)</b>
Results in equity-accounted investments	11.2	673	(218)	(177)
<b>Net income/(loss) before income taxes</b>		<b>1,997</b>	<b>(3,665)</b>	<b>(9,748)</b>
Income taxes	21.7	(1,828)	(684)	1,137
<b>Net income /(loss) for the year</b>		<b>169</b>	<b>(4,349)</b>	<b>(8,611)</b>
Net income /(loss) attributable to:				
Shareholders of Petrobras		(91)	(4,838)	(8,450)
Non-controlling interests		260	489	(161)

Net income /(loss) for the year		169	(4,349)	(8,611)
Basic and diluted earning (loss) per weighted-average of common and preferred share in U.S. dollars	23.6	(0.01)	(0.37)	(0.65)

The notes form an integral part of these financial statements.

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**Table of Contents****Petróleo Brasileiro S.A. Petrobras**

## Consolidated Statement of Comprehensive Income

December 31, 2017, 2016 and 2015

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Net income/(loss) for the year	169	(4,349)	(8,611)
Items that will not be reclassified to the statement of income:			
Actuarial gains (losses) on defined benefit pension plans	1,908	(5,296)	(53)
Deferred income tax	(273)	1,058	(14)
	1,635	(4,238)	(67)
Share of other comprehensive income (losses) in equity-accounted investments	(1)	(3)	(1)
Items that may be reclassified subsequently to the statement of income:			
Unrealized gains / (losses) on available-for-sale securities			
Recognized in equity	15		
Deferred income tax	(4)		
	11		
Unrealized gains / (losses) on cash flow hedge highly probable future exports			
Recognized in equity	(543)	10,779	(21,132)
Reclassified to the statement of income	3,154	2,841	2,057
Deferred income tax	(887)	(4,629)	6,486
	1,724	8,991	(12,589)
Unrealized gains on cash flow hedge others			
Recognized in equity	(5)	8	10
	(5)	8	10
Cumulative translation adjustments (*)			
Recognized in equity	(851)	9,529	(29,248)
Reclassified to the statement of income	37	1,457	
	(814)	10,986	(29,248)
Share of other comprehensive income in equity-accounted investments			
Recognized in equity	134	344	(860)
Reclassified to the statement of income	22		
	156	344	(860)
Total other comprehensive income/(loss):	2,706	16,088	(42,755)
Total comprehensive income/(loss)	2,875	11,739	(51,366)

Comprehensive income/(loss) attributable to:			
Shareholders of Petrobras	2,584	11,236	(51,209)
Non-controlling interests	291	503	(157)
<b>Total comprehensive income/(loss)</b>	<b>2,875</b>	<b>11,739</b>	<b>(51,366)</b>

(\*) Includes a loss of US\$ 49 (loss of US\$ 413 in 2016) of cumulative translation adjustments in associates and joint ventures.

The notes form an integral part of these financial statements.

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## Consolidated Statement of Cash Flows

December 31, 2017 and 2016

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	2017	2016	2015
<b>Cash flows from Operating activities</b>			
Net income/(loss) for the year	169	(4,349)	(8,611)
Adjustments for:			
Pension and medical benefits (actuarial expense)	2,726	2,304	1,960
Results in equity-accounted investments	(673)	218	177
Depreciation, depletion and amortization	13,307	13,965	11,591
Impairment of assets (reversal)	1,191	6,193	12,299
Exploratory expenditures write-offs	279	1,281	1,441
Gains and losses on disposals/write-offs of assets	(1,498)	(293)	758
Foreign exchange, indexation and finance charges	9,602	7,962	9,172
Deferred income taxes, net	467	(913)	(2,043)
Allowance (reversals) for impairment of trade and others receivables	708	1,131	941
Inventory write-down to net realizable value	66	343	431
Reclassification of cumulative translation adjustment and other comprehensive income	59	1,457	
Revision and unwinding of discount on the provision for decommissioning costs	425	(836)	382
Gain on remeasurement of investment retained with loss of control	(217)		
Provision for the class action agreement	3,449		
Decrease (Increase) in assets			
Trade and other receivables, net	(978)	(39)	(396)
Inventories	(336)	(518)	291
Judicial deposits	(1,671)	(986)	(789)
Other assets	(223)	(319)	(819)
Increase (Decrease) in liabilities			
Trade payables	(62)	(1,060)	(1,226)
Other taxes payable	2,952	1,047	1,628
Pension and medical benefits	(919)	(766)	(709)
Other liabilities	(912)	664	76
Income taxes paid	(799)	(372)	(567)
<b>Net cash provided by operating activities</b>	<b>27,112</b>	<b>26,114</b>	<b>25,987</b>
<b>Cash flows from Investing activities</b>			
Capital expenditures	(13,639)	(14,085)	(21,653)
Investments in investees	(75)	(125)	(108)
Proceeds from disposal of assets Divestment	3,091	2,205	224



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Divestment (Investment) in marketable securities	(861)	229	7,982
Dividends received	452	473	259
Net cash used in investing activities	(11,032)	(11,303)	(13,296)
<b>Cash flows from Financing activities</b>			
Investments by non-controlling interest	19	29	100
Proceeds from financing	27,075	18,897	17,420
Repayment of principal	(36,095)	(30,660)	(14,809)
Repayment of interest	(6,981)	(7,308)	(6,305)
Dividends paid to non-controlling interests	(167)	(72)	(74)
Proceeds from sale of interest without loss of control	1,511		503
Net cash used in financing activities	(14,638)	(19,114)	(3,165)
Effect of exchange rate changes on cash and cash equivalents	(128)	450	(1,123)
Net decrease in cash and cash equivalents	1,314	(3,853)	8,403
Cash and cash equivalents at the beginning of the year	21,205	25,058	16,655
Cash and cash equivalents at the end of the year	22,519	21,205	25,058

The notes form an integral part of these financial statements.

**Table of Contents****Petróleo Brasileiro S.A. Petrobras**

Consolidated Statement of Changes in Shareholders' Equity

December 31, 2017, 2016 and 2015

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	Share capital	Share issuance costs	Accumulated other comprehensive income (deficit) and deemed cost				Profit Reserves				Equity to shareholders	
			Cash flow hedge	Actuarial gains (losses) on highly defined pension plans	Other comprehensive income (loss) and deemed cost	Legal	Statutory	Tax incentives	Profit retention	Retained earnings		
	Share Capital	Share issuance costs	Capital Transaction	Cumulative translation adjustment	probable future exports	Other deemed cost	Legal	Statutory	Tax incentives	Profit retention	Retained earnings	Per share
	107,380	(279)	148	(41,968)	(7,699)	(7,295)	(438)	7,919	2,182	720	55,602	1
<b>14</b>	107,101	148					(57,400)				66,423	1
							(4)					4
			173									
(loss)				(29,252)	(12,589)	(67)	(851)					(8,450)
											(8,446)	8,446
	107,380	(279)	321	(71,220)	(20,288)	(7,362)	(1,293)	7,919	2,182	720	47,156	
<b>15</b>	107,101	321					(100,163)				57,977	
							(4)					4
			307									
				10,972	8,991	(4,238)	349					(4,838)
											(4,834)	4,834
	107,380	(279)	628	(60,248)	(11,297)	(11,600)	(948)	7,919	2,182	720	42,322	
<b>16</b>	107,101	628					(84,093)				53,143	

						(4)					4
	439										(91)
		(795)	1,724	1,585	161						
									(87)		87
	107,380	(279)	1,067	(61,043)	(9,573)	(10,015)	(791)	7,919	2,182	720	42,235
<b>17</b>	107,101	1,067					(81,422)				53,056

The notes form an integral part of these financial statements.

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**Petróleo Brasileiro S.A. Petrobras**

Notes to the financial statements

*(Expressed in millions of US Dollars, unless otherwise indicated)*

**1. The Company and its operations**

Petróleo Brasileiro S.A. (Petrobras), hereinafter referred to as Petrobras or Company, is a partially state-owned enterprise, controlled by the Brazilian Federal Government, of indefinite duration, governed by the terms and conditions under the Brazilian Corporate Law (Law 6,404 of December 15, 1976) and its Bylaws.

The Company is dedicated to prospecting, drilling, refining, processing, trading and transporting crude oil from producing onshore and offshore oil fields and from shale or other rocks, as well as oil products, natural gas and other liquid hydrocarbons. In addition, Petrobras carries out energy related activities, such as research, development, production, transport, distribution and trading of all forms of energy, as well as other related or similar activities.

Petrobras may perform any of the activities related to its corporate purpose, directly, through its wholly owned subsidiaries, controlled companies, alone or through joint venture with third parties, in Brazil or abroad.

Petrobras may have its activities, provided they are in compliance with its corporate purpose, guided by the Brazilian Federal Government to contribute to the public interest that justified its creation, aiming at meeting the objective of the national energy policy.

The Brazilian Federal Government may only guide the Company to assume obligations or responsibilities, including the implementation of investment projects and the assumption of specific operating costs/results, such as those relating to the sale of fuels, as well as any other related activities, under conditions different from those of any other private sector company operating in the same market, when:

- I established by law or regulation, as well as under provisions of agreements with a public entity that is competent to establish such obligation, abiding by the broad publicity of such instruments; and
- II the cost and revenues thereof have been broken down and disseminated in a transparent manner, including in the accounting plan.

Moreover, in the event of the Brazilian Federal Government guide the Company to meet the public interest under conditions different from market conditions, the Company's Finance Committee and Minority Shareholders Committee, exercising their advisory role to the Board of Directors, shall assess and measure the difference between such market conditions and the operating result or economic return of the transaction, based on technical and economic criteria for investment valuation and specific operating costs and results under the Company's operations. In this case, for every financial year, the Federal Government shall compensate the Company.

**2. Basis of preparation**

**2.1. Statement of compliance and authorization of financial statements**

The consolidated financial statements have been prepared and are presented in accordance with the International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

The consolidated financial statements have been prepared under the historical cost convention, except for available-for-sale financial assets, financial assets and financial liabilities measured at fair value and certain current and non-current assets and liabilities, as set out in the summary of significant accounting policies.

The preparation of the financial statements requires the use of estimates and assumptions for certain transactions and their impacts in assets, liabilities revenues and expenses. Although our management uses assumptions and judgments that are periodically reviewed, the actual results could differ from these estimates. For further information on accounting estimates, see note 5.

The annual consolidated financial statements were approved and authorized for issue by the Company's Board of Directors in a meeting held on March 14, 2018.

**2.2. Functional and presentation currency**

The functional currency of Petrobras and all of its Brazilian subsidiaries is the Brazilian Real. The functional currency of most of the Petrobras entities that operate outside Brazil is the U.S. dollar.

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Petrobras has selected the U.S. Dollar as its presentation currency to facilitate a more direct comparison to other oil and gas companies. The financial statements have been translated from the functional currency (Brazilian Real) into the presentation currency (U.S. Dollar). All assets and liabilities are translated into U.S. dollars at the closing exchange rate at the date of the financial statements; income and expenses, as well as cash flows are translated into U.S. dollars using the average exchange rates prevailing during the period. All exchange differences arising from the translation of the consolidated financial statements from the functional currency into the presentation currency are recognized as cumulative translation adjustments (CTA) within accumulated other comprehensive income in the consolidated statements of changes in shareholders' equity.

<b>Brazilian Real x U.S. Dollar</b>	<b>Dec 2017</b>	<b>Sep 2017</b>	<b>Jun 2017</b>	<b>Mar 2017</b>	<b>Dec 2016</b>	<b>Sep 2016</b>	<b>Jun 2016</b>	<b>Mar 2016</b>
Quarterly average exchange rate	3.25	3.16	3.22	3.15	3.29	3.25	3.51	3.91
Period-end exchange rate	3.31	3.17	3.31	3.17	3.26	3.25	3.21	3.56

**3. The Lava Jato (Car Wash) Operation and its effects on the Company**

In 2009, the Brazilian Federal Police (*Polícia Federal*) began an investigation called Lava Jato (Car Wash) aimed at criminal organizations engaged in money laundering in several Brazilian states. The Lava Jato investigation is extremely broad and involves numerous investigations into several criminal practices focusing on crimes committed by individuals in different parts of the country and sectors of the Brazilian economy.

Beginning in 2014, the Brazilian Federal Prosecutor's Office focused part of its investigation on irregularities involving Petrobras's contractors and suppliers and uncovered a broad payment scheme that involved a wide range of participants, including former Petrobras personnel. Based on the information available to Petrobras, the payment scheme involved a group of companies that, between 2004 and April 2012, colluded to obtain contracts with Petrobras, overcharge the Company under those contracts and use the overpayment received under the contracts to fund improper payments to political parties, elected officials or other public officials, individual contractors and suppliers personnel, former Petrobras personnel and other individuals involved in the scheme. Petrobras refers to this scheme as the payment scheme and to the companies involved in the scheme as cartel members. The Company did not make any improper payment.

In addition to the payment scheme, the investigations identified specific instances of other contractors and suppliers that overcharged Petrobras and allegedly used the overpayment received from their contracts with the Company to fund improper payments, unrelated to the payment scheme, to certain former Petrobras personnel. Those contractors and suppliers are not cartel members and acted individually. Petrobras refers to these specific cases as the unrelated payments.

Certain former executives of Petrobras were arrested and in certain cases charged for crimes such as money-laundering and passive corruption. Other former executives of the Company as well as executives of Petrobras contractors and suppliers were or may be charged as a result of the investigation.

The amounts paid by Petrobras related to contracts with contractors and suppliers involved in the payment scheme were included in historical costs of its property, plant and equipment. However, the Company believes that, under International Accounting Standard IAS 16 Property, Plant and Equipment, the portion of the payments made to these companies and used by them to make improper payments, which represents additional charges incurred as a result of the payments scheme, should not have been capitalized. Thus, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing amounts that Petrobras overpaid for the acquisition of property, plant and equipment in prior years.

Petrobras will continue to monitor the results of the investigations and the availability of other information concerning the payment scheme. If information becomes available that indicates with sufficient precision that the estimate described below should be adjusted, Petrobras will evaluate whether the adjustment is material and, if so, recognize it.

### **3.1. Approach adopted by the Company to adjust its property, plant and equipment for overpayments**

As it is not possible to specifically identify the amounts of each overpayment to contractors and suppliers, or periods over which such payments occurred, Petrobras developed a methodology to estimate the aggregate amount that it overpaid under the payment scheme, in order to determine the amount of the write-off representing the overstatement of its assets resulting from overpayments used to fund improper payments.

As it is impracticable to identify the periods and amounts of overpayments incurred, the Company developed a methodology to estimate the adjustment incurred in property, plant and equipment in the third quarter of 2014 using the five steps described below:

(1) Identify contractual counterparties: the Company listed all the companies identified as cartel members, and using that information the Company identified all of the contractors and suppliers that were either so identified or were part of consortia including entities so identified.

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(2) Identify the period: the Company concluded from testimony that the payment scheme was operating from 2004 through April 2012.

(3) Identify contracts: the Company identified all contracts entered into with the counterparties identified in step 1 during the period identified in step 2, which included supplemental contracts when the original contract was entered into between 2004 and April 2012. It has identified all of the property, plant and equipment related to those contracts.

(4) Identify payments: the Company calculated the total contract values under the contracts mentioned in step 3.

(5) Apply a fixed percentage to the amount determined in Step 4: the Company estimated the aggregate overpayment by applying a percentage indicated in the depositions (3%) to the total amounts for identified contracts.

For overpayments attributable to non-cartel members, unrelated to the payment scheme, the Company included in the write-off for incorrectly capitalized overpayments the specific amounts of improper payments or percentages of contract values, as described in the testimony, which were used by those suppliers and contractors to fund improper payments.

For more information on the approach adopted by the Company to estimate the write-off for overpayments incorrectly capitalized, see note 3 to the Company's audited consolidated financial statements for 2014.

Petrobras has continuously monitored the progress of both the investigation by Brazilian authorities and the independent law firm. As a result, on the preparation of the financial statements for the year ended December 31, 2017, the Company has not identified any additional information that would impact the adopted calculation methodology and consequently require additional write-offs. The Company will continue to monitor these investigations for additional information and will review their potential impact on the adjustment made.

**3.2. The Company's response to the facts uncovered in the investigation**

The Company has been closely monitoring the investigations and cooperating fully with the Brazilian Federal Police (*Polícia Federal*), the Brazilian Public Prosecutor's Office (*Ministério Público Federal*), Federal Auditor's Office (*Tribunal de Contas da União* - TCU), the Ministry of Transparency (*Ministério da Transparência*) and the General Federal Inspector's Office (*Controladoria Geral da União*) in the investigation of all crimes and irregularities. We have responded to numerous requests for documents and information from these authorities.

The Company has also cooperated with the U.S. Securities and Exchange Commission (SEC) and the United States Department of Justice (DOJ), which, since November 2014, have been investigating potential violations of U.S. law based on information disclosed as a result of the Lava Jato investigation.



We have been formally recognized as a victim of the crimes identified under the Lava Jato investigation by the Brazilian Federal Prosecutor's Office, the lower court hearing the case and also by the Brazilian Supreme Court. As a result, we have entered into 45 criminal proceedings as an assistant to the prosecutor. In addition, we have entered into four criminal proceedings as an interested party. We have also renewed our commitment to continue cooperating with authorities to clarify the issues and report them regularly to our investors and to the public in general.

We do not tolerate corrupt practices and illegal acts perpetuated by any of our employees. Accordingly, since 2015, the Company continued to implement several measures as a response to the facts uncovered in the Lava Jato investigation and to improve its corporate governance and compliance systems.

As part of the process of strengthening integrity procedures to prevent and detect frauds or any illegal act, the Company has taken continuous measures aiming at enhancing its corporate governance and compliance systems, thereby applying corporate governance best practices aligned with new corporate governance requirements.

In this respect, among other measures, in 2016, the Company approved its new Corporate Compliance Policy, performed training programs with personnel and executives focused on the prevention of corruption, reviewed the Compliance Agents initiative and adapted its findings to the new organization structure. In 2017, the Company created the position of Deputy Officer for Governance and Compliance, reviewed its Code of Best Practices, released the Annual Letter of Public Policies and Corporate Governance, implemented the Manager Training Program and continued to conduct integrity due diligence procedures of suppliers of goods and providers of services (conducted nearly 17,000 through 2017), as well as integrity background checks as part of the decision making for appointing personnel to key positions. By reviewing its Bylaws, the Company also extended the Minority Committee duties in order to enhance transparency of related party transactions, indications to key management personnel and determination of investment thresholds under the public policies scope.

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The continuous process of strengthening corporate governance practices resulted in the certification of Petrobras in the State Governance Highlight (*Destaque em Governança das Estatais*) program. Petrobras also obtained the maximum score in the IG-SEST governance index for state-owned companies of the Ministry of Planning and enabled the Company to request adherence to a governance level 2 at the Brazilian stock exchange (B3), a market tier for companies with high level of corporate governance standards.

Internal investigations are still in progress and are being carried out by two independent firms hired in October 2014, which report directly to a Special Committee that serves as a reporting line to the Board of Directors. The Special Committee is composed of our Governance and Compliance Officer, João Adalberto Elek Junior and two other independent and recognized experts: Ellen Gracie Northfleet, former Chief Justice of the Brazilian Supreme Court, who is recognized internationally as a jurist with great experience in analyzing complex legal issues; and Andreas Pohlmann from Germany, former Chief Compliance Officer of Siemens AG (2007-2010), who has broad experience in compliance and corporate governance matters.

In addition, the Company has been taking the necessary procedural steps to seek compensation for damages suffered from the improper payments scheme, including those related to its reputation.

Accordingly, the Company joined 15 public civil suits addressing acts of administrative misconduct filed by the Brazilian Public Prosecutor's Office and the Federal Government, including demands for compensation for reputation damages.

To the extent that any of the proceedings resulting from the Lava Jato investigation involve leniency agreements with cartel members or plea agreements with individuals pursuant to which they agree to return funds, the Company may be entitled to receive a portion of such funds. Nevertheless, the Company is unable to reliably estimate further recoverable amounts at this moment. Any recoverable amount will be recognized as income when received or when their economic benefits become virtually certain.

In 2017, the Company recognized US\$ 252 as other income and expenses with respect to compensation for damages resulting from leniency agreements (US\$ 131 in 2016 and US\$ 72 in 2015). The total funds collected through December 31, 2017 amount to US\$ 455.

**3.3. Investigations involving the Company**

Petrobras is not a target of the Lava Jato investigation and is formally recognized as a victim of the improper payments scheme by the Brazilian Authorities.

On November 21, 2014, Petrobras received a subpoena from the U.S. Securities and Exchange Commission (SEC) requesting certain documents and information about the Company with respect to, among other things, the Lava Jato

investigation and any allegations regarding a violation of the U.S. Foreign Corrupt Practices Act. The U.S. Department of Justice (DoJ) is conducting a similar inquiry, and the Company is cooperating with both investigations and intends to continue to do so, working with the independent Brazilian and U.S. law firms that were hired to conduct an independent internal investigation. The investigations carried out by the SEC and DoJ may require the Company to pay penalties or provide other financial relief, or consent to injunctions or orders on future conduct or suffer other penalties.

The inquiries carried out by these authorities remain ongoing, and to date it is not possible to estimate their duration, scope or results. Accordingly, the Company is unable to make a reliable estimate about amounts and probability of penalties that may be required or if other financial relief may be provided in connection with any SEC or DoJ investigation.

On December 15, 2015, the State of São Paulo Public Prosecutor's Office issued the Order of Civil Inquiry 01/2015, establishing a civil proceeding to investigate the existence of potential damages caused by Petrobras to investors in the stock market. The Company has provided all relevant information required by the authorities.

### **3.4. Legal proceedings involving the Company**

Note 30 provides information about class actions and other material legal proceedings.

## **4. Summary of significant accounting policies**

The accounting policies set out below have been consistently applied to all periods.

### **4.1. Basis of consolidation**

The consolidated financial statements include the financial information of Petrobras and the entities it controls (subsidiaries), joint operations and consolidated structured entities.

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Control is achieved when Petrobras: i) has power over the investee; ii) is exposed, or has rights, to variable returns from involvement with the investee; and iii) has the ability to use its power to affect its returns.

Subsidiaries are consolidated from the date on which control is obtained until the date that such control no longer exists, by using accounting policies consistent with those adopted by Petrobras. Note 11 sets out the consolidated entities and other direct investees, not including investments structured through a separate vehicle.

Investments structured through a separate vehicle are conceived so that the voting rights, or similar rights, are not the dominant factor to determine who controls the entity.

At December 31, 2017, Petrobras controls and consolidates the following structured entities:

<b>Structured Entities</b>	<b>Country</b>	<b>Main segment</b>
Charter Development LLC CDC	U.S.A	E&P
Companhia de Desenvolvimento e Modernização de Plantas Industriais CDMPI	Brazil	RT&M
Fundo de Investimento em Direitos Creditórios Não-padronizados do Sistema Petrobras	Brazil	Corporate

The consolidation procedures involve combining assets, liabilities, income and expenses, according to their function and eliminating all intragroup balances and transactions, including unrealized profits arising from intragroup transactions.

**4.2. Reportable segments**

The information related to the Company's operating segments is prepared based on available financial information directly attributable to each segment, or items that can be allocated to each segment on a reasonable basis. This information is presented by business activity, as used by the Company's Board of Executive Officers (Chief Operating Decision Maker CODM) on the decision-making process of resource allocation and performance evaluation.

The measurement of segment results includes transactions carried out with third parties and transactions between business areas, which are charged at internal transfer prices defined by the relevant areas using methods based on market parameters.

The Company's operating segments comprises the following business areas:

- a) Exploration and Production (E&P): this segment covers the activities of exploration, development and production of crude oil, NGL (natural gas liquid) and natural gas in Brazil and abroad, for the primary purpose of supplying its domestic refineries and the sale of surplus crude oil and oil products produced in the natural gas processing plants to the domestic and foreign markets. The E&P segment also operates through partnerships with other companies;
- b) Refining, Transportation and Marketing (RT&M): this segment covers the refining, logistics, transport and trading of crude oil and oil products activities in Brazil and abroad, exports of ethanol, extraction and processing of shale, as well as holding interests in petrochemical companies in Brazil;
- c) Gas and Power: this segment covers the activities of transportation and trading of natural gas produced in Brazil and abroad, imported natural gas, transportation and trading of LNG (liquid natural gas), generation and trading of electricity, as well as holding interests in transporters and distributors of natural gas and in thermoelectric power plants in Brazil, in addition to being responsible for the fertilizer business;
- d) Biofuels: this segment covers the activities of production of biodiesel and its co-products, as well as the ethanol-related activities: equity investments, production and trading of ethanol, sugar and the surplus electric power generated from sugarcane bagasse; and
- e) Distribution: this segment covers the activities of Petrobras Distribuidora S.A, which sells oil products, ethanol and vehicle natural gas in Brazil. This segment also includes distribution of oil products operations abroad (South America).

The corporate segment comprises the items that cannot be attributed to the other segments, notably those related to corporate financial management, corporate overhead and other expenses, including actuarial expenses related to the pension and medical benefits for retired employees and their dependents.

Assets and the statement of income by business area are presented in note 29.

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### **Petróleo Brasileiro S.A. Petrobras**

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#### **4.3. Financial instruments**

##### **4.3.1. Cash and cash equivalents**

Cash and cash equivalents comprise cash in hand, term deposits with banks and short-term highly liquid financial investments that are readily convertible to known amounts of cash, are subject to insignificant risk of changes in value and have a maturity of three months or less from the date of acquisition.

##### **4.3.2. Marketable securities**

Marketable securities comprise investments in debt or equity securities. These instruments are initially measured at fair value, classified and subsequently measured as set out below:

Fair value through profit or loss includes financial instruments purchased and held for trading in the short term. These instruments are measured at fair value with changes recognized in the statement of income in finance income (expenses).

Held-to-maturity includes non-derivative financial instruments with fixed or determinable payments and fixed maturity, for which management has the clear intention and ability to hold to maturity. These instruments are measured at amortized cost using the effective interest rate method.

Available-for-sale includes non-derivative financial instruments that are designated as available for sale or are not classified as financial assets at fair value through profit or loss or held-to-maturity investments. These instruments are measured at fair value and changes are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income when the instruments are derecognized or realized.

##### **4.3.3. Trade receivables**

Trade receivables are initially measured at the fair value of the consideration to be received and, subsequently, at amortized cost using the effective interest method, less any impairment loss on uncollectible receivables.

The Company recognizes an allowance for impairment of trade receivables when there is objective evidence that a loss event occurred after the initial recognition of the receivable and has an impact on the estimated future cash flows, which can be reliably estimated. Impairment losses on trade receivables are presented in the statement of income

within selling expenses.

#### **4.3.4. Loans and financing (Debt)**

Loans and financing are initially recognized at fair value less transaction costs incurred and subsequently measured at amortized cost using the effective interest rate method.

When a debt instrument is replaced by another one, between the same parties, but containing substantially different terms, the original financial instrument is derecognized and a new one is recognized. Similarly, substantial changes to the terms of the existing financial instrument, or part of it, are accounted as extinction of the original financial liability and recognition of a new financial liability.

The terms of the financial instrument are considered substantially modified if the present value of their cash flows under the new terms, including any commissions paid (net of any commissions received) and discounted using the original effective interest rate method, is at least 10% different from the present value of the remaining cash flows of the original financial instrument.

Changes in the terms of the financial instrument that are not considered substantial do not affect the statement of income at the moment they occur. In this case, the effective interest rate of the instrument is recalculated and applied prospectively.

#### **4.3.5. Derivative financial instruments**

Derivative financial instruments are recognized in the statement of financial position as assets or liabilities and are initially and subsequently measured at fair value.

Gains or losses arising from changes in fair value are recognized in the statement of income in finance income (finance expense), unless the derivative is qualified and designated for hedge accounting.

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**4.3.6. Cash flow hedge accounting**

The Company qualifies certain transactions for cash flow hedge accounting.

Hedging relationships qualify for cash flow hedges when they involve the hedging of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecasted transaction that may impact the statement of income.

Gains or losses relating to the effective portion of the hedge are recognized in other comprehensive income, in the shareholders' equity and recycled to the statement of income in finance income (expense) in the periods when the hedged item affects the statement of income. The gains or losses relating to the ineffective portion are immediately recognized in the statement of income.

When the hedging instrument expires or settled in advance, no longer meets the criteria for hedge accounting or the Company revokes the designation, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income from the period when the hedge was effective is recorded separately in equity until the forecast transaction occurs. When the forecast transaction is no longer expected to occur, the cumulative gain or loss on the hedging instrument that has been recognized in other comprehensive income is immediately reclassified from shareholders' equity to the statement of income.

In addition, when a financial instrument designated as a hedging instrument expires or settled, the Company may replace it with another financial instrument in a manner such that the hedge relationship continues to occur. Likewise, whenever a hedged transaction effectively occurs, its financial instrument previously designated as a hedging instrument may be designate for a new hedge relationship.

**4.4. Inventories**

Inventories are determined by the weighted average cost method and mainly comprise crude oil, intermediate products and oil products, as well as natural gas, LNG, fertilizers and biofuels, adjusted to the net realizable value when it is lower than its carrying amount.

Net realizable value is the estimated selling price of inventory in the ordinary course of business, less estimated cost of completion and estimated expenses to complete its sale.

Crude oil and LNG inventories can be traded or used for production of oil products and/or electricity generation, respectively.

Intermediate products are those product streams that have been through at least one of the refining processes, but still need further treatment, processing or converting to be available for sale.



Biofuels mainly include ethanol and biodiesel inventories.

Materials, supplies and others mainly comprise production supplies and operating materials used in the operations of the Company, stated at the average purchase cost, not exceeding replacement cost.

The amounts presented in the categories above include imports in transit, which are stated at their cost of purchase.

#### **4.5. Investments in other companies**

An associate is an entity over which the Company has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but not the ability to exercise control or joint control over those polices. The definition of control is set out in note 4.1.

A joint arrangement is an arrangement over which two or more parties have joint control (pursuant to contractual provisions). A joint arrangement is classified either as a joint operation or as a joint venture depending on the rights and obligations of the parties to the arrangement.

In a joint operation, the parties have rights to the assets and obligations for the liabilities related to the arrangement, while in a joint venture the parties have rights to the net assets of the arrangement. Certain of the Company's activities in the E&P segment are conducted through joint operations.

Profit or loss, assets and liabilities related to joint ventures and associates are accounted for by the equity method. In a joint operation the Company recognizes the amount of its assets, liabilities and related income and expenses.

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Accounting policies of joint ventures and associates have been adjusted, where necessary, to ensure consistency with the policies adopted by Petrobras. Distributions received from an investee reduce the carrying amount of the investment.

**4.6. Business combinations and goodwill**

Acquisitions of businesses are accounted for using the acquisition method when control is obtained. Combinations of entities under common control are accounted for at cost.

The acquisition method requires that the identifiable assets acquired and the liabilities assumed be measured at the acquisition-date fair value, with limited exceptions.

Goodwill is measured as the excess of the aggregate amount of: (i) the consideration transferred; (ii) the amount of any non-controlling interest in the acquiree; and (iii) in a business combination achieved in stages, the fair value of the acquirer's previously held equity interest in the acquiree at the acquisition-date; over the net of the amounts of the identifiable assets acquired and the liabilities assumed. When this aggregate amount is lower than the net of the amounts of the identifiable assets acquired and the liabilities assumed, a gain on a bargain purchase is recognized in the statement of income.

Changes in ownership interest in subsidiaries that do not result in loss of control of the subsidiary are equity transactions. Any excess of the amounts paid/received, including directly attributable costs, over the carrying value of the ownership interest acquired/disposed is recognized in shareholders' equity as changes in interest in subsidiaries.

**4.7. Oil and Gas exploration and development expenditures**

The costs incurred in connection with the exploration, appraisal and development of crude oil and natural gas production are accounted for using the successful efforts method of accounting, as set out below:

Costs related to geological and geophysical activities are expensed when incurred.

Amounts paid for obtaining concessions for exploration of crude oil and natural gas (capitalized acquisition costs) are initially capitalized as intangible assets and are transferred to property, plant and equipment once the technical and commercial feasibility can be demonstrated.

Costs directly attributable to exploratory wells, including their equipment and installations, pending determination of proved reserves are capitalized within property, plant and equipment. In some cases, exploratory wells have discovered oil and gas reserves, but at the moment the drilling is completed they are not yet able to be classified as proved. In such cases, the expenses continue to be capitalized if the well has found a sufficient quantity of reserves to justify its completion as a producing well and progress on assessing the reserves and the economic and operating viability of the project is under way. An internal commission of technical executives of the Company reviews these conditions monthly for each well, by analysis of geoscience and engineering data, existing economic conditions, operating methods and government regulations. For additional information on proved reserves estimates, see note 5.1.

Costs related to exploratory wells drilled in areas of unproved reserves are charged to expense when determined to be dry or uneconomic by the aforementioned internal commission.

Costs related to the construction, installation and completion of infrastructure facilities, such as drilling of development wells, construction of platforms and natural gas processing units, construction of equipment and facilities for the extraction, handling, storing, processing or treating crude oil and natural gas, pipelines, storage facilities, waste disposal facilities and other related costs incurred in connection with the development of proved reserve areas are capitalized within property, plant and equipment.

#### **4.8. Property, plant and equipment**

Property, plant and equipment are measured at the cost to acquire or construct, including all costs necessary to bring the asset to working condition for its intended use and the estimated cost of dismantling and removing the asset and restoring the site, reduced by accumulated depreciation and impairment losses.

A condition of continuing to operate certain items of property, plant and equipment, such as industrial plants, offshore plants and vessels is the performance of regular major inspections and maintenance. Those expenditures are capitalized if a maintenance campaign is expected to occur, at least, 12 months later. Otherwise, they are expensed when incurred. The capitalized costs are depreciated over the period through the next major maintenance date.

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Spare parts are capitalized when they are expected to be used during more than one period and can only be used in connection with an item of property, plant and equipment. These are depreciated over the useful life of the item of property, plant and equipment to which they relate.

Borrowing costs directly attributable to the acquisition or construction of qualifying assets are capitalized as part of the costs of these assets. General borrowing costs are capitalized based on the Company's weighted average cost of borrowings outstanding applied over the balance of assets under construction. Borrowing costs are amortized during the useful lives of the assets or by applying the unit-of-production method to the related assets. In general, the Company suspends capitalization of borrowing to the extent investments in a qualifying asset hibernates during a period greater than one year or whenever the asset is prepared for its intended use.

Whenever an asset is directly associated to oil and gas production and its estimated lifecycle is equal or greater than the estimated length of reserves depletion, the depreciation of this asset will be accounted for pursuant to the unit-of-production method.

Assets depreciated based on the straight line method include: (i) assets related to oil and gas production with useful lives shorter than the life of the field; (ii) floating platforms; and (iii) assets that are unrelated to oil and gas production.

The unit of production method of depreciation (amortization) is computed based on a unit of production basis (monthly production) over the proved developed oil and gas reserves, applied on a field-by-field basis.

Amortization of amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, such as signature bonuses (capitalized acquisition costs) is recognized using the unit-of-production method, computed based on the units of monthly production over the total proved oil and gas reserves, applied on a field-by-field basis.

Except for land, which is not depreciated, other property, plant and equipment are depreciated on a straight-line basis over its useful life. Note 12.2 provides further information on the estimated useful life by class of assets. The useful life is reviewed at each year end.

**4.9. Intangible assets**

Intangible assets are measured at the acquisition cost, less accumulated amortization and impairment losses and comprise rights and concessions, including the signature bonus paid for concessions and production sharing agreements for exploration and production of oil and natural gas (capitalized acquisition costs), public service concessions, trademarks, patents, software and goodwill.

Signature bonuses paid for obtaining concessions for exploration of crude oil and natural gas are initially capitalized within intangible assets and are transferred to property, plant and equipment when the technical and commercial feasibility can be demonstrated. They are not amortized before their transference to property, plant and equipment. Intangible assets with a finite useful life, other than amounts paid for obtaining concessions for exploration of oil and natural gas of producing properties, are amortized over the useful life of the asset on a straight-line basis. In the event a signature bonus encompasses an area in which exploration activities occur in different locations, whenever the technical and commercial feasibility can be demonstrated for a specific location, a portion of the signature bonus is transferred to property, plant and equipment based on the ratio between the oil in place at this location and total reservoir volume of the area.

Internally-generated intangible assets are not capitalized and are expensed as incurred, except for development costs that meet the recognition criteria related to the completion and use of assets, probable future economic benefits, and others.

Intangible assets with an indefinite useful life are not amortized but are tested annually for impairment. Their useful lives are reviewed annually.

#### **4.10. Impairment of property, plant and equipment and intangible assets**

Property, plant and equipment and intangible assets with definitive lives are tested for impairment when there is an indication that the carrying amount may not be recoverable. Assets are assessed for impairment at the smallest identifiable group that generates largely independent cash inflows from other assets or groups of assets (the cash-generating unit - CGU).

Assets related to development and production of oil and gas and (fields or group of fields) assets that have indefinite useful lives, such as goodwill acquired in business combinations, are tested for impairment annually, irrespective of whether there is any indication of impairment, or when any indication of impairment occurs.

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The impairment test is performed through the comparison of the carrying amount of an individual asset or a cash-generating unit (CGU) with its recoverable amount. Whenever the recoverable amount is less than the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use. Considering the existing synergies between the Company's assets and businesses, as well as the expectation of the use of its assets for their remaining useful lives, value in use is generally used by the Company for impairment testing purposes, except when specifically indicated.

Value in use is estimated based on the present value of the risk-adjusted (for specific risks) future cash flows expected to arise from the continuing use of an asset or cash-generating unit, discounted at a pre-tax discount rate. This rate is obtained from the Company's post-tax weighted average cost of capital (WACC). Cash flow projections are mainly based on the following assumptions: prices based on the Company's most recent business and management plan and strategic plan; production curves associated with existing projects in the Company's portfolio, operating costs reflecting current market conditions, and investments required for carrying out the projects.

Reversal of previously recognized impairment losses is permitted for assets other than goodwill.

**4.11. Impairment of associates and joint ventures (equity-accounted investments)**

The Company assesses its investments in associates and joint ventures (equity-accounted investments) for impairment whenever there is an indication that their carrying amounts may not be recoverable.

By performing impairment testing of an equity-accounted investment, goodwill, if exists, is also considered part of the carrying amount to be compared to the recoverable amount.

Except when specifically indicated, value in use is generally used by the Company for impairment testing purposes in the proportion to the Company's interests in the present value of future cash flow projections via dividends and other distributions.

Reversals of previously recognized impairment losses are permitted.

**4.12. Leases**

Leases that transfer substantially all the risks and rewards incidental to ownership of the leased item are recognized as finance leases.

For finance leases, when the Company is the lessee, assets and liabilities are recognized at the lower of the fair value of the leased property or the present value of the minimum lease payments, both determined at the inception of the lease.

Capitalized lease assets are depreciated on a systematic basis consistent with the depreciation policy the Company adopts for property, plant and equipment that are owned. Where there is no reasonable certainty that the Company will obtain ownership by the end of the lease term, capitalized lease assets are depreciated over the shorter of the lease term or the estimated useful life of the asset.

When the Company is the lessor, a receivable is recognized at the amount of the net investment in the lease.

If a lease does not transfer substantially all the risks and rewards incidental to ownership of the leased item, it is classified as an operating lease. Operating leases are recognized as expenses over the period of the lease.

Contingent rents are recognized as expenses when incurred.

#### **4.13. Assets classified as held for sale**

Non-current assets, disposal groups and liabilities directly associated with those assets are classified as held for sale if their carrying amounts will, principally, be recovered through the sale transaction rather than through continuing use.

The Company has an active divestment program and is considering opportunities for divestments in several areas where it operates. The divestment portfolio is dynamic because changes in market conditions and/or in the Company's evaluation of its different businesses may affect any ongoing negotiation or potential transaction.

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The condition for classification as held for sale is met only when the sale is approved by the Company's Board of Directors and the asset or disposal group is available for immediate sale in its present condition and there is the expectation that the sale will occur within 12 months after its classification as held for sale. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of its classification as held for sale. However, an extended period required to complete a sale does not preclude an asset (or disposal group) from being classified as held for sale if the delay is caused by events or circumstances beyond the Company's control and there is sufficient evidence that the Company remains committed to its plan to sell the assets (or disposal groups).

Assets (or disposal groups) classified as held for sale and the associated liabilities are measured at the lower of their carrying amount and fair value less costs to sell. Assets and liabilities are presented separately in the statement of financial position.

**4.14. Decommissioning costs**

Decommissioning costs are future obligations to perform environmental restoration, dismantle and remove a facility when the Company terminates its operations due to the exhaustion of the area or economic feasibility.

Costs related to the abandonment and dismantling of areas are recognized as part of the cost of an asset (with a corresponding liability) based on the present value of the expected future cash outflows, discounted at a risk-adjusted rate when a future legal obligation exists and can be reliably measured.

Decommissioning costs estimates for oil and natural gas producing properties are initially recognized after a field is declared to be commercially viable.

The part of the cost of an asset relating to decommissioning costs estimates is depreciated on the same basis of its corresponding property, plant and equipment. Unwinding of the discount on the corresponding liability is recognized as a finance expense, when incurred. Decommissioning costs estimates are revised annually, at least.

**4.15. Provisions, contingent assets and contingent liabilities**

Provisions are recognized when there is a present obligation that arises from past events and for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, which must be reasonably estimable.

Contingent assets and liabilities are not recognized, but contingent liabilities are disclosed whenever the likelihood of loss is considered possible, including those for which the amount outflow of resources are not reasonably estimable.



#### **4.16. Income taxes**

Income tax expense for the period includes current and deferred taxes.

##### **a) Current income taxes**

Current income taxes are computed based on taxable profit for the year, determined in accordance with the rules established by the taxation authorities, using tax rates that have been enacted or substantively enacted at the end of the reporting period.

Current income taxes are offset when they relate to income taxes levied on the same taxable entity and by the same tax authority, when there is a legal right and the entity has the intention to set off current tax assets and current tax liabilities, simultaneously, and they are recognized in the statement of income of the period, except to the extent that the tax arises from a transaction or event which is recognized directly in equity.

##### **b) Deferred income taxes**

Deferred income taxes are recognized on temporary differences between the tax base of an asset or liability and its carrying amount. Deferred income tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets are generally recognized for all deductible temporary differences and carryforward of unused tax losses or credits to the extent that it is probable that taxable profit will be available against which those deductible temporary differences can be utilized. When there are insufficient taxable temporary differences relating to the same taxation authority and the same taxable entity, a deferred tax is recognized to the extent that it is probable that the entity will have sufficient taxable profit in future periods, based on projections approved by management and supported by the Company's Business and Management Plan.

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Deferred tax assets and deferred tax liabilities are measured at the tax rates that have been enacted or substantively enacted by the end of the reporting period, and they are offset when they relate to income taxes levied on the same taxable entity, when a legally enforceable right to set off current tax assets and current tax liabilities exists and when the deferred tax assets and deferred tax liabilities relate to taxes levied by the same tax authority on the same taxable entity.

**4.17. Employee benefits (Post-Employment)**

Actuarial commitments related to post-employment defined benefit plans and health-care plans are recognized as liabilities in the statement of financial position based on actuarial calculations which are revised annually by an independent qualified actuary (updating for material changes in actuarial assumptions and estimates of expected future benefits), using the projected unit credit method, net of the fair value of plan assets, when applicable, from which the obligations are to be directly settled.

Actuarial assumptions include demographic assumptions, financial assumptions, medical costs estimates, historical data related to benefits paid and employee contributions.

Under the projected credit unit method, each period of service gives rise to an additional unit of benefit entitlement and each unit is measured separately to determine the final obligation.

Changes in the net defined benefit liability (asset) are recognized when they occur, as follows: i) service cost and net interest cost in the statement of income; and ii) remeasurements in other comprehensive income.

Service cost comprises: (i) current service cost, which is the increase in the present value of the defined benefit obligation resulting from employee service in the current period; (ii) past service cost, which is the change in the present value of the defined benefit obligation for employee service in prior periods, resulting from a plan amendment (the introduction, modification, or withdrawal of a defined benefit plan) or a curtailment (a significant reduction by the entity in the number of employees covered by a plan); and (iii) any gain or loss on settlement.

Net interest on the net defined benefit liability (asset) is the change during the period in the net defined benefit liability (asset) that arises from the passage of time.

Remeasurement of the net defined benefit liability (asset) is recognized in shareholders' equity, in other comprehensive income, and comprises: (i) actuarial gains and losses and; (ii) the return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).

The Company also contributes amounts to defined contribution plans, that are expensed when incurred and are computed based on a percentage of salaries.

#### **4.18. Share capital and distributions to shareholders**

Share capital comprises common shares and preferred shares. Incremental costs directly attributable to the issue of new shares (share issuance costs) are presented (net of tax) in shareholders' equity as a deduction from the proceeds.

To the extent the Company proposes distributions to shareholders, such dividends and interest on capital are determined in accordance with the limits defined in the Brazilian Corporation Law and in the Company's bylaws.

Interest on capital is a form of dividend distribution, which is deductible for tax purposes in Brazil to the entity distributing interest on capital. Tax benefits from the deduction of interest on capital are recognized in the statement of income.

#### **4.19. Other comprehensive income**

Other comprehensive income includes: i) changes in fair value of available-for-sale financial instruments; ii) effective portion of cash flow hedge; iii) remeasurement of defined benefit plans; and iv) cumulative translation adjustment.

#### **4.20. Government grants**

A government grant is recognized when there is reasonable assurance that the grant will be received and the Company will comply with the conditions attached to the grant.

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**4.21. Recognition of revenue**

Revenue from the sale of goods, including, among others, crude oil, oil products, natural gas, biofuels, electric energy, is recognized when all the following conditions are satisfied:

- (a) the Company has transferred to the buyer the significant risks and rewards of ownership of the goods, which usually happens at the delivery, in accordance with the terms of the sales contract;
  - (b) the Company retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold. The amount of revenue can be measured reliably, consisting of the fair value of the consideration received or receivable for products sold and services provided in the normal course of business, net of returns, discounts and sales taxes;
  - (c) it is probable that the economic benefits associated with the transaction will flow to the Company; and
  - (d) the costs incurred or to be incurred in respect of the transaction can be measured reliably.
- Revenue is measured at the fair value of the consideration received or receivable for sales of products or services rendered, net of discounts, sales taxes and returns.

**5. Critical accounting policies: key estimates and judgments**

The preparation of the consolidated financial information requires the use of estimates and judgments for certain transactions and their impacts on assets, liabilities, income and expenses. The assumptions are based on past transactions and other relevant information and are periodically reviewed by management, although the actual results could differ from these estimates.

Information about those areas that require significant judgment or involve a higher degree of complexity in the application of the accounting policies and that could materially affect the Company's financial condition and results of operations is set out as follows:

**5.1. Oil and gas reserves**

Oil and gas reserves are estimated based on economic, geological and engineering information, such as well logs, pressure data and drilling fluid sample data and are used as the basis for calculating unit-of-production depreciation, depletion and amortization rates, impairment testing, decommissioning costs estimates and for projections of high

probable future exports subject to cash flow hedge.

These estimates require the application of judgment and are reviewed at least annually based on a re-evaluation of already available geological, reservoir or production data and new geological, reservoir or production data, as well as changes in prices and costs that are used in the estimation of reserves. Revisions can also result from significant changes in the Company's development strategy or in the production capacity.

The Company determines its oil and gas reserves both pursuant to the U.S. Securities and Exchange Commission (SEC) and the ANP/SPE (Brazilian Agency of Petroleum, Natural Gas and Biofuels / Society of Petroleum Engineers) criteria. The main differences between the two criteria are: selling price of crude oil (*ANP/SPE* establishes the use of the Company's forecasted price, while SEC determines the use of an average price considering each first day of the last 12 months); concession period (ANP permission for the use of reserve quantities after the concession period). Additionally, pursuant to the SEC criteria, only proved reserves are determined, while proved and unproved reserves are determined pursuant to the ANP/SPE criteria.

According to the definitions prescribed by the SEC, proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscientific and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs and under existing economic conditions, operating methods, and government regulation. Proved reserves are subdivided into developed and undeveloped reserves.

Proved developed oil and gas reserves are those that can be expected to be recovered through: (i) existing wells with existing equipment and operating methods; (ii) extraction technology installed and operational at the time of the reserves estimate, extracting oil and gas in other ways than using wells.

Although the Company is reasonably certain that proved reserves will be produced, the timing and amount recovered can be affected by a number of factors including completion of development projects, reservoir performance, regulatory aspects and significant changes in long-term oil and gas price levels.

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Detailed information on reserves is presented as unaudited supplementary information.

**a) Impacts of oil and gas reserves on depreciation, depletion and amortization**

Depreciation, depletion and amortization are measured based on estimates of reserves prepared by the Company's technicians in a manner consistent with SEC definitions. Reviews to the Company's proved developed and undeveloped reserves impact prospectively the amounts of depreciation, depletion and amortization recognized in the statement of income and the carrying amounts of oil and gas properties assets.

Therefore, considering all other variables being constant, a decrease in estimated proved reserves would increase, prospectively, depreciation, depletion and amortization expense, while an increase in reserves would reduce depreciation, depletion and amortization.

Notes 4.8 and 12 provide more detailed information on depreciation, amortization and depletion.

**b) Impacts of oil and gas reserves on impairment testing**

The Company assesses the recoverability of the carrying amounts of oil and gas exploration and development assets based on their value in use, as defined in note 4.10. In general, analyses are based on proved reserves and probable reserves pursuant to the ANP/SPE definitions.

**c) Impacts of oil and gas reserves on decommissioning costs estimates**

The timing of abandonment and dismantling of on shore and offshore areas is based on the length of reserves depletion, in accordance with ANP/SPE definitions.

Therefore, the review of the timing of reserves depletion may impact the provision for decommissioning cost estimates.

**d) Impacts of oil and gas reserves on highly probable future exports subject to cash flow hedge accounting**

The Company estimates highly probable future exports in accordance with future exports forecasted in the scope of its Business and Management Plan BMP and its Strategic Plan projections, which are driven by proved and probable reserves estimates. Reviews in such reserves may impact future exports forecasts and, consequently, hedge relationship designations may also be impacted. For example, whenever future exports for which a hedging

relationship has been designated are no longer considered as highly probable, the Company revokes this designation and the cumulative foreign exchange gains or losses recognized in other comprehensive income remain in shareholders' equity until the forecast exports occur. Additionally, if the future exports are also no longer expected to occur, the cumulative foreign exchange recognized in other comprehensive income is immediately recycled from shareholders' equity to the statement of income.

## **5.2. Main assumptions for impairment testing**

Impairment testing involves uncertainties mainly related to its key assumptions: average Brent prices and Real/U.S. dollar average exchange rate. These assumptions are relevant to virtually all of the Company's operating segments and a significant number of interdependent variables are derived from these key assumptions and there is a high degree of complexity in their application in determining value in use for impairment tests.

The markets for crude oil and natural gas have a history of significant price volatility and although prices can drop precipitously, industry prices over the long term tends to continue being driven by market supply and demand fundamentals.

Projections relating to the key assumptions are derived from the Business and Management Plan for the first five years and consistent with the Strategic Plan for the following years. These assumptions are consistent with market evidence, such as independent macro-economic forecasts, industry commentators and experts. Back testing analysis and feedback process in order to continually improve forecast techniques are also performed.

The Company's oil price forecast model is based on a nonlinear relationship between variables reflecting market supply and demand fundamentals. This model also takes into account other relevant factors, such as historical idle capacity, industry costs, oil and gas production forecasted by specialized firms, the relationship between the oil price and the U.S. dollar exchange rate, as well as the impact of OPEC on the oil market.

Changes in the economic environment may result in changing assumptions and, consequently, the recognition of impairment charges on certain assets or CGUs. For example, the Brent price directly impacts the Company's sales revenue and refining margins, while the Real/U.S. dollar exchange rate mainly impacts our capital and operating expenditures.

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Changes in the economic and political environment may also result in higher country risk projections that would increase discount rates for impairment testing.

In addition, changes in reserve volumes, production curve expectations and lifting costs could trigger the need for impairment assessment, as well as capital expenditure decisions, which are also affected by the Company's plan to reduce its leverage, may result in postponement or termination of projects, reducing their economic feasibility.

The recoverable amount of certain assets was not substantially in excess of their carrying amounts and, therefore, it is reasonably possible that outcomes in future periods that are different from the current assumptions may result in the recognition of additional impairment charges on these assets, as described in note 14.1.1.

### **5.3. Identifying cash-generating units for impairment testing**

Identifying cash-generating units (CGUs) requires management assumptions and judgment, based on the Company's business and management model. Changes in the aggregation of assets into Cash-Generating units (CGUs) could result in additional impairment charges or reversals. Such changes may occur due to a review of investment, strategic or operational factors result in changes in the interdependencies between those assets and, consequently, alter the aggregation or breakdown of assets into CGUs. The assumptions set out below have been consistently applied by the Company:

#### **a) Exploration and Production CGUs:**

i) Crude oil and natural gas producing properties CGU: comprises exploration and development assets related to crude oil and natural gas fields and groups of fields in Brazil and abroad. At December 31, 2017, the Guriatã and Guriatã Sul fields were grouped as one CGU, the Guriatã group, since both fields share the same reservoir. Based on the same reason, Canário da Terra and Canário da Terra Sul fields were also grouped in a single CGU, so named Canário da Terra group. In addition, on November 30, 2017, the company submitted to the ANP the declaration of commerciality of the Mero field and it has been regarded as a single CGU. Accordingly, E&P CGUs include 40 groups of fields comprising 179 fields.

The drilling rigs are not part of any grouping of assets and are assessed for impairment separately.

#### **b) Refining, transportation and marketing CGUs:**

i) Downstream CGU: comprises refineries and associated assets, terminals and pipelines, as well as logistics assets operated by Transpetro, with a combined and centralized operation of logistical and refining assets in Brazil. These



assets are managed with a common goal of achieving efficiency, profitability and strategic value long term on a nationwide basis. They are not operated for the generation of profit by asset/location. The operational planning is made in a centralized manner and these assets are not managed, measured or evaluated by their individual results. The refineries do not have autonomy to choose the oil to be processed, the mix of oil products to produce, the markets in which these products will be traded, which amounts will be exported, which intermediaries will be received and to decide the sales prices of oil products. The operational decisions are analyzed through an integrated model of operational planning for market supply. This model evaluates the solutions to supply the market considering all the options for production, importing, exporting, logistics and inventories seeking a comprehensive optimum of Petrobras and not the profit of each unit. The decision regarding a new investment is not based on the profitability of the project for the asset where it will be installed, but for the Petrobras Group. The model in which the entire planning is based, used in the studies of technical and economic feasibility of new investments in refining, may, in its indications, allocate a lower economic kind of oil to a certain refinery or define a lower economic mix of products to it, or even force it to supply more distant markets (area of influence), leading it to operate with reduced margins if seen individually, in case this is the best for the integrated system as a whole. Pipelines and terminals are an integral part and interdependent portion of the refining assets, required to supply the market.

ii) CGU Comperj comprises assets under construction of the first refining unit of Petrochemical Complex of Rio de Janeiro. In 2014, the Company decided to postpone this project for an extended period of time;

iii) CGU Second Refining Unit of RNEST comprises assets under construction of the second refining unit of Abreu e Lima refinery. In 2014, the Company decided to postpone this project for an extended period of time;

iv) Petrochemical CGU: This CGU was composed of the *PetroquímicaSuape* and *Citepe* petrochemical plants until November 2016. Since December 2016, these assets have not been aggregated as a CGU following their reclassification to assets held for sale.

v) Transportation CGU: comprises assets relating to Transpetro's fleet of vessels. In December 2017, Transpetro's management decided to postpone the completion of three vessels under construction that were PANAMAX class (EI-512, EI-513 and EI-514) for an indefinite period of time and, thus, these assets are no longer part of Transportation CGU and were reviewed and tested for impairment separately;

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vi) Hidrovia CGU: comprises the fleet of vessels of the Hidrovia project (transportation of ethanol along the Tietê River) that are under construction. In 2016, they were removed from the Transportation CGU since the project was delayed for an extended period of time;

vii) SIX CGU: shale processing plant; and

viii) Other operations abroad defined as the smallest group of assets that generates independent cash flows.

**c) Gas & Power CGUs:**

i) Natural gas CGU: comprises natural gas pipelines and natural gas processing plants. Reflecting the Business and Management Plan BMP 2018-2022 approved in December 2017 that foresees the entire withdrawal from petrochemical interests, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, all of the nitrogen products plants that were still grouped into this CGU started to be assessed for impairment separately.

ii) CGU UFN III: comprises assets under construction of the fertilizer plant Unidade de Fertilizantes e Nitrogenados III (UFN III). Since 2014, the Company has decided to postpone this project for an extended period of time;

iii) Power CGU: comprises the thermoelectric power generation plants; and

iv) Other CGUs: operations abroad defined as the smallest group of assets that generates largely independent cash flows.

**d) Distribution CGU:**

Mainly comprises the distribution assets related to the operations of Petrobras Distribuidora S.A.

**e) Biofuels CGUs:**

i) Biodiesel CGU: An integrated unit of biodiesel plants defined based on the production planning and operation process, that takes into consideration domestic market conditions, the production capacity of each plant, as well as the results of biofuels auctions and raw materials supply.

ii) Quixadá CGU: comprises the assets of Quixadá Biofuel Plant. In September 2016, it was removed from the Biodiesel CGU following the decision to discontinue its operations.

Investments in associates and joint ventures, including goodwill, are assessed for impairment separately.

Further information on impairment testing is set out in notes 4.10, and 14.

#### **5.4. Pension and other post-retirement benefits**

The actuarial obligations and net expenses related to defined benefit pension and health care post-retirement plans are computed based on several financial and demographic assumptions, of which the most significant are:

Discount rate: comprises the projected future inflation in addition to an equivalent real interest rate that matches the duration of the pension and health care obligations with the future yield curve of long-term Brazilian Government Bonds; and

Medical costs: comprise the projected growth rates based on per capita health care benefits paid over the last five years, which are used as a basis for projections, converged to the general price inflation index within 30 years.

These and other estimates are reviewed at least annually and may differ materially from actual results due to changing market and financial conditions, as well as actual results of actuarial assumptions.

The sensitivity analysis of discount rates and changes in medical costs as well as additional information about actuarial assumptions are set out in note 22.

#### **5.5. Estimates related to contingencies and legal proceedings**

The Company is defendant in arbitrations and in legal and administrative proceedings involving civil, tax, labor and environmental issues arising from the normal course of its business, and makes use of estimates to recognize the amounts and the probability of outflow of resources, based on reports and technical assessments from legal advisors and on the management's assessment.

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These estimates are performed individually, or aggregated if there are cases with similar characteristics, primarily considering factors such as assessment of the plaintiff's demands, consistency of the existing evidence, jurisprudence on similar cases and doctrine on the subject. Specifically for actions of outsourced employees, the Company estimates the expected loss based on a statistical procedure, due to the amount of actions with similar characteristics.

Arbitral, legal and administrative decisions against the Company, new jurisprudence and changes to the existing evidences can result in changes regarding the probability of outflow of resources and on the estimated amounts, according to the assessment of the legal basis.

Note 30 provides further detailed information about contingencies and legal proceedings.

#### **5.6. Decommissioning costs estimates**

The Company has legal and constructive obligations to remove equipment and restore onshore and offshore areas at the end of operations at production sites. Its most significant asset removal obligations involve removal and disposal of offshore oil and gas production facilities in Brazil and abroad. Estimates of costs for future environmental cleanup and remediation activities are based on current information about costs and expected plans for remediation.

These estimates require performing complex calculations that involve significant judgment since: i) the obligations are long-term; ii) the contracts and regulations contain subjective definitions of the removal and remediation practices and criteria involved when the events actually occur; and iii) asset removal technologies and costs are constantly changing, along with regulations, environmental, safety and public relations considerations.

The Company is constantly conducting studies to incorporate technologies and procedures to optimize the operations of abandonment, considering industry best practices. However, the timing and amounts of future cash flows are subject to significant uncertainty.

Notes 4.14 and 20 provide further detailed information about the decommissioning provisions.

#### **5.7. Deferred income taxes**

The recognition of deferred tax liabilities and deferred tax assets involves significant estimates and judgments by the Company. Deferred tax assets are recognized to the extent that it is probable that taxable profit will be available against which a deductible temporary difference can be utilized or it is probable that the entity will have sufficient taxable profit in future periods. In evaluating whether it will have sufficient taxable profit in future periods to support the recognition of deferred tax assets, the Company uses future projections and estimates based on its Business and Management Plan (BMP), which is approved by the Board of Directors annually. Future taxable profits projections

are mainly based on the following assumptions: i) Brent crude oil prices; ii) foreign exchange rates; and iii) the Company's projected net finance expenses (income).

Changes in deferred tax assets and liabilities are presented in note 21.5.

#### **5.8. Cash flow hedge accounting involving the Company's future exports**

The Company determines its future exports as highly probable future exports based on its Business and Management Plan (BMP) and its Strategic Plan. The highly probable future exports are determined by a percentage of projected exports revenue over the mid and long term, taking into account the Company's operational and capital expenditure optimization model, limited to a threshold based on a historical percentage of the oil production that is usually sold abroad. Future exports forecasts are reviewed whenever the Company reviews its BMP and Strategic Plan assumptions. The approach for determining exports as highly probable future exports is reviewed annually, at least.

See note 33.2 for more detailed information about cash flow hedge accounting and a sensitivity analysis of the cash flow hedge involving future exports.

#### **5.9. Write-off overpayments incorrectly capitalized**

As described in note 3, in the third quarter of 2014, the Company wrote off US\$2,527 of capitalized costs representing the estimated amounts that Petrobras had overpaid for the acquisition of property, plant and equipment.

To account for these overpayments, the Company developed an estimation methodology, as set out in note 3. Petrobras acknowledges the degree of uncertainty involved in the estimation methodology and continues to monitor the ongoing investigations and the availability of other information concerning the amounts it may have overpaid in the context of the payment scheme. If reliable information becomes available that indicates with sufficient precision that the Company's estimate should be modified, it will evaluate materiality and, if so, adjust.

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However, as previously discussed, the Company believes it has used the most appropriate methodology and assumptions to determine the amounts of overpayments incorrectly capitalized and there is no evidence that would indicate the possibility of a material change in the amounts written-off.

**5.10. Allowance for impairment of trade receivables**

Allowance for impairment of trade receivables is recognized when there is objective evidence that trade receivables are impaired. Such evidence includes insolvency, defaults, judicial recovery claims, a significant probability of a debtor filing for bankruptcy and others. See note 8 for more detailed information about allowance for impairment of trade receivables.

**6. New standards and interpretations**

**6.1. International Accounting Standards Board (IASB)**

**IFRS 9 Financial Instruments**

The International Financial Reporting Standard 9 Financial Instruments (IFRS 9), issued by the IASB, is mandatorily effective for annual periods beginning on or after January 1, 2018 and supersedes IAS 39 Financial Instruments: Recognition and Measurement (IAS 39).

IFRS 9 sets out, among others, new requirements for: classification and measurement of financial assets, measurement and recognition of expected credit losses on financial assets, changes in the terms of financial assets and financial liabilities, hedge accounting and related disclosures.

As permitted by IFRS 9, the company does not intend to restate prior periods with respect to classification and measurement (including impairment and modification of financial assets and liabilities) changes. Differences in the carrying amounts of financial assets and financial liabilities resulting from the adoption of IFRS 9 will be recognized in retained earnings at January 1, 2018. New hedge accounting requirements should generally be applied prospectively.

The impacts arising from IFRS 9 on the Company's equity at January 1, 2018 are immaterial. The principal impacts that IFRS 9 will have on the Company's financial statements are shown below:

**Classification and measurement**

IFRS 9 establishes a new classification approach for financial assets that reflects the business model in which assets are managed and their contractual cash flow characteristics.

#### **Modification of contractual cash flow of financial assets and liabilities**

IFRS 9 establishes that if a financial asset or liability measured at amortized cost has its terms modified and this change is not substantial, its gross carrying amount should reflect the discounted present value of its cash flows under the new terms using the original effective interest rate.

#### **Impairment of Financial Assets**

IFRS 9 replaces the incurred loss model in IAS 39 with an expected credit loss model.

The Company will apply the practical expedient of calculating the expected credit losses on short-term trade receivables using a provision matrix.

#### **Hedge Accounting**

IFRS 9 provides for new requirements with respect to hedge accounting such as the prohibition of voluntary discontinuation of the hedge accounting, changes in the measurement of hedge effectiveness that must take into account the time value of money, as well as the expansion of certain disclosure requirements.

All cash flow hedging relationships of highly probable future exports designated under IAS 39 also qualify for hedge accounting under IFRS 9 and are regarded as continuing hedging relationships.

IFRS 9 does not change the criteria for accounting for cash flow hedge.

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#### **IFRS 15 Revenue from Contracts with Customers**

On January 1, 2018, the International Financial Reporting Standard 15 Revenue from Contracts with Customers (IFRS 15) became effective. This Standard, issued by the IASB, supersedes a number of Standards and Interpretations, including IAS 18 Revenue.

The objective of this Standard is to establish the principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing and uncertainty of revenue and cash flows arising from a contract with a customer. This Standard should be applied to all contracts with customers, except to non-monetary exchanges between entities in the same line of business to facilitate sales to customers or potential customers, or when the transaction is within the scope of another Standard.

The requirements of IFRS 15 establish a comprehensive approach to determine when and in what amount of revenue from a contract with a customer that should be recognized. To achieve this, the newly enacted standard uses the following five step approach: 1) identify the contract with a customer; 2) identify the separate performance obligations in the contract; 3) determine the transaction price; 4) allocate the transaction price to the separate performance obligations in the contract, 5) recognize revenue when the entity satisfies a performance obligation. A performance obligation is satisfied when the customer obtains control of that good or service.

For the purposes of the transition requirements an entity shall apply this Standard using one of the following two methods: (i) retrospectively to each prior reporting period presented in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, subject to the practical expedients; or (ii) retrospectively with the cumulative effect of initially applying this Standard recognized at the date of initial application. The company intends to apply the second method as of January 1, 2018, and so far no cumulative effects have been identified to be recognized.

The changes in the Company's accounting policies arising from IFRS 15 only affect the way certain revenues from contracts with customers are disclosed within the statement of income and do not impact net income. In 2017, it would be equivalent to a 1.7% reduction in revenues. The main changes are the following:

#### **The Company acting as an agent**

In accordance with accounting policies at December 31, 2017, the Company is regarded as the principal in certain transactions. Therefore, the revenues from these sales, cost of the product sold and sales expenses are presented separately in the statement of income. However, under the new standard's requirements, the company acts as an agent because it does not obtain control of goods or services provided by another party before it is transferred to the customer. From January 1, 2018, revenues from these sales will be presented in the statement of income net of their cost of sales and sales expenses.



**Non-exercised right Income (breakage)**

In accordance with accounting policies at December 31, 2017, the Company regards the income from rights not exercised by customers in certain take or pay and ship or pay contracts as penalties revenue and presents it as other income and expenses in the statement of income. However, according to the new standard's requirements, the Company will account for and present its income from rights not exercised by customers as sales revenues in the statement of income, as from January 1, 2018.

**IFRIC 22 Foreign Currency Transactions and Advance Consideration**

As of January 1, 2018, the IFRIC Interpretation 22 Foreign Currency Transactions and Advance Consideration (IFRIC 22), issued by the IASB, became mandatorily applicable.

IFRIC 22 applies to a foreign currency transaction (or part of it) when an entity recognizes a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration before the entity recognizes the related asset, expense or income (or part of it). IFRIC 22 clarifies that the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

Based on the transition provisions of IFRIC 22, the Company will apply the new requirements prospectively from the effective date of the interpretation and did not identify any material impact on its financial statements.

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**IFRS 16 Leases**

On January 13, 2016, the IASB issued IFRS 16 Leases , which will become effective for the financial report period beginning on or after January 1, 2019, superseding the following standards and related interpretations: IAS 17 Leases; IFRIC 4 Determining whether an Arrangement contains a Lease; SIC-15 Operating Leases Incentives; and SIC-27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease.

IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases, from the lessees and lessors perspectives. This Standard shall be applied to all leases, except for:

Leases to explore for or use minerals, oil, natural gas and similar non-regenerative resources;

Leases of biological assets within the scope of IAS 41 Agriculture held by a lessee;

Service concession arrangements within the scope of IFRIC 12 Service Concession Arrangements;

Licenses of intellectual property granted by a lessor within the scope of IFRS 15 Revenue from Contracts with Customers; and

Rights held by a lessee under licensing agreements within the scope of IAS 38 Intangible Assets for such items as motion picture films, video recordings, plays, manuscripts, patents and copyrights.

Among the changes for lessees, IFRS 16 eliminates the classification of leases as either operating leases or finance leases as is required by IAS 17. Instead, it introduces a single lessee accounting model, in which all leases result in the recognition of a right to use an asset at the start of the lease. If lease payments are made over time, a financial liability will also be recognized. Accordingly, the adoption of IFRS 16 may cause a significant increase in assets and liabilities presented in statement of financial position.

Following the adoption of IFRS 16, lease payments under operating leases will not be charged to results on accrual basis. Instead, depreciation of the right to use a leased asset, as well as the finance expenses and foreign exchange gains or losses over the finance liability will affect the results. Finance expenses may qualify for borrowing costs capitalization in accordance with IAS 23 and foreign exchange gains and losses may be first recognized within equity if designated as hedge instrument, as set out in IFRS9.

For lessors, IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17. Accordingly, a lessor continues to classify its leases as operating leases or finance leases, and to account for those two types of leases differently.

The Company is assessing the impacts that IFRS 16 will have on its financial statements, is unable to make a reasonable estimation of those impacts at this stage of the implementation process. Once the estimated impact can be evaluated with sufficient reliability, it may result in the need to renegotiate the terms of certain debt instrument with BNDES (Brazilian Development Bank) and other financial institutions, especially regarding the covenants clauses related to debt level.

## 7. Cash and cash equivalents and Marketable securities

### Cash and cash equivalents

	<b>12.31.2017</b>	<b>12.31.2016</b>
Cash at bank and in hand	1,570	591
Short-term financial investments		
- In Brazil		
Brazilian interbank deposit rate investment funds and other short-term deposits	1,176	1,180
Other investment funds	17	131
	1,193	1,311
- Abroad		
Time deposits	6,237	3,085
Automatic investing accounts and interest checking accounts	11,287	9,780
U.S. Treasury bills		5,217
Other financial investments	2,232	1,221
	19,756	19,303
Total short-term financial investments	20,949	20,614
Total cash and cash equivalents	22,519	21,205

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The principal uses of funds in 2017 were for debt service obligations (US\$ 43,076) including pre-payment of debts, and capital expenditures (US\$ 13,639) and they were principally provided by operating activities (US\$ 27,708), proceeds from financing (US\$ 27,112) and disposal of assets (US\$ 3,091).

Short-term financial investments in Brazil primarily consist of investments in funds holding Brazilian Federal Government Bonds and related repo investments that mature within three months as of the date of their acquisition. Short-term financial investments abroad comprise time deposits that mature in three months or less from the date of their acquisition, highly-liquid automatic investment accounts, interest checking accounts and other short-term fixed income instruments.

**Marketable securities**

	12.31.2017			12.31.2016
	In Brazil	Abroad	Total	In Brazil
Trading securities	1,067		1,067	784
Available-for-sale securities	153	609	762	
Held-to-maturity securities	120		120	90
Total	1,340	609	1,949	874
Current	1,276	609	1,885	784
Non-current	64		64	90

Trading securities refer mainly to investments in Brazilian Federal Government Bonds. These financial investments have maturities of more than three months and are mostly classified as current assets due to their maturity or the expectation of their realization in the short term.

Available-for-sale securities in Brazil refer substantially to São Martinho's common shares granted to the wholly-owned subsidiary Petrobras Biocombustível S.A. PBIO (24 million shares) as consideration for PBIO's shares in Nova Fronteira. For further information on this transaction see note 10.3. Available-for-sale securities abroad refer to UK government bonds amounting to GBP 475 million and maturing in March 2018.

**8. Trade and other receivables****8.1. Trade and other receivables, net**

	<b>12.31.2017</b>	<b>12.31.2016</b>
Trade receivables -Third parties	6,995	6,128
Related parties		
Investees (note 19.1)	530	555
Receivables from the electricity sector (note 8.4) (*)	5,247	4,922
Petroleum and alcohol accounts -receivables from		
Brazilian Government (19.2)	251	268
Finance lease receivables	550	1,223
Receivables from divestments in the Nova		
Transportadora do Sudeste (note 10.1)	872	
Other receivables	1,647	1,650
	16,092	14,746
Allowance for impairment of trade and other receivables	(5,945)	(5,426)
<b>Total</b>	<b>10,147</b>	<b>9,320</b>
Current	4,972	4,769
Non-current	5,175	4,551

(\*) Includes the amount of US\$ 239 at December 31, 2017 (US\$ 251 at December 31, 2016) regarding finance lease receivable from Amazonas Distribuidora de Energia.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***8.2. Trade receivables overdue Third parties**

	<b>12.31.2017</b>	<b>12.31.2016</b>
Up to 3 months	596	403
From 3 to 6 months	52	67
From 6 to 12 months	83	411
More than 12 months	3,573	2,650
<b>Total</b>	<b>4,304</b>	<b>3,531</b>

**8.3. Changes in the allowance for impairment of trade and other receivables**

	<b>12.31.2017</b>	<b>12.31.2016</b>
Opening balance	5,426	3,656
Additions	843	1,325
Write-offs	(110)	(9)
Reversals	(135)	(171)
Cumulative translation adjustment	(79)	625
 Closing balance	 5,945	 5,426
 Current	 2,068	 2,010
Non-current	3,877	3,416

As established in IFRS 9, from 2018 onwards, impairment of trade receivables will be based on the expected credit loss model, no longer on the incurred loss, as set out in note 6.

On May, 22 2017, the Company terminated a finance lease agreement relating to the *Vitória* 10,000 drilling rig, owned by the indirect wholly-owned subsidiary Drill Ship International BV – DSI BV and leased to the Deep Black Drilling LLP – DBD, an entity from Schahin group. On July 19, 2017, a court ruling confirmed this contract termination and, shortly after, Schahin filed a request to suspend its effects, which was denied by the court on July 28, 2017.

Due to the finance lease agreement termination, the Company assessed the value in use of the drilling rig based on the cash flows projected to arise from its commitment to certain Petrobras Group projects, and compared it to the carrying amount of the finance lease receivable at June 30, 2017. As result, the Company wrote-down US\$ 254 as other

income and expenses in the second quarter of 2017.

In addition, on August 9, 2017, measures were adopted to obtain possession of this drilling rig, which effectively occurred on August 16, 2017. As a result of this matter, in the third quarter of 2017 the Company added US\$ 24 to the allowance for impairment due to additions to the finance lease receivable and contractual fine, as well as derecognized the finance lease receivable and recognized the drilling rig as equipment within Property, plant and equipment in the amount of US\$ 387.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***8.4. Trade receivables – electricity sector (isolated electricity system in the northern region of Brazil)**

	As of 12.31.2016	Sales	Amounts received	Transfers	Write-offs	Recognition allowance for impairment, net of Inflation reversals	indexation	CTA	As of 12.31.2017
<b>Related parties (Eletrobras Group)</b>									
Eletrobras Distribuição Amazonas AME-D	2,475	248	(549)	405		(277)	303	(42)	2,563
Centrais Elétricas de Rondônia CERON	369		(21)				34	(7)	375
Others	95	47	(50)		(18)	27	12	(1)	112
<b>Subtotal</b>	<b>2,939</b>	<b>295</b>	<b>(620)</b>	<b>405</b>	<b>(18)</b>	<b>(250)</b>	<b>349</b>	<b>(50)</b>	<b>3,050</b>
<b>Third parties</b>									
Cia de Gás do Amazonas Cigás	143	793	(395)	(405)		(3)	8		141
Centrais Elétricas do Pará Celpa		104	(129)		(8)	35			2
Others	4	210	(195)		(19)	8	2	(1)	9
<b>Subtotal</b>	<b>147</b>	<b>1,107</b>	<b>(719)</b>	<b>(405)</b>	<b>(27)</b>	<b>40</b>	<b>10</b>	<b>(1)</b>	<b>152</b>
<b>Trade receivables, net</b>	<b>3,086</b>	<b>1,402</b>	<b>(1,339)</b>		<b>(45)</b>	<b>(210)</b>	<b>359</b>	<b>(51)</b>	<b>3,202</b>
<b>Trade receivables – Eletrobras Group</b>									
(-) Allowance for impairment	4,922	295	(620)	405	(18)		349	(86)	5,247
	(1,983)					(250)		36	(2,197)
<b>Subtotal</b>	<b>2,939</b>	<b>295</b>	<b>(620)</b>	<b>405</b>	<b>(18)</b>	<b>(250)</b>	<b>349</b>	<b>(50)</b>	<b>3,050</b>
<b>Trade receivables – Third parties</b>									
(-) Allowance for impairment	515	1,107	(719)	(405)	(27)		10	(5)	476
	(368)					40		4	(324)
<b>Subtotal</b>	<b>147</b>	<b>1,107</b>	<b>(719)</b>	<b>(405)</b>	<b>(27)</b>	<b>40</b>	<b>10</b>	<b>(1)</b>	<b>152</b>



<b>Trade receivables Total</b>	5,437	1,402	(1,339)	(45)		359	(91)	5,723
(-) Allowance for impairment	(2,351)				(210)		40	(2,521)
Trade receivables, net	3,086	1,402	(1,339)	(45)	(210)	359	(51)	3,202

(\*) Transfer of overdue receivables from Cigás to AME, pursuant to the purchase and sale agreement of natural gas (upstream and downstream) entered into by Petrobras, Cigás and AME.

The Company supplies fuel oil, natural gas, and other products to entities that operate in the city of Manaus and in the isolated electricity system in the northern region of Brazil, such as thermoelectric power plants controlled by Eletrobras, state-owned natural gas distribution companies and independent electricity producers (*Produtores Independentes de Energia* - PIE). The isolated electricity system provides the public service of electricity distribution in the northern region of Brazil, as the Brazilian National Interconnected Power Grid (*Sistema Interligado Nacional*) has not yet met the demand for electricity.

The total cost of power generation to Manaus and the isolated electricity system includes the costs to products supplied by the Company. Local consumers partially cover these costs based on a threshold comprising the average cost of the energy and potency traded in the Regulated Procurement Environment (*Ambiente de Contratação Regulada* - ACR). Most of the funds for the payment for these costs comes from the Fuel Consumption Account (*Conta de Consumo de Combustível* - CCC), a component of the Brazilian Energy Development Account (*Conta de Desenvolvimento Energético* - CDE).

The regulation of CCC and CDE underwent some changes in the last few years, notably the ones arising from Provisional Measure 579/2012, signed into Law No. 12,783/2013, and to Provisional Measure 735/2016, signed into Law No. 13,360/2016.

These changes, along with supervision procedures carried out run by the Brazilian National Electricity Agency (*Agência Nacional de Energia Elétrica* - ANEEL) over these accounts and its beneficiaries (power plants controlled by Eletrobras) caused instability and decrease in amount of funds transferred from CCC since 2013, which increased the default rate of those customers to the Company, notably relating to Eletrobras Distribuição Amazonas (AME-D).

The Company intensified negotiations with the state-owned natural gas distribution companies, the independent electricity producers (PIEs), other private companies and entities controlled by Eletrobras. As a result, on December 31, 2014, the Company entered into debt acknowledgement agreements with subsidiaries of Eletrobras with respect to the balance of its receivables as of November 30, 2014. Eletrobras acknowledged it owed US\$ 2,202 to the Company, of which US\$ 1,889 were collateralized by payables from the CDE to the CCC. This amount has been adjusted by the Selic interest rate (Brazilian short-term interest rate) on a monthly basis and the first of 120 monthly installments was paid in February 2015.

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The contractual amortization clauses in the debt acknowledgement agreements establish the payment of 15% of the amount of renegotiated debt within 36 months and the remaining 85% to be paid in 84 installments beginning in January 2018. Therefore, the Company expects the balance of trade receivables from the electricity sector will decrease from 2018 onwards, which did not occur until December 31, 2017 due to the characteristics of its initial amortizations along with its indexation. Despite some periodic delays, these payments have continued.

Considering the restructuring of the electricity sector and the expected effects arising from the Normative Instruction 679/2015 enacted by ANEEL, the Company expected a decrease on these defaults rates, which actually did not occur.

Accordingly, the Company has adopted measures to reduce the default rate, mainly:

Judicial collection of overdue receivables from companies of Eletrobras Group, with respect to fuel oil, natural gas and other liquid fuels;

Suspension of fuels supply on credit;

Register of entities controlled by Eletrobras as delinquent companies in the Brazilian public sector records of overdue receivables; and

Register of AME as a delinquent company in ANEEL records from April 2016 to May 2017. In May 2017, ANEEL canceled this registration alleging fuel purchases are non intra sector debt. The Company appealed the ANEEL decision.

In 2017, the Company accounted for allowances for impairment of trade receivables, net of reversals, totaling US\$ 210 (US\$ 345 in 2016) primarily due to partial defaults relating to supplies of natural gas, partially offset by overdue receivables paid by CELPA.

Moreover, the Company has negotiated with Eletrobras the settlement of the receivables relating to Eletrobras Group. The Company is assessing the provisions approved at Eletrobras Shareholders General Meeting, held on February 8, 2018, primarily the segregation of operating segments and the privatization of companies controlled by Eletrobras.

**9. Inventories**

	<b>12.31.2017</b>	<b>12.31.2016</b>
Crude oil	3,647	3,524
Oil products	2,814	2,649
Intermediate products	613	700
Natural gas and LNG (*)	67	134
Biofuels	173	211
Fertilizers	25	26
<b>Total products</b>	<b>7,339</b>	<b>7,244</b>
Materials, supplies and others	1,150	1,243
<b>Total</b>	<b>8,489</b>	<b>8,487</b>
<b>Current</b>	<b>8,489</b>	<b>8,475</b>
<b>Non-current</b>		<b>12</b>

(\*) Liquefied Natural Gas

In 2017, the Company recognized as cost of sales US\$ 66 reducing inventories to net realizable value (US\$ 343 in 2016).

In 2017, the Company had pledged crude oil and oil products volumes as collateral for the Terms of Financial Commitment (TFC) signed by Petrobras and Petros in 2008, in the amount of US\$ 4,067 (US\$ 1,979 as of December 31, 2016), as set out in note 22. In the third quarter of 2017, the amount of collateral was revised and updated in order to reflect the increase in commitments undertaken under the TCF.

#### **10. Disposal of Assets and other changes in organizational structure**

The Company has an active partnership and divestment program which takes into account opportunities for divestments in several areas in which it operates. The divestment portfolio is dynamic, meaning that market conditions, legal matters and negotiations may affect the Company's evaluation of ongoing and potential transactions. This program is an essential initiative in the Company's 2018-2022 Business and Management Plan (2018-2022 BMP) which, along with other initiatives, will enable the Company to reduce and improve its indebtedness and debt profile, respectively. For the 2017-2018 period, the target of proceeds from divestments is US\$ 21 billion.

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On December 7, 2016, the Brazilian Federal Auditor's Office (*Tribunal de Contas da União - TCU*) filed a civil action prohibiting the Company from commencing additional divestment projects and entering into sales agreements, except for transactions in their final stages at that time.

After the TCU's assessment of the divestments decision-making methodology and the Company's review of its divestment policies, the TCU's civil action was dismissed, allowing the partnership and divestment program to continue based on the Company's revised methodology.

Accordingly, the Company's Executive Board approved the new divestment portfolio on March 30, 2017, consisting of projects that follow the revised divestment methodology in compliance with the TCU's decision.

#### **10.1. Disposal of assets**

##### **Disposal of distribution assets in Chile**

On July 22, 2016, the Company signed a sale and purchase agreement with the Southern Cross Group for the sale of 100% of Petrobras Chile Distribución Ltda (PCD), a group entity from the distribution business segment, held through Petrobras Caribe Ltda.

This transaction was concluded on January 4, 2017 and the net proceeds from this sale were US\$ 470, of which US\$ 90 was received via distribution of dividends after taxes on December 9, 2016 and the remaining US\$ 380 was paid by Southern Cross Group at the transaction closing. Accordingly, the Company recognized a gain of US\$ 0.8 as other income and expenses, in the first quarter of 2017, taking into account the impairment of US\$ 82 at December 31, 2016.

In addition, a US\$ 79 loss was recycled from shareholders' equity to other income and expenses within the income statement, reflecting the reclassification of cumulative translation adjustments resulting from the depreciation of the Chilean Peso against the U.S Dollar from the time of the acquisition of this investment to its disposal (see note 23.4).

##### **Disposal of interest in Nova Transportadora do Sudeste (NTS) and related changes in organizational structure**

On September 22, 2016, the Company's Board of Directors approved the sale of a 90% interest in Nova Transportadora do Sudeste - NTS, a group entity from the gas and power business segment, to Brookfield Infrastructure Partners (BIP) and its affiliates, through a Private Equity Investment Fund (FIP) whose other shareholders are British Columbia Investment Management Corporation (BCIMC), CIC Capital Corporation (wholly-owned subsidiary of China Investment Corporation - CIC) and GIC Private Limited (GIC). The disposal occurred after a corporate restructuring intended to concentrate the transportation assets of the southeastern region in NTS.

The corporate restructuring of NTS comprised an increase in its share capital in the amount of US\$ 711, through net assets of the Company's subsidiary Transportadora Associada de Gás S.A. TAG. Subsequently TAG had a reduction in its share capital, in the amount of its investment in NTS (US\$ 800), which was transferred to Petrobras. This restructuring maintained the same terms of the Firm Gas Transportation Agreements associated to the assets involved on the transaction.

On April 4, 2017, after performing all conditions precedent and adjustments provided for in the purchase and sale agreement, this transaction was completed in the amount of US\$ 5.08 billion upon the payment of US\$ 4.23 billion on this date, made up of: US\$ 2.59 billion from the sale of shares, of which US\$ 109 was allocated to an escrow account pledged as collateral for charges associated with the repair of pipelines; and US\$ 1.64 billion relates to the issuance of convertible debentures by NTS, maturing in 10 years, as a replacement of the debt to PGT. The remaining balance (US\$ 850, also relating to the sale of shares) will be paid in the fifth year, bearing annual interests at a fixed rate, as established in the purchase and sale agreement.

At the transaction closing, the Company recognized a gain on this transaction in the amount of US\$ 2,169 accounted for as other income and expenses, which includes a US\$ 217 gain on the remeasurement at fair value of the remaining 10% interest in NTS.

On October 10, 2017, the final price adjustment was settled in the amount of US\$ 20, totaling a gain of US\$ 2,189 on this transaction.

#### **Disposal of Guarani**

On December 28, 2016, the Company's wholly-owned subsidiary in the biofuels business segment Petrobras Biocombustível S.A. (PBIO) disposed of its interests in the associate Guarani S.A. (45.97% of share capital) to Tereos Participations SAS, an entity of the French group Tereos.

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On February 3, 2017, this transaction was concluded pursuant to the payment of US\$ 203, after all conditions precedent were performed by Tereos Participations S.A. In 2016, impairment losses amounting to US\$ 118 were accounted for as results in equity-accounted investments with respect to Guarani.

Additionally, a gain of US\$ 42 was recycled from shareholders' equity to other income and expenses within the income statement, reflecting the reclassification of cumulative translation adjustment resulting from the appreciation of Mozambican Metical against the Brazilian Real from the acquisition of this investment to its disposal (see note 23.4). This gain was partially offset by a US\$ 22 loss also recycled from shareholders' equity to other income and expenses reflecting cumulative losses relating to cash flow hedge accounting.

#### **Disposal of Liquigás**

On November 17, 2016 the Company's Board of Directors approved the disposal of its wholly-owned subsidiary Liquigás Distribuidora S.A, a group entity from the RT&M business segment (Refining, Transportation and Marketing), to Companhia Ultragaz S.A., a subsidiary of Ultrapar Participações S.A. In January 2017, this sale was approved at Ultrapar's and Petrobras' Shareholders' Meetings in the amount of US\$ 828.

According to an official statement released by the General Superintendence of CADE (SG) on June 30, 2017, additional diligence was required in order to make a decision regarding on market concentration aspects of this sale. On August 28, 2017, the SG reported some concerns about market concentration that may result from this transaction and submitted its opinion to the CADE court.

Based on pending conditions precedent to the transaction, including CADE approval, the related assets and liabilities remained classified as held for sale as of December 31, 2017.

On February 28, 2018, the CADE court ruled on this matter and dismissed this sale. This decision is subject to a termination clause within the sales and purchase agreement that provides for compensation to the Company, amounting to US\$ 88, which were received on March 13, 2018.

#### **Disposal of Suape and Citepe petrochemical plants**

On December 28, 2016, the Company's Board of Directors approved the disposal of the interests in the wholly-owned subsidiaries Companhia Petroquímica de Pernambuco (PetroquímicaSuape) and Companhia Integrada Têxtil de Pernambuco (Citepe), both from the RT&M business segment, to Grupo Petrotemex S.A. de C.V. and to Dak Americas Exterior, S.L., both subsidiaries of Alpek, S.A.B. de C.V., which is a company from Grupo Alfa S.A.B. de C.V. (a Mexican public company), in the amount of US\$ 385, which will be fully disbursed at the transaction closing. This amount remains subject to adjustments relating to working capital, net debt and recoverable taxes.

On February 21, 2017, the transaction was approved at the Grupo Alfa's Board of Directors Meeting and, on March 27, 2017, at Petrobras' Shareholders' Meeting.

According to an official statement released by the General Superintendence of CADE (SG) on October 10, 2017, additional diligence was required in order to conclude on market concentration aspects of this sale. On December 15, 2017, the SG concluded its opinion, recommending to the CADE Court the approval of this transaction subject to the execution of an Agreement on Concentration of Control (*Acordo de Controle de Concentração - ACC*).

Due to some customary conditions precedent to its closing, including the CADE approval, the related assets and liabilities remained classified as held for sale at December 31, 2017.

On February 7, 2018, the CADE approved this transaction, however, other customary conditions precedent are still pending to date.

### **Strategic alliance with Total**

On December 21, 2016, the Company entered into a master agreement with Total, in connection with the Strategic Alliance established in the Memorandum of Understanding signed on October 24, 2016. Accordingly, certain E&P assets were classified as held for sale at December 31, 2016 due to the share of interests established in this agreement, as described below:

Transfer of the Company's 22.5% stake in the concession area named as Iara, comprising Sururu, Berbigão and West of Atapu fields, which are subject to unitization agreements with Entorno de Iara (an area under the Assignment Agreement in which the Company holds 100% and is located in the Block BM-S-11). The Company will continue to operate the block;

Transfer of the Company's 35% stake in the concession area of Lapa field, located in the Block BM-S-9. Total will also become the operator and the Company will retain a 10% interest in this area; and

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Transfer of the Company's 50% interests in Termobahia S.A, including the power plants Celso Furtado and Rômulo Almeida. In 2016, the Company recognized an impairment loss on this transaction in the amount of US\$ 47.

On February 28, 2017, the Company and Total signed purchase and sale agreements with respect to the aforementioned assets. Total will pay to the Company the amount of US\$ 1,675 in cash for assets and services, subject to price adjustments, as well as contingent payments in the amount of US\$ 150, associated with the production volume in Lapa field. In addition, a long-term line of credit in the amount of US\$ 400 will be provided by Total, which may be used to fund the Company's investments in the Iara fields.

The aforementioned agreements supplement the ones already executed on December 21, 2016, such as: (i) the Company's preemptive right to purchase a 20% interest in block 2 of the Perdido Foldbelt area, in the Mexican sector of the Gulf of Mexico, (ii) the joint exploration studies in the exploratory areas of Equatorial Margin and in Santos Basin; and (iii) the Technological partnership agreement in the areas of digital petrophysics, geological processing and subsea production systems.

At December 31, 2017, these transactions were still subject to approval by the relevant authorities, the potential exercise of preemptive rights by current Iara partners, and other customary conditions precedent. Accordingly, the related assets and liabilities were classified as held for sale at December 31, 2017.

On January 15, 2018, Petrobras and Total closed the aforementioned transfers of interests of Iara and Lapa fields, after performing all conditions precedent to this transaction.

This transaction totaled US\$ 1.95 billion, including price adjustments, but not including the long-term line of credit and the contingent payments.

The closing of the power plants deal is still subject to approval by the relevant authorities and other customary conditions precedent.

**Initial public offering (IPO) of Petrobras Distribuidora (BR)**

On July 11, 2017, the Company's Board of Directors approved an IPO of its subsidiary Petrobras Distribuidora (BR) through a secondary public offering of common shares, aiming at joining the market tier in the Brazilian stock exchange that requires the highest level of corporate governance, so named New Market (*Novo Mercado*).

Accordingly, on September 5, 2017, the Extraordinary General Shareholder's Meeting of BR approved the changes in its bylaws taking into account relevant rules governing the requirements needed to join the New Market tier (Law 13.303/2016 and Decree 8.945/2016).



On December 14, 2017, the Brazilian Securities and Exchange Commission (CVM) accepted the registration of the public offering of secondary distribution of common shares for Petrobras Distribuidora (BR), held the following day in Brazil, in the non-organized over-the-counter market, pursuant to applicable rules.

The Final Prospectus of the Offering reported the sale of 291,250,000 common shares ( Base Lot ) at the price of US\$ 4.50 dollars per share. This offering was increased by an additional lot of 43,687,500 shares, as allowed for in the Final Prospectus, under the same conditions and at the same price of issue as initially offered ( Additional Lot ).

The offering was closed on December 22, 2017, with a total distribution of 334,937,500 shares, in the total amount of US\$ 1,507, representing a 28.75% stake of BR equity. Considering the book value of the investment, in the proportion of the disposed shares, and the transaction costs, the final gain totaled US\$ 719, US\$ 479 net of taxes, accounted for within equity, since the Company has kept the control of BR, as set out in note 23.2.

	<b>Basis Lot</b>	<b>Additional Lot</b>	<b>Total</b>
% of disposed stake	25.00%	3.75%	28.75%
Number of shares	291,250,000	43,687,500	334,937,500
Offering price of common shares (in U.S. dollars)	4.50	4.50	4.50
Value of the offering	1,310	197	1,507
Book value of the disposed shares	(654)	(98)	(752)
Transaction costs	(31)	(5)	(36)
Gain accounted for in equity	625	94	719

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#### **Sale of Azulão field**

On November 22, 2017, the Company entered into an agreement with Parnaíba Gás Natural S.A., a subsidiary of Eneva S.A, concerning the assignment of its entire participation in the Azulão Field (Concession BA-3), located in the state of Amazonas. The total amount of the operation is US\$ 54.5 and will be paid at the transaction closing.

The completion of this deal is subject to the fulfillment of usual conditions precedent, including approval by ANP. Accordingly, the related assets and liabilities were classified as held for sale at December 31, 2017.

#### **Strategic alliance with Statoil**

On December 18, 2017, the Company entered into agreements with the Norwegian company Statoil relating to the assets of the strategic partnership, in continuity with the Heads of Agreement ( HoA ) signed and disclosed on September 29, 2017. The main signed contracts are:

- (i) Strategic Alliance Agreement ( SAA ) agreement describing all documents related to the strategic partnership, covering all negotiated initiatives.
- (ii) Sale and Purchase Agreement ( SPA ) sale of 25% of Petrobras interest in the Roncador field to Statoil.
- (iii) Strategic Technical Alliance Agreement ( STAA ) strategic agreement for technical cooperation aiming at maximizing the value of the asset and focusing on increasing the recoverable oil volume (recovery factor), including the extension of the useful life of the field;
- (iv) Gas Term Sheet Statoil may hire a certain processing capacity of natural gas at the Cabiúnas Terminal (TECAB) for the development of the BM-C-33 area, where the companies already are partners and Statoil is the operator.

The strategic alliance, among other goals, aims at applying the Statoil's expertise in mature fields in the North Sea towards increasing the recovery factor of Roncador field. Accordingly, the parties signed the STAA for technical cooperation and the joint development of projects.

The SPA has a total amount of US\$ 2.9 billion, made up of US\$ 118 paid at the execution date of the agreement, contingent payments relating to investments in projects to increase the recovery factor of the field, limited to US\$ 550, and the remaining amount will be paid at the transaction closing. Accordingly, the related assets and liabilities remained classified as held for sale at December 31, 2017 and, as a result, an impairment charge was recognized, as set out in note 14.1.

On March 13, 2018, the CADE approved this transaction. However, its closing still depends on the fulfillment of other conditions precedent, such as the approval of ANP.

**10.2. Assets classified as held for sale**

The major classes of assets and liabilities classified as held for sale are shown in the following table:

	12.31.2017				12.31.2016	
	E&P Distribution	RT&M	Gas & Power	Total	Total	Total
<b>Assets classified as held for sale</b>						
Cash and Cash Equivalents			8		8	109
Trade receivables			117		117	205
Inventories			128		128	172
Investments			5		5	378
Property, plant and equipment	4,370	1	285	95	4,751	4,420
Others			309		309	444
<b>Total</b>	<b>4,370</b>	<b>1</b>	<b>852</b>	<b>95</b>	<b>5,318</b>	<b>5,728</b>
<b>Liabilities on assets classified as held for sale</b>						
Trade Payables	29		73		102	135
Finance debt						14
Provision for decommissioning costs	170				170	52
Others			119		119	291
<b>Total</b>	<b>199</b>		<b>192</b>		<b>391</b>	<b>492</b>

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As of December 31, 2017, the amounts mainly refer to assets and liabilities transferred following the approvals of the disposal of Liquigás, Petroquímica Suape and Citepe, interest in the concession areas named as Iara and Lapa, as well as interests in the thermoelectric power generation plants Rômulo Almeida and Celso Furtado, 25% Roncador field and entire shareholding Azulão field. At December 31, 2016, the amounts also comprise assets and liabilities transferred following the approvals of the disposals of NTS, PCD, Guarani and Nova Fronteira.

### **10.3. Other changes in organizational structure Corporate restructuring in Petrobras Distribuidora (BR)**

In preparation for the IPO of BR, on August 25, 2017, the Company's Board of Directors approved the corporate restructuring of BR through the following transactions:

On August 31, 2017, Petrobras Parent Company increased the share capital of BR by US\$ 2,006 in order to prepay borrowings owned by BR and unconditionally guaranteed by Petrobras; and

Partial split-off of BR into the wholly-owned subsidiary Downstream Participações Ltda. ( Downstream ). The split-off relates to the collateralized receivables held by BR resulting from debt acknowledgement agreement with the Eletrobras group and other receivables from other entities of Petrobras Group also held by BR, totaling the same amount of the aforementioned capital increase. These assets were incorporated by Downstream on August 31, 2017.

#### **Sale and merger of Nova Fronteira Bioenergia**

On December 15, 2016, the Company's wholly-owned subsidiary PBIO (biofuels business segment) entered into an agreement with the São Martinho group to merge PBIO's interests in Nova Fronteira Bioenergia S.A. (49%) into São Martinho.

On February 23, 2017, São Martinho granted to PBIO additional 24 million of its common shares, corresponding to 6.593% of its total capital. These shares were accounted for as available-for-sale securities, as set out in note 7.

On December 27, 2017, the Extraordinary General Shareholder's Meeting of PBIO approved the sale of these shares through a block trade.

On February 16, 2018, PBIO disposed, through a public auction held in the Brazilian stock exchange, these 24 million of shares, at the share price of US\$ 5.72 dollars. The settlement of the transaction occurred on February 21, 2018,

closing the complete disposal of PBIO's interests in São Martinho's capital.

#### 10.4. Cash flows from sales of interest with loss of control

As shown in note 10.1, among other transactions in the scope of the Divestment and Venture Plan, in 2017 the Company disposed of its interest in certain subsidiaries over which control was lost. The following table summarizes cash flows arising from losing control in subsidiaries:

	<b>Cash received</b>	<b>Cash in subsidiary before losing control</b>	<b>Net Proceeds</b>
NTS	2,481	(88)	2,393
Petrobras Chile Distribución	470	(104)	366
<b>Total</b>	<b>2,951</b>	<b>(192)</b>	<b>2,759</b>

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*(Expressed in millions of US Dollars, unless otherwise indicated)***11. Investments****11.1. Information on direct subsidiaries, joint arrangements and associates**

	Main business segment	% Petrobras ownership	% Petrobras voting rights	Shareholders equity (deficit)	Net income (loss)for the year	Country
<b>Subsidiaries</b>						
Petrobras Netherlands B.V. - PNBV						
(i)	E&P	100.00	100.00	27,120	2,568	Netherlands
Petrobras Distribuidora S.A. - BR	Distribution	71.25	71.25	2,668	360	Brazil
Petrobras International Braspetro - PIB BV (i) (ii)	Several segments(iii)	100.00	100.00	8,197	(1,700)	Netherlands
Petrobras Transporte S.A. - Transpetro	RT&M	100.00	100.00	1,278	38	Brazil
Petrobras Logística de Exploração e Produção S.A. - PB-LOG	E&P	100.00	100.00	1,189	247	Brazil
Transportadora Associada de Gás S.A. - TAG	Gas & Power	100.00	100.00	3,766	731	Brazil
Petrobras Gás S.A. - Gaspetro	Gas & Power	51.00	51.00	590	81	Brazil
Petrobras Biocombustível S.A.	Biofuels	100.00	100.00	451	50	Brazil
Petrobras Logística de Gás - Logigás	Gas & Power	100.00	100.00	188	98	Brazil
Liquigás Distribuidora S.A.	RT&M	100.00	100.00	294	33	Brazil
Araucária Nitrogenados S.A.	Gas & Power	100.00	100.00	53	(152)	Brazil
Termomacaé Ltda.	Gas & Power	100.00	100.00	26	(188)	Brazil
Braspetro Oil Services Company - Brasoil (i)	Corporate	100.00	100.00	176	9	Cayman Islands
Breitener Energética S.A.	Gas & Power	93.66	93.66	219	14	Brazil
Companhia Integrada Têxtil de Pernambuco S.A. - CITEPE	RT&M	100.00	100.00	81	(56)	Brazil

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Termobahia S.A.	Gas & Power	98.85	98.85	185	19	Brazil
Companhia Petroquímica de Pernambuco S.A. - PetroquímicaSuape	RT&M	100.00	100.00	(3)	(26)	Brazil
Baixada Santista Energia S.A.	Gas & Power	100.00	100.00	98	30	Brazil
Petrobras Comercializadora de Energia Ltda. - PBEN	Gas & Power	99.91	99.91	28	4	Brazil
Fundo de Investimento Imobiliário RB Logística - FII	E&P	99.20	99.20	45	14	Brazil
Petrobras Negócios Eletrônicos S.A. - E-Petro	Corporate	100.00	100.00	11	1	Brazil
Termomacaé Comercializadora de Energia Ltda	Gas & Power	99.99	99.99	3		Brazil
5283 Participações Ltda.	Corporate	100.00	100.00			Brazil
PDET Offshore S.A.	Corporate	100.00	100.00	(51)	(53)	Brazil
<b>Joint operations</b>						
Fábrica Carioca de Catalizadores S.A. - FCC	RT&M	50.00	50.00	77	22	Brazil
Ibiritermo S.A.	Gas & Power	50.00	50.00	56	12	Brazil
<b>Joint ventures</b>						
Logum Logística S.A.	RT&M	17.14	17.14	315	(47)	Brazil
Cia Energética Manauara S.A.	Gas & Power	40.00	40.00	39	2	Brazil
Petrocoque S.A. Indústria e Comércio	RT&M	50.00	50.00	56	19	Brazil
Refinaria de Petróleo Riograndense S.A.	RT&M	33.20	33.20	54	33	Brazil
Brasympe Energia S.A.	Gas & Power	20.00	20.00	25	2	Brazil
Brentech Energia S.A.	Gas & Power	30.00	30.00	26	1	Brazil
Metanol do Nordeste S.A. - Metanor	RT&M	34.54	34.54	8	1	Brazil
Eólica Mangue Seco 4 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	13	2	Brazil
Eólica Mangue Seco 3 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	13	1	Brazil
Eólica Mangue Seco 1 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	49.00	49.00	12	1	Brazil
Eólica Mangue Seco 2 - Geradora e Comercializadora de Energia Elétrica S.A.	Gas & Power	51.00	51.00	12	1	Brazil
Companhia de Coque Calcinado de Petróleo S.A. - Coquepar	RT&M	45.00	45.00	(2)	(3)	Brazil
Participações em Complexos Bioenergéticos S.A. - PCBIOS	Biofuels	50.00	50.00			Brazil

<b>Associates</b>						
Sete Brasil Participações S.A. (iv)	E&P	5.00	5.00	(6,789)	(81)	Brazil
Fundo de Investimento em Participações de Sondas - FIP Sondas	E&P	4.59	4.59		(1)	Brazil
Braskem S.A. (v)	RT&M	36.20	47.03	2,352	1,158	Brazil
UEG Araucária Ltda.	Gas & Power	20.00	20.00	158	(16)	Brazil
Deten Química S.A.	RT&M	27.88	27.88	119	19	Brazil
Energética SUAPE II	Gas & Power	20.00	20.00	98	38	Brazil
Termoelétrica Potiguar S.A. - TEP	Gas & Power	20.00	20.00	33		Brazil
Nitroclor Ltda.	RT&M	38.80	38.80			Brazil
Bioenergética Britarumã S.A.	Gas & Power	30.00	30.00			Brazil
Nova Transportadora do Sudeste - NTS	Gas & Power	10.00	10.00	1,192	433	Brazil

- (i) Companies abroad with financial statements prepared in foreign currencies.
- (ii) 5283 Participações Ltda holds 0.0034% interest.
- (iii) Cover segments abroad in E&P, RTM, Gas & Power and Distribution segments.
- (iv) Despite the negative amount of net assets, allowance for losses was not recognized as the Company's obligations with Sete Brasil are limited to the investments made in this associate.
- (v) Equity and net income at September 30, 2017.



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The main investees of PNBV are: Tupi BV (65%), Guar BV (45%), Agri Development BV (90%), Libra (40%), Papa Terra BV (62.5%). They are dedicated to construction and lease of equipment and platforms for Brazilian E&P consortiums and are incorporated under the law of The Netherlands. PNBV's interests in these entities comprise the voting rights. In addition, Tupi BV and Guar BV have 100% interest in Iara BV and Lapa BV, respectively.

The main investees of PIB BV are the wholly-owned subsidiaries Petrobras Global Trading B.V. - PGT, Petrobras Global Finance B.V. - PGF; Petrobras America Inc. - PAI. PGT is incorporated under the law of The Netherlands and is dedicated to the trade of oil, oil products, biofuels and LNG (liquefied natural gas), as well as to the funding of its activities in light of Petrobras Group. PGF also is incorporated under the law of The Netherlands and is the finance subsidiary of Petrobras Group, raising funds through bonds issued in the international market. PAI is incorporated under the law of United States and is dedicated to E&P and refining activities (Pasadena). In addition, Petrobras Oil & Gas B.V. - PO&G is a joint venture incorporated under the law of The Netherlands dedicated to E&P business in Africa, of which PIB BV has 50% stake.

Gaspetro holds interests in several state distributors of natural gas in Brazil that carry out, by means of concessions, public service of distribution of piped natural gas.

**11.2. Investments in associates and joint ventures**

	Balance at 12.31.2016	Investments	Restructuring, capital decrease and others	Results in equity- accounted investments	CTA	OCI	Dividends	Balance at 12.31.2017
<b>Joint Ventures</b>								
Petrobras Oil & Gas B.V. - PO&G	1,428			133			(151)	1,410
State-controlled natural gas distributors	330			80	(5)		(60)	345
Compaia Mega S.A. - MEGA	36			25	(1)		(11)	49
Petrochemical joint ventures	25			9	(1)		(4)	29
Other joint ventures	103	100	(5)	(81)		3	(16)	104
<b>Associates</b>								
Nova Transportadora do Sudeste			357	43	(8)		(61)	331
Petrochemical associates	1,064		(55)	464	(32)	131	(111)	1,461

<b>Other associates</b>	50		(3)	13	(1)		(11)	48
Other investments	16	4	(1)		(1)			18
Total	3,052	104	293	686	(49)	134	(425)	3,795
Results in investees transferred to assets held for sale				(13)				
Results in equity-accounted investments				673				

### 11.3. Investments in non- consolidated listed companies

Associate	Thousand-share lot		Type	Quoted stock exchange prices (US\$ per share)		Market value	
	12.31.2017	12.31.2016		12.31.2017	12.31.2016	12.31.2017	12.31.2016
Braskem S.A.	212,427	212,427	Common	13.15	9.20	2,794	1,955
Braskem S.A.	75,762	75,762	Preferred A	12.96	10.51	982	796
						3,776	2,751

Since July 2017, the Company has begun negotiations with Odebrecht S.A. to revise the terms and conditions of the Braskem S.A. Shareholder's Agreement, signed on February 8, 2010. This revision aims to improve Braskem's corporate governance and the corporate relationship between the parties, with the purpose of creating value for all Braskem shareholders. The negotiations are still in their preliminary stages and they aim at a corporate restructuring with a unification of Braskem's shares classes.

The market value of these shares does not necessarily reflect the realizable value upon sale of a large block of shares.

The main estimates used in the cash flow projections to determine the value in use of Braskem are set out in Note 14 to the Financial Statements as of December 31, 2017.

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The total amount of non-controlling interest at December 31, 2017 is US\$ 1,700 (US\$ 771 in 2016) primarily comprising US\$ 792 of Petrobras Distribuidora, US\$ 289 of Gaspetro (US\$ 281 in 2016), US\$ 76 of Transportadora Brasileira Gasoduto Brasil-Bolívia TBG (US\$ 99 in 2016), and US\$ 284 refer to Consolidated Structured Entities (US\$ 175 in 2016).

Condensed financial information is set out as follows:

	Gaspetro		Consolidated Structured entities (*)		TBG		BR Distribuidora
	2017	2016	2017	2016	2017	2016	2017
Current assets	80	83	728	745	140	329	3,235
Long-term receivables	74	84	1,106	1,673	1	1	2,042
Investments	406	392					11
Property, plant and equipment	1	1		85	594	640	1,758
Other non-current assets	89	93			2	3	137
	650	653	1,834	2,503	737	973	7,183
Current liabilities	24	46	226	508	248	394	1,334
Non-current liabilities	36	33	1,322	1,820	335	377	3,181
Shareholders' equity	590	574	286	175	154	202	2,668
	650	653	1,834	2,503	737	973	7,183
Sales revenues	111	96			462	423	26,483
Net income	75	72	106	287	265	243	330
Increase (decrease) in cash and cash equivalents	15	1	57	11	204	187	(49)

(\*) Comprises Charter Development LLC CDC and Companhia de Desenvolvimento e Modernização de Plantas Industriais CDMPI S.A. At December 31, 2016 also includes PDET Offshore S.A., which became a subsidiary in 2017.

Petrobras Distribuidora (BR) is a company which has as its corporate purpose the distribution, transportation, trade and industrialization of oil products, other fuels and several forms of energy, and is controlled by Petrobras, which holds a 71.25% interest. See note 10.1 for information on the public offering of BR in December 2017.

Gaspetro, a Petrobras subsidiary, holds interests in several state distributors of natural gas in Brazil. The Company holds 51% of interests in this indirect subsidiary.

TBG is an indirect subsidiary which operates in natural gas transmission activities mainly through Bolivia-Brazil Gas Pipeline. The Company holds 51% of interests in this indirect subsidiary.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***11.5. Summarized information on joint ventures and associates**

The Company invests in joint ventures and associates in Brazil and abroad, whose activities are related to petrochemical companies, gas distributors, biofuels, thermoelectric power plants, refineries and other activities. Condensed financial information is set out below:

	2017				2016			
	Joint ventures		Associates		Joint ventures		Associates	
	In		Other	Other	In		Other	Other
	Brazil	PO&G	companies	companies	Brazil	PO&G	companies	companies
			abroad	in			abroad	in
				Brazil				Brazil
Current assets	938	625	72	5,729	1,016	835	152	5,214
Non-current assets	502	71	1	1,454	558	35	21	1,647
Property, plant and equipment	897	3,706	8	9,342	867	3,304	19	9,344
Other non-current assets	725			980	720	1		957
	3,062	4,402	81	17,505	3,161	4,175	192	17,162
Current liabilities	1,005	276	29	5,973	1,226	391	84	4,296
Non-current liabilities	639	2,197	1	16,172	499	1,819	1	18,613
Shareholders equity	1,418	1,929	51	(4,390)	1,436	1,965	107	(4,789)
Non-controlling interest				(250)				(958)
	3,062	4,402	81	17,505	3,161	4,175	192	17,162
Sales revenues	3,208	557	145	15,790	2,696	770	331	14,156
Net Income (loss) for the year	160	272	26	1,338	185	63	68	(1,292)
Ownership interest %	20 to 83%	50%	34 to 50%	5 to 49%	20 to 83%	50%	34 to 50%	5 to 49%



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*(Expressed in millions of US Dollars, unless otherwise indicated)***12. Property, plant and equipment****12.1. By class of assets**

	<b>Land, buildings and improvement</b>	<b>Equipment and other assets (*)</b>	<b>Assets under construction (**)</b>	<b>Exploration and development costs (oil and gas producing properties) (***)</b>	<b>Total</b>
Balance at January 1, 2016	6,100	73,893	37,610	43,694	161,297
Additions	110	917	11,846	203	13,076
Additions to / review of estimates of decommissioning costs				937	937
Capitalized borrowing costs			1,724		1,724
Write-offs	(64)	(140)	(1,371)	(43)	(1,618)
Transfers (****)	387	4,519	(15,863)	5,912	(5,045)
Depreciation, amortization and depletion	(428)	(7,520)		(5,862)	(13,810)
Impairment recognition	(319)	(3,891)	(439)	(1,932)	(6,581)
Impairment reversal		768		179	947
Cumulative translation adjustment	1,196	10,178	5,062	8,107	24,543
<b>Balance at December 31, 2016</b>	<b>6,982</b>	<b>78,724</b>	<b>38,569</b>	<b>51,195</b>	<b>175,470</b>
Cost	9,999	127,539	38,569	80,662	256,769
Accumulated depreciation, amortization and depletion	(3,017)	(48,815)		(29,467)	(81,299)
<b>Balance at December 31, 2016</b>	<b>6,982</b>	<b>78,724</b>	<b>38,569</b>	<b>51,195</b>	<b>175,470</b>
Additions	2	1,167	11,031	31	12,231
Additions to / review of estimates of decommissioning costs				4,503	4,503
Capitalized borrowing costs			1,972		1,972

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Write-offs	(14)	(6)	(545)	(35)	(600)
Transfers	316	3,296	(7,631)	3,079	(940)
Depreciation, amortization and depletion	(437)	(7,320)		(5,366)	(13,123)
Impairment recognition	(145)	(937)	(568)	(892)	(2,542)
Impairment reversal	52	831	165	692	1,740
Cumulative translation adjustment	(91)	(753)	(472)	(745)	(2,061)
Balance at December 31, 2017	6,665	75,002	42,521	52,462	176,650
Cost	9,914	128,603	42,521	86,491	267,529
Accumulated depreciation, amortization and depletion	(3,249)	(53,601)		(34,029)	(90,879)
Balance at December 31, 2017	6,665	75,002	42,521	52,462	176,650
Weighted average useful life in years	40	20			
	(25 to 50)	(3 to 31)		Units of production method	
	(except land)	(****)			

(\*) It is composed of platforms, refineries, thermoelectric power plants, natural gas processing plants, pipelines, rights of use and other operating, storage and production plants, also including exploration and production assets depreciated based on the units of production method.

(\*\*) See note 29 for assets under construction by business area.

(\*\*\*) It is composed of exploration and production assets related to wells, abandonment and dismantling of areas, signature bonuses associated to proved reserves and other costs directly associated to the exploration and production of oil and gas.

(\*\*\*\*) In 2016 it includes transfers to assets held for sale.

In 2017, additions to property, plant and equipment primarily relate to E&P projects in pre-salt fields of Santos basin, such as *Búzios*, *Lula* and *Atapu* as well as *Libra* block. The Company also made investments aiming at maintaining the production in mature fields and at improving operational efficiency of the production, especially in Campos basin, and in projects relating to the infrastructure for transporting and processing natural gas from the pre-salt layer in the Santos Basin (Route 1, 2 and 3).

Moreover, important platforms started operating in 2017, such as the FPSOs *Libra Pioneer*, in Mero field, and *P-66*, in South of *Lula* field, as well as the interconnection of new wells to FPSOs *Cidade de Saquarema*, *Cidade de Maricá* and *Cidade de Itaguaí*, in pre-salt fields of Santos basin.

In addition to the capital commitments previously reported and in line with the investments foreseen in the Strategic Plan and the 2017-2021 Business and Management Plan, in 2017, the Company entered into agreements for the acquisition and construction of property, plant and equipment, especially the contract for the conclusion of the hull conversion of FPSO *P-76*, in the amount of US\$ 497, and the contract for the supply of flexible pipelines for the production, gas lifting and water injection in many pre-salt projects, in the total amount of US\$ 596, expiring in March 2018 and May 2022, respectively.





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At December 31, 2017, property, plant and equipment include assets under finance leases of US\$ 118 (US\$ 125 as of December 31, 2016).

**12.2. Estimated useful life**

Estimated useful life	Buildings and improvements, equipment and other assets		
	Cost	Accumulated depreciation	Balance at 2017
5 years or less	4,017	(2,897)	1,120
6 - 10 years	11,592	(6,841)	4,751
11 - 15 years	1,379	(708)	671
16 - 20 years	38,961	(14,561)	24,400
21 - 25 years	18,879	(6,138)	12,741
25 - 30 years	13,984	(3,896)	10,088
30 years or more	24,030	(6,636)	17,394
Units of production method	25,326	(15,173)	10,153
<b>Total</b>	<b>138,168</b>	<b>(56,850)</b>	<b>81,318</b>
Buildings and improvements	9,565	(3,249)	6,316
Equipment and other assets	128,603	(53,601)	75,002

**12.3. Concession for exploration of oil and natural gas Assignment Agreement ( Cessão Onerosa )**

Petrobras and the Brazilian Federal Government entered into the Assignment Agreement in 2010, which grants the Company the right to carry out prospecting and drilling activities for oil, natural gas and other liquid hydrocarbons located in the pre-salt area, subject to a maximum production of five billion barrels of oil equivalent. The agreement has a term of forty years and is renewable for a further five years subject to certain conditions. As of December 31, 2017, the Company's property, plant and equipment include the amount of US\$ 22,614 related to the Assignment Agreement (US\$ 22,954 as of December 31, 2016).

Petrobras has already declared commerciality in fields of all six blocks under this agreement: Franco (Búzios), Florim (Itapu), Nordeste de Tupi (Sépia), Entorno de Iara (Norte de Berbigão, Sul de Berbigão, Norte de Sururu, Sul de Sururu, Atapu), Sul de Guará (Sul de Sapinhoá) and Sul de Tupi (Sul de Lula).

The agreement establishes that its review procedures will commence immediately after the declaration of commerciality for each area and must be based on reports by independent experts engaged by Petrobras and the ANP.

If the review of the Assignment Agreement determines that the value of acquired rights is greater than the amount initially paid, the Company may be required to pay the difference to the Brazilian Federal Government, or may proportionally reduce the total volume of barrels acquired under the agreement in order to match with the amount originally paid. If the review determines that the value of the acquired rights is lower than initially paid by the Company, the Brazilian Federal Government will reimburse the Company for the difference by delivering cash or bonds or equivalent means of payment, subject to budgetary regulations.

The information gathered after drilling over 50 exploratory wells and performing extended well tests in this area, as well as the extensive knowledge acquired on the pre-salt layer of Santos Basin, made possible the identification of volumes exceeding five million barrels of oil equivalent.

The formal review procedures for each block are based on costs incurred over the exploration phase, and estimated costs and production for the development period. The review of the Assignment Agreement may result in renegotiation of: (i) the amount of the agreement; (ii) the total volume (in barrels of oil) to be produced; (iii) the term of the agreement; and (iv) the minimum percentages of local content.

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In November 2017, the Company set up an internal commission responsible for the negotiation with the Brazilian Federal Government, composed of representatives of the Chief Exploration and Production Officer and the Chief Financial Officer.

In January 2018, the Brazilian Federal Government established, through the Interministerial Ordinance No. 15/2018, the Interministerial Commission responsible to negotiate and conclude the terms of this review, within 60 days, extendable for the same period.

The negotiations are ongoing and have taken into account appraisals by independent experts engaged by both parties and their respective reports. As at the date of issue of these financial statements, the final amount to be established for this agreement is not defined.

The Company considers that this surplus provides an opportunity to enter into an agreement concerning the compensation to the Company arising from this review. Therefore, aiming to support an eventual negotiation where this compensation would be paid through the right over exceeding volume, the Company is complementing its assessment based on reports issued by the independent experts it has engaged.

This review process of the Assignment Agreement has been monitored by the Minority Shareholders Committee, which is composed of two board members elected by the minority shareholders and by a third independent member with knowledge in technical-financial analysis of investment projects. This Committee will provide support to the board's decisions through opinions about related matters.

**12.4. Oil and Gas fields operated by Petrobras returned to ANP**

In 2017 the following oil and gas fields were returned to ANP: Mosquito, Siri and Saíra. These fields were returned to ANP mainly due to their economic unfeasibility. However, due to impairment losses recorded for these assets in prior years, these write-offs amounted to US\$ 0.1.

In 2016 the following oil and gas fields were returned to ANP: Tiziu, Japuaçu, Rio Joanes, part of Golfinho and part of Tambuatá. These fields were returned to ANP mainly due to their uneconomic feasibility and, as a consequence, the Company wrote off the amount of US\$ 4 as other income and expenses, in addition to impairments recognized in prior years.

In 2015, the oil and gas fields Itaparica, Camaçari, Carapicú, Baúna Sul, Salema Branca, Nordeste Namorado, part of Rio Preto, Pirapitanga, Piracucá, Catuá and part of Mangangá were returned to ANP and the Company wrote-off the amount of US\$ 264 as other income and expenses.



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*(Expressed in millions of US Dollars, unless otherwise indicated)***13. Intangible assets****13.1. By class of assets**

	<b>Rights and Concessions</b>	<b>Software</b>		<b>Goodwill</b>	<b>Total</b>
		<b>Acquired</b>	<b>in-house Developed</b>		
Balance at January 1, 2016	2,438	80	290	284	3,092
Addition	11	15	59		85
Capitalized borrowing costs			5		5
Write-offs	(160)		(1)		(161)
Transfers	(15)	(4)	(1)	(99)	(119)
Amortization	(22)	(35)	(98)		(155)
Impairment recognition	(3)				(3)
Cumulative translation adjustment	429	12	52	35	528
Balance at December 31, 2016	2,678	68	306	220	3,272
Cost	2,875	487	1,209	220	4,791
Accumulated amortization	(197)	(419)	(903)		(1,519)
Balance at December 31, 2016	2,678	68	306	220	3,272
Addition	935	16	61		1,012
Capitalized borrowing costs			4		4
Write-offs	(81)		(2)		(83)
Transfers	(1,656)	2			(1,654)
Amortization	(20)	(29)	(101)		(150)
Impairment recognition	(33)				(33)
Cumulative translation adjustment	(22)		(4)	(2)	(28)
Balance at December 31, 2017	1,801	57	264	218	2,340
Cost	2,006	496	1,225	218	3,945
Accumulated amortization	(205)	(439)	(961)		(1,605)

Balance at December 31, 2017	1,801	57	264	218	2,340
Estimated useful life in years	(*)	5	5	Indefinite	

(\*) Mainly composed of assets with indefinite useful lives, which are reviewed annually to determine whether events and circumstances continue to support an indefinite useful life assessment.

During 2017, the Company participated on bids conducted by the ANP with the following accomplishments:

On September 27, 2017, the Company acquired seven blocks in the fourteenth round of bids under the concession regime, six of which are offshore and one of which is onshore. The Company will be the operator in all blocks. In the offshore blocks, Petrobras will hold a 50% interest in partnership with ExxonMobil. In the onshore blocks, the Company will hold the entire interest. The total amount of signature bonus payed by the Company was US\$ 567. The contracts were signed on January 29, 2018.

On October 27, 2017, the Company acquired three offshore blocks in the second and third rounds of bids under the production sharing regime, in partnership with Shell, British Petroleum (BP), Repsol and CNODC Brasil Petróleo e Gás. The total amount of signature bonus payed by the Company was US\$ 351. The contracts were signed on January 31, 2018.

Following the determination of economic feasibility of the Northwest area of Libra block, which resulted in declarations of commerciality such as the one relating to Mero field (see note 13.3), a portion of signature bonus thereof, in the amount of US\$ 1,614, was transferred from intangible assets to property, plant and equipment.

At December 31, 2017, no impairment was identified on goodwill.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***13.2. Exploration rights returned to the Brazilian Agency of Petroleum, Natural Gas and Biofuels Agência Nacional de Petróleo, Gás Natural e Biocombustíveis (ANP)**

Exploration areas returned to the ANP in 2017, totaling US\$ 3 (US\$ 8 in 2016) are set out below:

Area	Exploratory phase	
	Exclusive	Partnership
Sergipe-Alagoas Basin	1	
Jequitinhonha Basin		1

**13.3. Exploration rights - production sharing contract**

Following the first pre-salt public auction held in October, 2013, the Libra consortium, composed of Petrobras (40% interest), Shell (20% interest), Total (20% interest), CNPC (10% interest), CNOOC (10% interest) and the Pré-Sal Petróleo S.A. (PPSA) as the manager of the agreement, entered into a production sharing contract with the Federal Government on December 2, 2013.

The Libra P1 contract granted rights and obligations to explore and operate oil and gas production in a strategic pre-salt area known as the Libra block, comprising an area of around 1,550 km<sup>2</sup>, located in ultra-deep waters in the Santos Basin. This was the first oil and gas production sharing contract signed in Brazil. The contract is for 35 years and cannot be renewed.

The signature bonus (acquisition cost) of US\$ 6,589 was paid by the consortium. The Company paid US\$ 2,636 relating to its 40% share of the acquisition cost paid by the consortium, initially recognized in its intangible assets as Rights and Concessions.

Within the initial stage of the exploration phase (4 years), the minimum work program was concluded in 2017, when the extended well test (EWT) was performed. In addition to EWT, the minimum work program also includes a 3D seismic acquisition for the whole block, and the drilling of two exploratory wells.

The EWT was performed by the FPSO Libra Pioneer, which continues to produce on the same well after the declaration of commerciality, through an early production system. In January 2018, the Company performed the first loading of oil from Libra. In the second half of 2018, this FPSO is expected to move to another location and to produce on another well.

On November 30, 2017, ANP was informed about the declaration of commerciality of the Northwest area of Libra, confirming the potential of the area and its economic viability. In total, twelve wells were drilled in Libra block, of



which nine in the Northwest area. Following the declaration of commerciality, the Northwest area of Libra is now named Mero field (*Campo de Mero*). The results confirmed oil reservoirs at thickness of up to 410 meters with high porosity and permeability. The production tests confirmed the high productivity and oil quality of these reservoirs. Following this declaration of commerciality, US\$ 1,614 was transferred to property, plant and equipment with respect to a portion signature bonus relating to the Northwest area of Libra.

In December 2017, the Company chartered the FPSO of Mero 1 for the Northwest area, with expected start-up in 2021 and capacity of producing 180 thousands of barrels per day and processing 12 million cubic meters of gas.

The consortium was granted by the Ministry of Mines and Energy with an extension of the exploration phase by 27 months to the Central and Southeast areas of the block, where new assessments will be performed to evaluate the economic viability of these areas.

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**13.4. Service concession agreement - Distribution of piped natural gas**

As of December 31, 2017, intangible assets include service concession agreements related to piped natural gas distribution in Brazil, in the amount of US\$ 171 (US\$ 177 in 2016), maturing between 2029 and 2043, which may be renewed. According to the distribution agreements, service is provided to customers in the industrial, residential, commercial, automotive, air conditioning and transport sectors, among others.

The consideration receivable is a factor of a combination of operating costs and expenses, and return on capital invested. The rates charged for gas distribution are subject to periodic reviews by the state regulatory agency.

The agreements establish an indemnity clause for investments in assets which are subject to return at the end of the service agreement, to be determined based on evaluations and appraisals.

On February 2, 2016, the state of Espírito Santo enacted the Law No. 10,493/2016 under which the service concession agreements related to piped natural gas distribution are considered ineffective pursuant Brazilian Federal Law 8,987/1995. The law states that a bidding process is required for this concession, or the establishment of a state-run company to provide this service, which would receive compensation pursuant to this law, which was appealed by the Company.

Accordingly, the Company entered into an agreement with the State of Espírito Santo, through a Memorandum of Understanding signed on August 12, 2016, aiming to evaluate the establishment of a state-run company of that state, to provide the public service of distributing piped natural gas. The evaluation is ongoing.

This concession is accounted for as intangible assets totaling US\$ 82 as of December 31, 2017 (US\$ 84 as of December 31, 2016) and the Company has not recognized any provision on this matter based on the indemnity established by law.

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**14. Impairment**

The Company annually tests its assets for impairment on December 31 or when there is an indication that their carrying amount may not be recoverable. In 2017, impairment losses and reversals were primarily recognized in the last quarter reflecting the Company's plan to optimize investment portfolio and updates of mid and long-term assumptions used in the recent Company's Business and Management Plan (BMP 2018-2022) concluded and approved in December 2017.

The enhanced risk perception of Brazilian market (Brazil's risk premium) decreased the discount rates applied for impairment testing purposes, and along with the better operational efficiency of certain E&P fields, resulted in reversals of impairment previously recognized following the 2017 annual review, mainly for the North Group CGU in Campos basin.

The Company accounted for impairment losses for certain assets in the scope of the partnership and divestment program, mainly with respect to oil and gas production and drilling equipment in Brazil and to the sale of a portion of Roncador field in Campos basin. The higher costs of raw materials and the lower refining margin, as set forth in BMP 2018-2022, were the main reasons for impairment losses on Second refining unit in RNEST.

The work in progress relating to the infrastructure shared by Comperj's first refining unit and the natural gas processing plant (UPGN), as well as the decision of hibernating the hulls construction of 3 vessels of PANAMAX project, that triggered their separate impairment testing from the Transportation, also resulted in impairment losses in 2017. In addition, the Company's plan to withdrawal its entire interest in petrochemical business, as set forth in BMP 2018-2022, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, triggered an impairment testing for these assets separately from the Natural Gas CGU in the last quarter of 2017, thereby accounting for impairment losses with respect to them.

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The table below shows the impairment losses, net of reversals, recognized within the statement of income in 2017, 2016 and 2015:

Assets or CGU by nature (*)	Carrying amount	Recoverable amount (**)	Impairment (***)	Business segment	Comments 2017
<b>Property, plant and equipment and intangible assets</b>					
Producing properties relating to oil and gas activities in Brazil (several CGUs)	11,826	16,070	(870)	E&P - Brazil	item (a1)
Second refining unit in RNEST	1,716	1,261	464	RTM - Brazil	item (b1)
Fertilizer Plants	412		412	Gas & Power - Brazil	item (c)
Oil and gas production and drilling equipment in Brazil	360	4	363	E&P - Brazil	item (d1)
Producing properties relating to oil and gas activities Abroad (several CGUs)	215	89	128	E&P - Abroad	item (e)
Panamax vessels - Transpetro	112		112	RTM - Brazil	item (f)
Araucária	70		70	Gas & Power - Brazil	item (g1)
Comperj	51		51	RTM - Brazil	item (h1)
Conecta and DGM	38		38	Distribution - Abroad	item (i)
Others	1,863	1,797	68	Several Segments	
			836		
<b>Assets classified as held for sale</b>					
Producing properties relating to oil and gas activities in Roncador	3,164	2,766	405	E&P - Brazil	item 14.2
Others	317	366	(50)	Several Segments	
Total			1,191		
					<b>2016</b>
Producing properties relating to oil and gas activities in Brazil (several CGUs)	12,788	10,718	2,268	E&P - Brazil	item (a2)

CGUs)					
Oil and gas production and drilling equipment					
in Brazil	918	64	854	E&P - Brazil	item (d2)
Second refining unit in RNEST	2,488	1,708	780	RTM - Brazil	item (b2)
Suape Petrochemical Complex	1,099	480	619	RTM - Brazil	item (j)
Comperj	403		403	RTM - Brazil	item (h2)
Transpetro s fleet of vessels	1,793	1,549	244	RTM - Brazil	item (k)
Fertilizer Plant - UFN III	523	370	153	Gas & Power - Brazil	item (l)
Araucária (fertilizers plant)	197	57	140	Gas & Power - Brazil	item (g2)
Quixada Power plant	28		28	Biofuel, Brazil	
Others	614	424	148	Several Segments	
			5,637		

<b>Assets classified as held for sale</b>					item 14.2
Suape Petrochemical Complex	816	381	435	RTM - Brazil	
Petrobras Chile Distribución	546	464	82	Distribution - Abroad	
Power Plants Celso Furtado and Rômulo Almeida	120	72	47	RTM - Brazil	
Others	96	104	(8)	Several Segments	
			556		

Total 6,193

## 2015

Producing properties relating to oil and gas activities in Brazil (several CGUs)					
Comperj	21,251	12,139	8,653	E&P - Brazil	item (a3)
Oil and gas producing properties abroad	1,586	234	1,352	RTM - Brazil	item (h3)
Oil and gas production and drilling equipment in Brazil	1,548	918	637	E&P - Abroad	item (e1)
Fertilizer Plant - UFN III	750	243	507	E&P - Brazil	item (d3)
Suape Petrochemical Complex	935	434	501	Gas & Power - Brazil	item (l1)
Nitrogen Fertilizer Plant - UFN-V	1,143	943	200	RTM - Brazil	item (j1)
Biodiesel plants	190		190	Gas & Power - Brazil	
Others	134	88	46	Biofuel - Brazil	
	341	156	213	Several segments	

12,299

(\* ) It only includes carrying amounts and recoverable amounts of impaired assets or asses for which reversals were recognized.

(\*\* ) The recoverable amounts of assets for impairment computation were their value in use, except for oil and gas production and drilling equipment that were based on their fair value.

(\*\*\*) Reversals are presented in brackets.



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*(Expressed in millions of US Dollars, unless otherwise indicated)***14.1. Impairment of property, plant and equipment and intangible assets**

For impairment testing purposes, the Company bases its cash flow projections on:

The estimated useful life of the asset or assets grouped into the CGU, based on the expected use of those assets, considering the Company's maintenance policy;

Assumptions and financial budgets/forecasts approved by management for the period corresponding to the expected life cycle of each different business; and

A pre-tax discount rate derived from the Company's post-tax weighted average cost of capital (WACC). Information on key assumptions for impairment testing and the definition of Company's CGUs are presented in notes 5.2 and 5.3, respectively. Management assumptions and judgements, which are based on the Company's business and management model, are required on these matters.

The cash flow projections used to measure the value in use of the CGUs in 2017 were mainly based on the following estimates of key assumptions for impairment testing:

**2017**

	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>Long term Average</b>
Average Brent (US\$/bbl)	53	58	66	70	73	71
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	3.44	3.47	3.47	3.46	3.49	3.4

For comparative purposes, estimates of key assumptions for impairment testing in 2016 and 2015 are shown below:

**2016**

	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Long term Average</b>
Average Brent (US\$/bbl)	48	56	68	71	71	70
Average Brazilian Real (excluding inflation) - Real /U.S. dollar exchange rate	3.46	3.54	3.48	3.42	3.38	3.36

**2015**

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>Long term Average</b>
Average Brent (US\$/bbl)	45	59	61	64	67	71
Average Brazilian Real (excluding inflation ) - Real /U.S. dollar exchange rate	4.06	3.73	3.66	3.6	3.60	3.06

Information on the main impairment losses and reversals of property, plant and equipment and intangible assets are described below:

**a1) Producing properties in Brazil 2017**

Impairment assessment for producing properties in Brazil under the concession regime for oil and gas resulted in a net reversal of impairment losses of US\$ 870. Cash flow projections were based on financial budgets/forecasts approved by management and the post-tax discount rates (excluding inflation) derived from the WACC for the E&P business of 7.6% p.a. at December 31, 2017. This amount comprises:

Reversals of impairment totaling US\$ 1,733 primarily from North group (US\$ 912), *Espadarte and Papa-Terra* fields (US\$ 125 and US\$ 122), *Uruguá* group (US\$ 100), *Pampo* field (US\$ 91), *Fazenda Alegre* group (US\$ 45), *Cidade de São Mateus* group (US\$ 44), *Riachuelo* field (US\$ 40), *Fazenda Imbé* group (US\$ 28), *Fazenda Bálsamo* field (US\$ 26), *Peroá* group (US\$ 25), *São Mateus* group (US\$ 19) and *Riacho da Forquilha* field (US\$ 18). These reversals substantially reflected the lower post-tax real discount rate, the approval of investments in enhancing recovery of mature fields and the lower tax burden set forth in the new tax rules applicable to the oil and gas industry (see note 21.4).



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Impairment losses totaling US\$ 863 mainly related to CGUs *Piranema* (US\$ 227), *Salgo* (US\$ 104) *Ceara Mar* group (US\$ 95), *Cvit* group (US\$ 63), *Miranga* group (US\$59), *Fazenda Belém* group (US\$ 49), *Frade* (US\$ 40) *Dom João* (US\$ 27) and *Candeias* (US\$ 18). These losses were substantially driven by an expected acceleration of production cessation reflecting an optimization of investment portfolio, as well as by a lower risk-adjusted discount rate for decommissioning costs, which also increased the costs of assets related to the abandonment and dismantling of these areas.

**a2) Producing properties in Brazil 2016**

Impairment losses of US\$ 2,268 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management and the post-tax discount rates (excluding inflation) derived from the WACC for the E&P business of 9.1% p.a. at December 31, 2016. The impairment losses were related primarily to the following fields and groups of fields: North group (US\$ 1,178), *Ceará Mar* Group (US\$ 210), *Guaricema* (US\$ 126), *Dourado* (US\$ 88), *Maromba* (US\$ 86), *Bijupirá* and *Salema* (US\$ 82), *Papa-Terra* (US\$ 72), *Trilha* (US\$ 69), *Uruguá* group (US\$ 62), *Pampo* (US\$ 67), *Frade* (US\$ 65), *Badejo* (US\$ 56), *Bicudo* (US\$ 49), *Riachuelo* (US\$ 44), *Fazenda Bálsamo* (US\$ 41) and *Água Grande* group (US\$ 31). These impairment losses were mainly due to the appreciation of the Brazilian Real against the U.S. Dollar, price assumptions review, Company's annual reviews of oil and gas reserves and decommissioning cost estimates, as well as a higher discount rate following the increase in Brazil's risk premium. In addition, an impairment reversal relating to *Centro Sul* group, amounting to US\$ 415, was recognized due to increased estimate of reserves and production, as well as lower operating expenses estimates based on a review of its fields operations, as set forth in 2017-2021 BMP, considering the decommissioning of a unit which had high operational costs and replacing another unit with an investment in a new processing plant which was committed to during the third quarter of 2016.

**a3) Producing properties in Brazil 2015**

In 2015, impairment losses of US\$ 8,653 were recognized for certain oil and gas fields in Brazil under E&P concessions. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the E&P business. The impairment losses were related primarily to the following fields: *Papa-Terra* (US\$ 2,234), *Centro Sul* group (US\$ 1,179), *Uruguá* group (US\$ 986), *Espadarte* (US\$ 593), *Linguado* (US\$ 489), *CVIT - Espírito Santo* group (US\$ 375), *Piranema* (US\$ 341), *Lapa* (US\$ 317), *Bicudo* (US\$ 240), *Frade* (US\$ 198), *Badejo* (US\$ 190), *Pampo* (US\$ 91) and *Trilha* (US\$ 84). These impairment losses are mainly due to the impact of the decline in international crude oil prices on the Company's price assumptions, the use of a higher discount rate, as well as the geological revision of *Papa-Terra* reservoir.

**b1) Second refining unit in RNEST 2017**

An impairment loss of US\$ 464 was recognized for the second refining unit in RNEST. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 7.7% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business, reflecting a specific risk premium for the postponed

project. The impairment loss was mainly attributable to: (i) higher costs of raw materials and ii) lower refining margin, as set forth in BMP 2018-2022.

**b2) Second refining unit in RNEST 2016**

An impairment loss of US\$ 780 was recognized for the second refining unit in RNEST. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.7% p.a. (8.1% p.a. in 2015) post-tax discount rate (excluding inflation) derived from the WACC for the refining business, reflecting a specific risk premium for the postponed project. The impairment loss was mainly attributable to: (i) the use of a higher discount rate and (ii) a delay in expected future cash inflows to 2023 resulting from postponing the project, considering the completion of this project with the Company's own capital resources as set forth in the 2017-2021 Business and Management Plan.

**c) Fertilizer Plants**

Following the Company's plan to withdraw its entire interest in petrochemical business, as set forth in BMP 2018-2022 approved in December 2017, along with the lower expectation of a successful sale of fertilizers and nitrogen products plants, triggered an impairment testing for these assets separately from the Natural Gas CGU in the last quarter of 2017. As a result, impairment losses amounting to US\$ 412 were recognized.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***d1) Oil and gas production and drilling equipment in Brazil 2017**

In 2017, impairment losses for oil and gas production and drilling equipment in Brazil that were not directly related to oil and gas producing properties amounted to US\$ 363, as a result of: i) lower fair value of certain equipment related to the FPSO P-72 and P-73 that could not be committed to other projects, when compared to their carrying amount (US\$ 127); ii) decommissioning of a crane and launch ferry (US\$ 114) and iii) hibernation of equipment of Inhaúma Shipyard excluded from the initial scope of Inhauma logistic center (US\$ 125).

**d2) Oil and gas production and drilling equipment in Brazil 2016**

Impairment losses of US\$ 854 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 9.9% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. These impairment losses were mainly related to uncertainties over the ongoing hulls construction of the FPSOs P-71, P-72 and P-73, amounting to US\$ 593 as set out in note 14.4.

**d3) Oil and gas production and drilling equipment in Brazil 2015**

In 2015, impairment losses of US\$ 507 were recognized for oil and gas production and drilling equipment which were not directly related to oil and gas producing properties. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 9.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the oil and gas services and equipment industry. The impairment losses were mainly related to the planned idle capacity of drilling rigs in the future and the use of a higher discount rate.

**e) Producing properties abroad 2017**

In 2017, impairment losses of US\$ 128 were recognized for E&P assets located in the United States, principally reflecting the expected cessation of production and definitive abandonment of operation in Hadrian South field. Cash flow projection were based on: financial budgets/forecasts approved by Management; 5.7% p.a. post-tax real discount rate (5.5% p.a. in 2016) derived from the WACC for the E&P business in United States.

**e1) Producing properties abroad 2015**

In 2015, impairment losses of US\$ 637 were recognized in E&P assets abroad. Cash flow projections were based on: financial budgets/forecasts approved by Management; and 5.6% p.a. to 10.4% p.a. post-tax discount rates (excluding inflation) derived from the WACC for the E&P business in different countries. The impairment losses were mainly in producing properties located in the United States (US\$ 448) and Bolivia (US\$ 157), attributable to the decline in international crude oil prices.

**f) Panamax vessels Transpetro**

In December 2017, the decision to hibernate the construction of three vessels of PANAMAX project (EI-512, EI-513 and EI-514) triggered their removal from the Transpetro's fleet of vessels CGU. These assets were assessed for impairment separately and, as a result, the Company accounted for an impairment loss for the total carrying amounts of these assets (US\$ 112).

**g1) Araucária 2017**

Indications of impairment were identified during this period, such as lower sales volume and prices, as well as higher production costs. Therefore, the Company assessed the related assets for impairment and, as a result, an impairment charge of US\$ 70 was recognized primarily in the second quarter of 2017 due to negative cash flow projections that were based on financial budget and forecasts approved by the management and a post-tax real discount rate of 6.6% p.a. derived for the weighted average cost of capital (WACC) for the fertilizer business.

**g2) Araucária 2016**

An impairment loss of US\$ 140 was recognized for *Araucária Nitrogenados S.A.* Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.8% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business (6.6% p.a. in 2015). The impairment loss was mainly attributable to (i) the use of a higher discount rate, (ii) the appreciation of Brazilian Real against the U.S. Dollar and (iii) an increase in estimated production costs.

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**h1) Comperj 2017**

As set out in BMP 2018-2022, the resumption of the Comperj project still depends on new partnerships. However, the construction of Comperj's first refining unit facilities that will also support the natural gas processing plant (UPGN) are in progress as the facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in Santos Basin. Nevertheless, due to the interdependence between such infrastructure and Comperj first refining unit, the Company recognized additional impairment charges, totaling US\$ 51 in 2017.

**h2) Comperj 2016**

Following a reassessment of COMPERJ project in the second quarter of 2016 confirming the postponement of its first refining unit until December 2020, with continuous efforts to seek new partnerships to resume the project, the Company recognized an impairment charge on the remaining balance of this project. However, the construction of Comperj's first refining unit facilities that will also support the natural gas processing plant (UPGN) are still in progress as the facilities are part of the infrastructure for transporting and processing natural gas from the pre-salt layer in Santos Basin. Nevertheless, due to the interdependence between such infrastructure and Comperj first refining unit, the Company recognized additional impairment charges, totaling US\$ 403 of impairment losses in 2016.

**h3) Comperj 2015**

In 2015, an impairment loss of US\$ 1,352 was recognized for refining assets of Comperj. Cash flow projections were based on: financial budgets/forecasts approved by Management, and; an 8.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the refining business reflecting a specific risk premium for the postponed projects. This impairment loss was mainly attributable to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing construction.

**i) Conecta and DGM 2017**

Following prices forecast and current agreements of natural gas supply in Uruguay, the Company recognized impairment losses for intangible assets and property, plant and equipment, in the amount of US\$ 38, with respect to concession agreements for natural gas distribution carried out by the subsidiaries Conecta and DGM.

**j) Suape Petrochemical Complex 2016**

An impairment loss of US\$ 619 was recognized for Companhia Integrada Têxtil de Pernambuco S.A. CITEPE and Companhia Petroquímica de Pernambuco S.A. Petroquímica Suape at September 30, 2016. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.5% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss was mainly attributable to lower market projections and the appreciation of Brazilian real against the U.S. dollar. Following the

disposal of Suape Petrochemical Complex in December 2016, the Company recognized an additional impairment charge as set out in note 14.2.

**j1) Suape Petrochemical Complex 2015**

In 2015, an impairment loss of US\$ 200 was recognized for *Companhia Integrada Têxtil de Pernambuco S.A. CITEPE* and *Companhia Petroquímica de Pernambuco S.A. PetroquímicaSuape*. Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.2% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the petrochemical business. The impairment loss was mainly attributable to changes in market and price assumptions resulting from a decrease in economic activity in Brazil, a reduction in the spread for petrochemical products in the international market and the use of a higher discount rate.

**k) Transpetro s fleet of vessels 2016**

In 2016, an impairment loss of US\$ 244 was recognized for Transpetro s fleet of vessels. Cash flow projections were based on: financial budgets/forecasts approved by Management; and post-tax discount rates (excluding inflation) ranging from 4.53% p.a. to 9.97% p.a. (3.92% p.a. to 8.92% p.a. in 2015) derived from the WACC for the transportation industry, considering financial leverage and the respective tax benefits. The impairment loss recognized in the third quarter mainly relates to a group of support vessels of Hidrovias project that were removed from this CGU due to the postponements and suspension of constructions projects, as well as the use of a higher discount rate. In the last quarter of 2016, additional impairment charges were accounted for due to the commencement of construction on 5 vessels after securing the projects funding, which avoided the possibility of future claims by alleging breach of contracts, as well as a further increase in discount rate.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***I) Fertilizer Plant UFN III 2016**

An impairment loss of US\$ 153 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and an 8.3% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the fertilizer business, reflecting a specific risk premium for the postponed projects. This impairment loss mainly relates to: (i) the use of a higher discount rate, (ii) the appreciation of the Brazilian Real against the US Dollar.

**II) Fertilizer Plant UFN III 2015**

In 2015, an impairment loss of US\$ 501 was recognized for the fertilizer plant UFN III (*Unidade de Fertilizantes e Nitrogenados III*). Cash flow projections were based on: financial budgets/forecasts approved by Management; and a 7.1% p.a. post-tax discount rate (excluding inflation) derived from the WACC for the Gas & Power business, reflecting a specific risk premium for the postponed projects. The impairment losses were mainly related to: (i) the use of a higher discount rate; and (ii) the delay in expected future cash inflows resulting from postponing the project.

**14.1.1. Assets most sensitive to future impairment**

As set out in note 4.10, whenever the recoverable amount of an asset or CGU falls below the carrying amount, an impairment loss is recognized to reduce the carrying amount to the recoverable amount. The following table presents the assets and CGU most sensitive to future impairment losses as their recoverable amounts were close to their current carrying amount. Changes in material assumptions for impairment testing may result in the recognition of additional impairment charges on such assets in future periods.

		12.31.2017		
	Business segment	Carrying amount	Recoverable amount	Sensitivity (*)
Producing properties relating to oil and gas activities in Brazil (3 CGUs)	E&P	168	180	(10)

(\*) It is based on a 10% reduction in the recoverable amount of CGUs.  
For information on the main assumptions for impairment testing, see note 5.2.

#### **14.2. Assets classified as held for sale**

Following the Company's Board of Director approvals of disposal of certain assets in 2017, as described in note 10, impairment losses amounting to US\$ 355 for assets held for sale were recognized, primarily attributable to the sale of 25% interest in Roncador field.

This transaction is aligned with the Company's business and management plan and is part of the Strategic Alliance with Statoil for sharing technology and increasing the recovery factor of the field. Impairment loss of US\$ 405 was recognized on this transaction, as its sales price was lower than carrying amount thereof.

In 2016, the Company recognized impairment losses amounting to US\$ 556 due to certain sales of interests in investees approved by the Board of Directors, mainly related to Suape Petrochemical Complex (US\$ 435), Petrobras Chile Distribución (US\$ 82) and Power plants *Romulo Almeida and Celso Furtado* (US\$ 47).

For 2015, impairment losses were recognized in E&P assets classified as held for sale. The Board of Directors approved the disposal of the Bijupirá and Salema fields, PI, PIII and PIV drilling rigs and PXIV platform. As their fair values were below their carrying amount, impairment losses in the amount of US\$ 3 were recognized.

#### **14.3. Investments in associates and joint ventures (including goodwill)**

Value in use is generally used for impairment test of investments in associates and joint ventures (including goodwill). The basis for estimates of cash flow projections includes: projections covering a period of 5 to 12 years, zero-growth rate perpetuity, budgets, forecasts and assumptions approved by management and a pre-tax discount rate derived from the WACC or the Capital Asset Pricing Model (CAPM), when applicable.



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The carrying amount and the value in use of the investments in associates and joint ventures which include goodwill as of December 31, 2017 are set out below:

<b>Investment</b>	<b>Segment</b>	<b>% Post-tax discount rate (excluding inflation) p.a.</b>	<b>Value in use</b>	<b>Carrying Amount</b>
Braskem S.A. (*)	RTM	9.6	5,712	1,448
Natural Gas Distributors	Gas & Power	5.9	518	285

(\*) The discount rate of Braskem is CAPM of petrochemical segment, as the value in use considers the cash flow projections via dividends.

**14.3.1. Investment in publicly traded associate (Braskem S.A.)**

Braskem's shares are publicly traded on stock exchanges in Brazil and abroad. As of December 31, 2017 the quoted market value of the Company's investment in Braskem was US\$ 3,775 based on the quoted values of both Petrobras interest in Braskem's common stock (47% of the outstanding shares), and preferred stock (22% of the outstanding shares). However, there is extremely limited trading of the common shares, since non-signatories of the shareholders agreement hold approximately 3% of the common shares.

Given the operational relationship between Petrobras and Braskem, the recoverable amount of the investment for impairment testing purposes was determined based on value in use, considering future cash flow projections and the manner in which the Company can derive value from this investment via dividends and other distributions to arrive at its value in use. As the recoverable amount was higher than the carrying amount, no impairment losses were recognized for this investment.

Cash flow projections to determine the value in use of Braskem were based on the following key assumptions:

Estimated average exchange rate of R\$ 3.44 to U.S.\$1.00 in 2018 (converging to R\$ 3.4 in the long run);

Average Brent crude oil price at US\$ 53 in 2018, converging to US\$ 71 in the long run;

Prices of feedstock and petrochemical products reflecting projected international prices;

Petrochemical products sales volume estimates reflecting projected Brazilian and global G.D.P growth; and

Increases in the EBITDA margin during the growth cycle of the petrochemical industry in the next years and declining in the long run.

#### **14.3.2. Impairment losses on equity-method investments**

For 2017, the Company accounted for US\$ 20 as results in equity-accounted investments, substantially attributable to the investees Logum, Belém Bioenergia Brasil and Refinaria de Petróleo Riograndense.

In 2016, impairment losses on equity-method investments in the amount of US\$ 182 were as results in equity-accounted investments, substantially attributable to investees of biofuels segment, notably the former associate Guarani (US\$ 178) and the former joint venture Nova Fronteira (US\$ 30).

For 2015, impairment losses on equity-method investments in the amount of US\$ 550 (US\$ 251 in 2014) were recognized in the statement of income as results in equity-accounted investments, mainly due to (i) losses in investees abroad reflecting the fall in international crude oil price (US\$ 276); (ii) higher discount rates and capital expenditure decisions relating to the biofuels segment (US\$ 139); (iii) the deteriorated economic and financial conditions of the associate Sete Brasil (US\$ 88); and (iv) losses relating to the associate Arpoador Drilling B.V, an entity indirectly controlled by Sete Brasil (US\$ 14).

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**14.4. Construction of platform hulls by Ecovix and Enseada shipyards**

The Company entered into contracts with the suppliers Ecovix-Engevix Construções Oceânicas S.A and Enseada Industria Naval S.A. for supplying eight hulls for the FPSOs P-66 to P-73 and for hulls conversion of four FPSOs (P-74 to P-77), respectively.

Considering the relevance of these assets in the context of the Business and Management Plan and due to the financial difficulties faced by the suppliers, escrow accounts relating to these projects were created in the last quarter of 2015 in order to ensure the ongoing performance of the services hired.

These escrow accounts have comprised funds transferred in advance for payments to be made by the shipyards, restricted to the scope of the contracts and limited to their total balance. The deposits would be offset to the extent that services rendered or equipment delivered, with the remaining balance being reimbursed. This strategy was considered effective as the projects achieved significant progress up to September 2016, enabling the delivery of P-67 hull to a shipyard in China for integration services, the recommence of the work in progress of P-69 hull also in China, the continuity of the work in progress of P-68 hull in Rio Grande shipyard, as well as the progress on priority activities for the conclusion of minimum scope of P-74 and P-76 hulls, delivering these units to shipyards in China for integration services and for setting up topsides.

During the third quarter of 2016, the Company reassessed the progress of the hulls project and the continuity of the escrow accounts related to the projects and concluded that this strategy, which in its beginning avoided the work in progress discontinuation, was not as effective as it was previously.

Due to uncertainties regarding the FPSOs P-71, P-72 and P-73 hulls construction continuity after significant delays on projects progress, the Company recognized, in the third quarter of 2016, impairment charges amounting to US\$ 593 as set out in note 14.1.

Based on management evaluation, in 2016 the Company recognized allowances for impairment amounting to US\$ 689 within other expenses, net with respect to the remaining balance of advances to these suppliers in the context of the escrow accounts (US\$ 352) and debts assumption relating to Ecovix and Enseada (US\$ 337), in which legal procedures to recover them are being assessed.

In addition, the Company wrote-off, in 2016, capital expenditures related to the right of use the Rio Grande shipyard in the amount of US\$ 155, as well as other investments related to the P-71, P-72 and P-73 amounting to US\$ 146.

The FPSOs constructions have progressed significantly after restructuring the contracts and accessing the hull. The start -ups of P-67 to P-69 and P-74 to P-76 are expected to occur in 2018, while the start -ups of P-70 and P-77 are expected in the first semester of 2019. The P-66 have been in operation since May 2017. This scenario shows the effectiveness of the strategy to enable the continuity of the work in progress of these FPSOs with no impacts in the Company's future production curve.

The effects of the negotiation with each shipyard are presented below:

### **Negotiations with Ecovix**

Pursuant the reassessment made by the Company in the third quarter of 2016 in order to verify the effectiveness of the escrow account approach implemented to ensure access to P-66 to P-73 hulls, a provision in the amount of US\$ 115 was recognized within other expenses, net.

On December 9, 2016, the Company, through its investees TUPI BV and Petrobras Netherlands BV, entered into agreements with Ecovix Construções Oceânicas S.A establishing the termination of EPC contracts signed in 2010 for the construction of eight FPSO hulls. Therefore, the Company has assumed certain liabilities from Ecovix as the most adequate solution for Petrobras Group: ensure the access to the hulls of platforms P-66 to P-70 and the achievement of the 2017-2021 Business and Management Plan production targets. These debts were recognized in 2016 within other expenses, net in the amount of US\$ 234.

Along with those agreements signed in the last quarter of 2016, the Company assessed investments carried out for the construction of the P-71, P-72 and P-73 hulls to determine the best option for their allocation. As a result, the amount of US\$ 146 were written-off and accounted for as other expenses, net. In 2017, after reassessing the use of certain acquired equipment for P-72 and 73, the Company wrote-off additional US\$ 127 as described in note 14.1.

The negotiations with Ecovix in the last quarter of 2016 also resulted in a transfer of the right of use of Rio Grande shipyard from Ecovix to the Company pursuant to a finance lease agreement. The Company reassessed the recoverable amount of this right of use and related improvements totaling US\$ 155 and, as a consequence, these assets were written-off.

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With the escrow accounts, the Company eliminated any risk of non-delivery of the P-74 to P-77 hulls. In 2016, PNBV transferred funds in advance amounting to US\$ 237 for the payment in the name of Enseada of certain liabilities relating to the hull construction of these platforms. Due to financial difficulties faced by this supplier, the Company recognized a provision for impairment on this entire amount within other expenses, net.

In addition, as part of the Company's strategy of ensuring the continuity of FPSOs P-75 and P-77 hulls construction, the Company approved the transfer of the contract entered into by Enseada and COSCO (Dalian) Shipyard Co., Ltd to its wholly-owned subsidiary Petrobras Netherlands B.V. (PNBV), resulting in the recognition of payables within the scope of this contract. As a result, the Company recognized a provision in the amount of US\$ 103 within other expenses in the third quarter of 2016.

In 2016, the Company also assessed the recoverable amount of improvements made for the hulls conversion of FPSOs P-74 to P-77 in the Inhaúma Shipyard, as well as the right of use of this shipyard. Accordingly, the Company did not account for any additional write-off related to these assets at December 31, 2016 based on the use of this location as a logistic center mainly dedicated to Santos Basin operations. In 2017, following a review in the scope of this logistic center implementation, impairment losses of US\$ 125 were recognized as shown in note 14.1.

**15. Exploration and evaluation of oil and gas reserves**

The exploration and evaluation activities include the search for oil and gas reserves from obtaining the legal rights to explore a specific area to the declaration of the technical and commercial viability of the reserves.

Changes in the balances of capitalized costs directly associated with exploratory wells pending determination of proved reserves and the balance of amounts paid for obtaining rights and concessions for exploration of oil and natural gas (capitalized acquisition costs) are set out in the following table:

<b>Capitalized Exploratory Well Costs / Capitalized Acquisition Costs (*)</b>	<b>12.31.2017</b>	<b>12.31.2016</b>
Property plant and equipment		
Opening Balance	5,133	5,201
Additions to capitalized costs pending determination of proved reserves	797	1,009
Capitalized exploratory costs charged to expense	(107)	(1,054)
Transfers upon recognition of proved reserves	(1,227)	(966)

Cumulative translation adjustment	(74)	943
Closing Balance	4,522	5,133
Intangible Assets	1,390	2,236
Capitalized Exploratory Well Costs / Capitalized Acquisition Costs	5,912	7,369

(\*) Amounts capitalized and subsequently expensed in the same period have been excluded from this table. See note 13.1 for information on signatures bonuses paid and declarations of commerciality during 2017.

Exploration costs recognized in the statement of income and cash used in oil and gas exploration and evaluation activities are set out in the following table:

<b>Exploration costs recognized in the statement of income</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Geological and geophysical expenses	361	371	416
Exploration expenditures written off (includes dry wells and signature bonuses)	279	1,281	1,441
Contractual penalties	152	46	
Other exploration expenses	8	63	54
<b>Total expenses</b>	<b>800</b>	<b>1,761</b>	<b>1,911</b>
<b>Cash used in :</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>
Operating activities	371	435	470
Investment activities	1,794	1,075	2,736
<b>Total cash used</b>	<b>2,165</b>	<b>1,510</b>	<b>3,206</b>

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In 2017, the Company recognized a provision in the amount of US\$ 152 (US\$ 46 in 2016), arising from potential contractual penalties for non-compliance with minimum percentages of local content in 118 blocks for which the exploratory phases were concluded.

**15.1. Aging of Capitalized Exploratory Well Costs**

The following tables set out the amounts of exploratory well costs that have been capitalized for a period of one year or more after the completion of drilling, the number of projects whose costs have been capitalized for a period greater than one year, and an aging of those amounts by year (including the number of wells relating to those costs):

<b>Aging of capitalized exploratory well costs (*)</b>	<b>2017</b>	<b>2016</b>
Exploratory well costs capitalized for a period of one year	111	806
Exploratory well costs capitalized for a period greater than one year	4,411	4,327
<b>Total capitalized exploratory well costs</b>	<b>4,522</b>	<b>5,133</b>
Number of projects relating to exploratory well costs capitalized for a period greater than one year	54	57
	<b>Capitalized costs</b>	<b>Number of wells</b>
	<b>(2017)</b>	
2016	316	4
2015	887	19
2014	1,154	19
2013	596	11
2012 and previous years	1,458	27
Exploratory well costs that have been capitalized for a period greater than one year	4,411	80

(\*) Amounts paid for obtaining rights and concessions for exploration of oil and gas (capitalized acquisition costs) are not included.

Exploratory well costs that have been capitalized for a period greater than one year since the completion of drilling amount to US\$ 4,411. Those costs relate to 54 projects comprising (i) US\$ 4,163 for wells in areas in which there has been ongoing drilling or firmly planned drilling activities in the near term and for which an evaluation plan ( *Plano de Avaliação* ) has been submitted for approval by ANP; and (ii) US\$ 248 relate to costs incurred to evaluate the reserves and their potential development.

## 16. Trade payables

	<b>12.31.2017</b>	<b>12.31.2016</b>
Third parties in Brazil	3,671	3,280
Third parties abroad	1,380	2,019
Related parties	716	463
Balance in current liabilities	5,767	5,762

## 17. Finance debt

In line with the Company's Business and Management Plan and following its liability management strategy, recent funds have been raised in order to settle older debts, as well as aiming at improving the debt repayment profile taking into account its alignment with investments returns over the long run. These factors have enabled the use of cash flows from operating activities and from divestments and partnerships as the main source of funds for the investments portfolio.



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The Company has covenants that were not in default at December 31, 2017 in its loan agreements and notes issued in the capital markets requiring, among other obligations i) the presentation of interim financial statements within 90 days of the end of each quarter (not reviewed by Independent Registered Public Accounting Firm) and audited financial statements within 120 days of the end of each fiscal year, with a grace period ranging from 30 to 60 days, depending on the agreement; ii) Negative Pledge / Permitted Liens clause; iii) clauses of compliance with the laws, rules and regulations applicable to the conduct of its business including (but not limited to) environmental laws; (iv) clauses in financing agreements that require both the borrower and the guarantor to conduct their business in compliance with anti-corruption laws and anti-money laundering laws and to institute and maintain policies necessary for such compliance; (v) clauses in financing agreements that restrict relations with entities or even countries sanctioned primarily by the United States (including, but not limited to, the Office of Foreign Assets Control (OFAC), Department of State and Department of Commerce), the European Union and United Nations; and vi) covenants with respect to debt level in some of its loan agreements with the Brazilian Development Bank (*Banco Nacional de Desenvolvimento Econômico e Social* - BNDES).

**17.1. Prepayment of debts and new financings**

In 2017, proceeds from financing amounted to US\$ 27,075, principally reflecting: (i) global notes issued in the capital market in the amount of US\$ 10,218 and maturing in 2022, 2025, 2027, 2028 and 2044; (ii) debentures issued in the domestic market amounting to US\$ 1,577 and maturing in 2022 and 2024; and (iii) funds raised from the domestic and international banking market in the amount of US\$ 12,988 with average term of five years.

In addition, the Company used US\$ 43,076 for repayment of principal and interest, mainly attributable to:

(i) US\$ 7,569 relating to repurchase of global bonds previously issued by the Company in the capital market maturing from 2018 to 2021, with premium paid to bond holders amounting to US\$ 339; (ii) pre-payment of banking loans in the domestic and international market totaling US\$ 16,012; (iii) pre-payment of finance debt with export credit agencies, in the amount of US\$ 913; and (iv) pre-payment of US\$ 2,980 with respect to financings with BNDES.

During this period, the Company also rolled over some debts through non-cash transactions, including: (i) exchange of US\$ 6,768 old notes previously issued in the international capital market, maturing from 2019 to 2021, to new notes with maturities in 2025 and 2028 in the amount of US\$ 7,597; (ii) exchange of some debts in the domestic and international banking market maturing from 2018 to 2020, to new similar financings amounting to US\$ 4,257 with maturities ranging from 2020 to 2024.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***17.2. Changes in current and non-current debt**

A roll-forward schedule of current and non-current debt is set out as follows:

	<b>Export Credit Agencies</b>	<b>Banking Market</b>	<b>Capital Market</b>	<b>Others</b>	<b>Total</b>
<b>Current and Non-current</b>					
In Brazil					
Opening balance at January 1, 2016		27,379	1,963	19	29,361
Principal amortization		(1,408)	(152)	(2)	(1,562)
Interest amortization		(2,887)	(231)	(2)	(3,120)
Additions (new funding obtained)		475			475
Transaction costs during the period (*)		3,041	188	16	3,245
Foreign exchange/inflation indexation charges		(1,169)	108	1	(1,060)
Pre-payments		(6,820)			(6,820)
Transfer to liabilities associated with assets classified as held for sale		(14)			(14)
Cumulative translation adjustment (CTA)		5,020	391	5	5,416
Balance as of December 31, 2016		23,617	2,267	37	25,921
Abroad					
Opening balance at January 1, 2016	5,832	34,645	55,666	661	96,804
Principal amortization	(824)	(5,353)	(5,784)	(115)	(12,076)
Interest amortization	(124)	(969)	(3,037)	(26)	(4,156)
Additions (new funding obtained)	298	8,506	9,759		18,563
Transaction costs during the period (*)	160	1,109	2,974	20	4,263
Foreign exchange/inflation indexation charges	(206)	(1,081)	(569)	(23)	(1,879)
Pre-payments		(780)	(9,443)		(10,223)
Transfer to liabilities associated with assets classified as held for sale		(2)	(310)		(312)
Cumulative translation adjustment (CTA)	217	1,068	(89)	25	1,221
Balance as of December 31, 2016	5,353	37,143	49,167	542	92,205
Total Balance as of December 31, 2016	5,353	60,760	51,434	579	118,126

<b>Current</b>					9,755
<b>Non-current</b>					108,371
<b>Current and Non-current</b>					
<b>In Brazil</b>					
Opening balance at January 1, 2017	23,617	2,267	37		25,921
Principal amortization	(2,059)	(166)	(2)		(2,227)
Interest amortization	(2,084)	(200)	(2)		(2,286)
Additions (new funding obtained)	5,224	1,577			6,801
Transaction costs during the period (*)	2,106	185	5		2,296
Foreign exchange/inflation indexation charges	27	87			114
Pre-payments	(8,414)				(8,414)
Cumulative translation adjustment (CTA)	(174)	(101)			(275)
<b>Balance as of December 31, 2017</b>	<b>18,243</b>	<b>3,649</b>	<b>38</b>		<b>21,930</b>
<b>Abroad</b>					
Opening balance at January 1, 2017	5,353	37,143	49,167	542	92,205
Principal amortization	(914)	(3,210)	(973)	(47)	(5,144)
Interest amortization	(125)	(1,281)	(2,831)	(14)	(4,251)
Additions (new funding obtained)	226	8,192	10,249	121	18,788
Transaction costs during the period (*)	163	1,460	3,208	20	4,851
Foreign exchange/inflation indexation charges	8	117	931	1	1,057
Pre-payments	(1,051)	(11,005)	(7,936)	(353)	(20,345)
Cumulative translation adjustment (CTA)	11	(151)	96	(1)	(45)
<b>Balance as of December 31, 2017</b>	<b>3,671</b>	<b>31,265</b>	<b>51,911</b>	<b>269</b>	<b>87,116</b>
<b>Total Balance as of December 31, 2017</b>	<b>3,671</b>	<b>49,508</b>	<b>55,560</b>	<b>307</b>	<b>109,046</b>
<b>Current</b>					7,001
<b>Non-current</b>					102,045

(\*) It includes premium and discount over notional amounts and other related costs.

As shown in note 6.1, the IFRS 9 provisions will govern the accounting treatment for modification of contractual cash flow from January 1, 2018.

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The table below presents a reconciliation between finance debt and cash flows from financing activities:

	Balance as of December 31, 2016	Additions (new funding obtained)	Amortization (*)	Transaction costs during the period	Foreign exchange and indexation charges	Cumulative translation adjustment (CTA)	Balance as of December 31, 2017
<b>Finance debt</b>	118,126	25,589	(42,667)	7,147	1,171	(320)	109,046
Reconciliation to the Statement of Cash Flows							
Transfer to held for sale		1,619	(15)				
Purchase of property, plant and equipment on credit		(133)					
Expenses with debt restructuring			(339)				
Compensating balances			(54)				
Finance Leases			20				
Net cash used in financing activities		27,075	(43,076)				

(\*) It includes principal, interest and pre-payments of debt.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***17.3. Summarized information on current and non-current finance debt**

<b>Maturity in</b>	<b>up to 1 year</b>	<b>1 to 2 years</b>	<b>2 to 3 years</b>	<b>3 to 4 years</b>	<b>4 to 5 years</b>	<b>5 years and onwards</b>	<b>Total (*)</b>	<b>Fair value</b>
<b>Financing in Brazilian Reais (R\$):</b>	1,460	2,779	4,103	3,052	4,648	5,463	21,505	18,499
Floating rate debt	772	2,335	3,678	2,632	4,269	4,239	17,925	
Fixed rate debt	688	444	425	420	379	1,224	3,580	
Average interest rate	6.6%	6.6%	6.8%	7.3%	6.8%	5.9%	6.6%	
<b>Financing in U.S.Dollars (US\$):</b>	5,123	2,814	5,228	8,716	12,571	44,829	79,281	88,968
Floating rate debt	3,893	1,565	3,918	3,152	9,539	13,133	35,200	
Fixed rate debt	1,230	1,249	1,310	5,564	3,032	31,696	44,081	
Average interest rate	5.4%	5.8%	5.8%	5.7%	5.6%	6.5%	6.1%	
<b>Financing in R\$ indexed to US\$:</b>	85	81	81	81	78		406	391
Floating rate debt	20	19	19	19	16		93	
Fixed rate debt	65	62	62	62	62		313	
Average interest rate	3.8%	3.7%	3.6%	3.3%	2.6%		3.6%	
<b>Financing in Pound Sterling (£):</b>	62					2,321	2,383	2,590
Fixed rate debt	62					2,321	2,383	
Average interest rate	6.2%					6.3%	6.3%	
<b>Financing in Japanese Yen (¥):</b>	91						91	97
Floating rate debt	91						91	
	0.4%						0.4%	

Average interest rate								
Financing in Euro (€):	173	802	229	896	717	2,556	5,373	6,069
Floating rate debt	1		182				183	
Fixed rate debt	172	802	47	896	717	2,556	5,190	
Average interest rate	4.3%	4.3%	4.5%	4.6%	4.8%	4.6%	4.5%	
Financing in other currencies:	7						7	7
Fixed rate debt	7						7	
Average interest rate	14.0%						14.0%	
Total as of December 31, 2017	7,001	6,476	9,641	12,745	18,014	55,169	109,046	116,621
Average interest rate	5.6%	5.9%	5.9%	5.9%	5.7%	6.4%	6.1%	
Total as of December 31, 2016	9,755	11,216	20,898	16,313	18,777	41,167	118,126	118,768
Average interest rate	6.1%	6.0%	5.9%	5.9%	5.4%	6.4%	6.2%	

\* The average maturity of outstanding debt as of December 31, 2017 is 8.61 years (7.46 years as of December 31, 2016).

The fair value of the Company's finance debts is mainly determined and categorized into a fair value hierarchy as follows:

Level 1 – quoted prices in active markets for identical liabilities, when applicable, amounting to US\$ 54,248 as of December 31, 2017 (US\$ 46,510 as of December 31, 2016); and

Level 2 – discounted cash flows based on discount rate determined by interpolating spot rates considering financing debts indexes proxies, taking into account their currencies and also the Petrobras' credit risk, amounting to US\$ 62,373 as of December 31, 2017 (US\$ 72,258 as of December 31, 2016).

The sensitivity analysis for financial instruments subject to foreign exchange variation is set out in note 33.2.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***17.4. Capitalization rate used to determine the amount of borrowing costs eligible for capitalization**

The capitalization rate used to determine the amount of borrowing costs eligible for capitalization was the weighted average of the borrowing costs applicable to the borrowings that were outstanding during the period, other than borrowings made specifically for the purpose of obtaining a qualifying asset. In 2017 the capitalization rate was 6.16% p.a. (5.80% p.a. in 2016).

**17.5. Lines of credit**

Company	Financial institution	Date	Maturity	Amount		Balance
				Available Lines of Credit	Used	
<b>Abroad</b>						
Petrobras	China Development Bank	12/4/2017	12/14/2019	5,000	3,000	2,000
PGT BV	CHINA EXIM	10/24/2016	Not defined	1,000		1,000
PGT BV				6,000	3,000	3,000
<b>In Brazil</b>						
PNBV	BNDES	9/3/2013	3/26/2018	2,986	824	2,162
Transpetro	BNDES	11/7/2008	8/12/2041	533	171	362
Transpetro	Banco do Brasil	7/9/2010	4/10/2038	24	10	14
Transpetro	Caixa Econômica Federal	11/23/2010	Not defined	99		99
Total				3,642	1,005	2,637

**17.6. Collateral**

Most of the Company's debt is unsecured, but certain specific funding instruments to promote economic development are collateralized. In addition, financing agreements with China Development Bank (CDB) maturing in 2019, 2026 and 2027 are also collateralized based on future oil exports for specific buyers limited to 400 thousand barrels per day up to 2019, 300 thousand barrels per day from 2020 to 2026, and 100 thousand barrels per day in 2027. This collateral may not exceed the amount of the related debt, amounting to US\$ 10,815 at December 31, 2017 (US\$ 9,208 at December 31, 2016).

On January 30, 2018, the Company prepaid the remaining balance of a financing agreement with CDB maturing in 2019, in the amount of US\$ 2.8 billion, as set out in note 35.1. After this settlement, the new limits for the collateralization based on future oil exports are 200 thousand barrels per day up to 2019, 300 thousand barrels per day from 2020 to 2026, and 100 thousand barrels per day in 2027.

In accordance with the Company's Business and Management Plan (BMP 2018-2022), the extension of these terms is associated to a better indebtedness level, as set out in note 19.

The loans obtained by structured entities are collateralized based on the projects' assets, as well as liens on receivables of the structured entities. Bonds issued by the Company in the capital market are unsecured.

The global notes are issued by the Company in the capital market through its wholly-owned subsidiary Petrobras Global Finance B.V. - PGF and are unsecured. However, Petrobras fully, unconditionally and irrevocably guarantees these notes, as set out in note 36.



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*(Expressed in millions of US Dollars, unless otherwise indicated)***18. Leases****18.1. Future minimum lease payments / receipts finance leases**

Estimated lease payments / receivable	Receipts			Payments		
	Future value	Annual interest	Present value	Future value	Annual interest	Present value
2018	123	(69)	54	52	(27)	25
2019-2022	481	(221)	260	148	(75)	73
2023 and thereafter	603	(128)	475	388	(257)	131
As of December 31, 2017 (*)	1,207	(418)	789	588	(359)	229
Current			54			25
Non-current			735			204
As of December 31, 2017 (*)			789			229
Current			91			18
Non-current			1,383			226
As of December 31, 2016			1,474			244

(\*) For information on termination of the finance lease contract related to Vitoria 10,000 drilling rig in 2017, see note 8.3.

**18.2. Future minimum lease payments operating leases**

Operating leases mainly include oil and gas production units, drilling rigs and other exploration and production equipment, vessels and support vessels, helicopters, land and building leases.

2018	8,417
2019	6,292

2020	6,228
2021	6,544
2022	6,180
2023 and thereafter	58,358
As of December 31, 2017	92,019
As of December 31, 2016	96,918

As of December 31, 2017, the balance of estimated future minimum lease payments under operating leases includes US\$ 52,701 (US\$ 49,671 as of December 31, 2016) with respect to assets under construction, for which the lease term has not commenced.

During 2017, the Company recognized expenditures of US\$ 10,228 (US\$ 9,920 in 2016) for operating leases installments.

As shown in note 6.1, the IFRS 16 provisions will govern the accounting treatment for operating leases from January 1, 2019.

#### **19. Related-party transactions**

The Company has a related-party transactions policy, which is annually revised and approved by the Board of Directors, and is applicable to all the Petrobras Group, in accordance with the Company's by-laws.

In order to ensure the goals of the Company are achieved and align them with transparency of processes and corporate governance best practices, this policy guides Petrobras and its workforce while entering into related-party transactions and dealing with potential conflicts of interest on these transactions, based on the following assumptions and provisions:

Prioritization of the Company's interests regardless of the counterparty;

Arm's length basis;

Compliance with market conditions, especially concerning terms, prices and guarantees or with adequate compensatory payment;

Accurate and timely disclosure in accordance with applicable authorities.

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The Audit Committee must approve in advance transactions between the Company and its associates, the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, taking into account the materiality established by this policy. The Audit Committee reports monthly to the Board of Directors.

Transactions with entities controlled by key management personnel or by their close family members are also approved in advance by the Audit Committee regardless of the amount involved.

Transactions with the Brazilian Federal Government, including its agencies or similar bodies and controlled entities, which are under the scope of Board of Directors approval, must be preceded by the Audit Committee and Minority Shareholders Committee assessment and must have prior approval of, at least, 2/3 of the board members.

The related-party transactions policy also aims to ensure an adequate and diligent decision-making process for the Company's key management.

**19.1. Transactions with joint ventures, associates, government entities and pension plans**

The Company has engaged, and expects to continue to engage, in the ordinary course of business in numerous transactions with joint ventures, associates, pension plans, as well as with the Company's controlling shareholder, the Brazilian federal government, which includes transactions with banks and other entities under its control, such as financing and banking, asset management and others.

The balances of significant transactions are set out in the following table:

	<b>2017</b>	<b>12.31.2017</b>		<b>2016</b>	<b>12.31.2016</b>	
	<b>Income</b>			<b>Income</b>		
	<b>(expense)</b>	<b>Assets</b>	<b>Liabilities</b>	<b>(expense)</b>	<b>Assets</b>	<b>Liabilities</b>
<b>Joint ventures and associates</b>						
State-controlled gas distributors (joint ventures)	2,203	294	141	1,740	246	69
Petrochemical companies (associates)	3,847	59	16	3,578	131	27
Other associates and						
joint ventures	(633)	177	691	462	178	382
<b>Subtotal</b>	<b>5,417</b>	<b>530</b>	<b>848</b>	<b>5,780</b>	<b>555</b>	<b>478</b>

**Brazilian government Parent and its controlled entities**

Government bonds	153	1,702		130	1,113	
Banks controlled by the Brazilian Government	(1,466)	5,839	12,390	(3,073)	4,114	19,860
Receivables from the Electricity sector (note 8.4)	643	5,247		962	4,922	2
Petroleum and alcohol account receivables from the Brazilian Government	1	251		5	268	
Others	227	45	217	200	408	333
Subtotal	(442)	13,084	12,607	(1,776)	10,825	20,195
Pension plans		68	94		48	99
<b>Total</b>	4,975	13,682	13,549	4,004	11,428	20,772
Revenues, mainly sales revenues	7,517			6,652		
Purchases and services	(1,588)			(94)		
Foreign exchange and inflation indexation charges, net	239			(284)		
Finance income (expenses), net	(1,193)			(2,270)		
Current assets		2,521			3,062	
Non-current assets		11,161			8,366	
Current liabilities			1,544			4,037
Non-current liabilities			12,005			16,735
<b>Total</b>	4,975	13,682	13,549	4,004	11,428	20,772

In addition to the aforementioned transactions, Petrobras and the Brazilian Federal Government entered into the Assignment Agreement in 2010, which grants the Company the right to carry out prospecting and drilling activities for hydrocarbons located in the pre-salt area limited to the production of five billion barrels of oil equivalent.

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For detailed information on Assignment Agreement, see note 12.3.

**19.2. Petroleum and Alcohol accounts Receivables from the Brazilian Federal Government**

As of December 31, 2017, the balance of receivables related to the Petroleum and Alcohol accounts was US\$ 251 (US\$ 268 as of December 31, 2016). Pursuant to Provisional Measure 2,181 of August 24, 2001, the Federal Government may settle this balance by using National Treasury Notes in an amount equal to the outstanding balance, or allow the Company to offset the outstanding balance against amounts payable to the Federal Government, including taxes payable, or both.

The Company provided all the information required by the National Treasury Secretariat (Secretaria do Tesouro Nacional - STN) in order to resolve disputes between the parties and conclude the settlement with the Brazilian Federal Government.

Following several negotiation attempts at the administrative level, the Company filed a lawsuit in July 2011 to collect the receivables.

On October 28, 2016, the court ruled in favor of the Company, disallowing the use of an alleged debt from the liquidated company of the group, Petrobras Comércio Internacional S.A. - Interbrás, by the Brazilian Federal Government, when offsetting the outstanding balance.

On July 18, 2017, the Brazilian Federal Government appealed the ruling and the court assessment of this appeal is pending.

**19.3. Compensation of employees and key management personnel**

The criteria for compensation of employees and officers are established based on the relevant labor legislation and the Company's Positions, Salaries and Benefits Plan (Plano de Cargos e Salários e de Benefícios e Vantagens).

The compensation of employees (including those occupying managerial positions) and officers in December 2017 and December 2016 were:

<b>Compensation of employees, excluding officers (amounts in U.S. dollars)</b>	<b>Dec/2017</b>	<b>Dec/2016</b>
Lowest compensation	964.52	934.64

Average compensation	5,591.00	5,376.73
Highest compensation	30,644.55	27,996.49
<b>Compensation of highest paid Petrobras officer</b>	35,964.15	35,453.09

The total compensation of Executive Officers and Board Members of Petrobras parent company is set out as follows:

	2017			2016 Board members and alternates		
	Officers	Board members	Total	Officers	Board members and alternates	Total
Wages and short-term benefits	3.7	0.4	4.1	3.4	0.4	3.8
Social security and other employee-related taxes	1.0		1.0	1.0	0.1	1.1
Post-employment benefits (pension plan)	0.4		0.4	0.4		0.4
Benefits due to termination of tenure				0.2		0.2
Total compensation recognized in the statement of income	5.1	0.4	5.5	5.0	0.5	5.5
Average number of members in the period (*)	7.92	9.00	16.92	7.67	11.00	18.67
Average number of paid members in the period (**)	7.92	5.75	13.67	7.67	9.33	17.00

(\*) Monthly average number of members.

(\*\*) Monthly average number of paid members.

In 2017 the board members and executive officers of the Petrobras group received US\$ 24.3 as compensation (US\$ 22.2 in 2016).

The compensation of the Advisory Committees to the Board of Directors is apart from the fixed compensation set for the Board Members and, therefore, has not been classified under compensation of Petrobras key management personnel.

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In accordance with Brazilian regulation applicable to companies controlled by the Brazilian Government, Board members who are also members of the Audit Committee are only compensated with respect to their Audit Committee duties. The total compensation concerning these members totaled US\$ 94 thousand in 2017 (US\$ 113 thousand with social security and related charges).

The general meeting, held on April 27, 2017, fixed monthly compensation of Audit Committee members to 10% of monthly average executive officers' compensation, excluding certain social security benefits and paid vacation.

**20. Provision for decommissioning costs**

<b>Non-current liabilities</b>	<b>2017</b>	<b>2016</b>
Opening balance	10,252	9,150
Adjustment to provision	4,166	(564)
Transfers related to liabilities held for sale	(117)	(35)
Payments made	(709)	(730)
Interest accrued	757	660
Others	24	(41)
Cumulative translation adjustment	(230)	1,812
Closing balance	14,143	10,252

The estimates for abandonment and dismantling of oil and natural gas producing properties are revised annually at December 31 along with the annual process of oil and gas reserves certification and whenever an indication of significant change in the assumptions used in the estimates occurs.

In 2017, the adjustment to this provision in the amount of US\$ 4,166 primarily reflected the decrease in the risk-adjusted discount rate from 7.42% p.a. in 2016 to 5.11% p.a. in 2017, which was affected by the improved market risk perception, as well as due to an acceleration of fields abandonment regarding certain projects.

**21. Taxes****21.1. Income taxes and other taxes**

<b>Income taxes</b>	<b>Current assets</b>		<b>Current liabilities</b>		<b>Non-current liabilities</b>
	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>
<b>Taxes in Brazil</b>					
Income taxes	442	595	39	112	
Income taxes Tax settlement programs (*)			228		671
	442	595	267	112	671
<b>Taxes abroad</b>					
	37	7	32	15	
<b>Total</b>	<b>479</b>	<b>602</b>	<b>299</b>	<b>127</b>	<b>671</b>

(\*) See note 20.2 for detailed information.

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Other taxes	Current assets		Non-current assets		Current liabilities		Non-current liabilities (*)	
	12.31.2017	12.31.2016	12.31.2017	12.31.2016	12.31.2017	12.31.2016	12.31.2017	12.31.2016
Taxes in Brazil								
Current / Deferred ICMS (VAT)	934	969	707	676	1,021	1,078		
Current / Deferred PIS and COFINS	820	710	2,282	2,262	820	463		
CIDE	14	22			104	118		
Production taxes					1,605	1,232		
Withholding								
income taxes					157	486		
Tax Settlement Program (**)					648	28		
Others	170	165	72	191	165	190	86	20
<b>Total in Brazil</b>	<b>1,938</b>	<b>1,866</b>	<b>3,061</b>	<b>3,129</b>	<b>4,520</b>	<b>3,595</b>	<b>86</b>	<b>20</b>
Taxes abroad	20	34	14	12	28	33		
<b>Total</b>	<b>1,958</b>	<b>1,900</b>	<b>3,075</b>	<b>3,141</b>	<b>4,548</b>	<b>3,628</b>	<b>86</b>	<b>20</b>

(\*) Other non-current taxes are classified as other non-current liabilities.

(\*\*) It includes the amount of US\$ 3 relating to tax amnesty and refinancing program (REFIS) from previous periods.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***21.2. Brazilian federal settlement programs**

In 2017, the Company joined certain settlement programs created by the Brazilian Federal Government, which enabled the settlement of significant disputes in which the Company was a defendant (see note 30), with certain benefits, such as the use of tax loss carry forwards and reduction in interests, penalties and related charges. The settlement of disputes involving Brazilian Federal Tax Authorities, Brazilian Federal Agencies and similar bodies reduced tax disputes amounting to US\$ 11,552 that as shown below:

Provisional measures	Signed into law	Brazilian federal settlement programs	Amount of		
			Disputes	relief	Debts
766		Tax Settlement Program - PRT(*)	502		502
783	13.496	Special Tax Settlement Program - PERT	2,203	1,001	1,202
780	13.494	Non -Tax Debts Settlement Program - PRD	340	113	227
795	13.586	Withholding income tax on remittances for payment of charter of vessels	8,507	7,976	531
			11,552	9,090	2,462

(\*) Benefit of using tax loss carryforwards to settle 80% of the debt.

The balances of respective liabilities carried on the statement of financial position as of December 31, 2017 are shown below:

	Settlement			Total	Inflation indexation CTA	12.31.2017
	Tax liabilities	In cash	Tax losses used			
<b>PRT</b>						
Income taxes	321	(64)	(103)	(167)	(1)	153
Other taxes	181	(36)	(145)	(181)		
Total	502	(100)	(248)	(348)	(1)	153
<b>PERT</b>						
Income taxes (*)	1,128	(425)		(425)	21	744

Others taxes	74	(34)	(34)	2	(2)	40
	1,202	(459)	(459)	23	18	784
<b>PRD</b>						
Production taxes	227	(132)	(132)		(8)	87
<b>Law 13.586/17</b>						
Withholding income tax	531				(10)	521
<b>Total</b>	<b>2,462</b>	<b>(691)</b>	<b>(248)</b>	<b>(939)</b>	<b>23</b>	<b>1,545</b>
Current						874
Non-current						671

(\* ) It includes incremental relief amounting to US\$ 239 according to Law 13.496 /17.

The following table presents the settlement years of the outstanding amount of these programs:

	2018	2019	2020	2021	2022	2023 onwards	Total
PRT	153						153
PERT	119	60	60	60	60	425	784
PRD	87						87
Law 13.586/17	521						521
<b>Total</b>	<b>880</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>425</b>	<b>1,545</b>

### 21.2.1. Tax Settlement Program (Programa de Regularização Tributária PRT)

The PRT enabled relief for the settlement of tax and non-tax debts overdue up to November 30, 2016 to the Brazilian Federal Tax Authorities (Brazilian Federal Revenue Service and National Treasury Attorney's Office).

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The Company joined the program to settle, principally, proceedings at administrative level totaling US\$ 502, for which outflow of resources were probable, related to disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation.

After assessing the reliefs provided by the PRT, the Company decided to settle the total debt of these tax disputes (US\$ 502) with the benefit of using tax loss carry forwards to pay US\$ 402, of which US\$ 248 was already used at December 31, 2017 and the remaining (US\$ 153 after foreign translation effects) is expected to be used in up to 12 months. The amount of US\$ 100 was settled in a lump sum payment.

After joining the PRT in May 2017, the Company recognized a reversal of provisions for legal proceedings previously recognized for this matter in the amount of US\$ 485. The impacts of this program were accounted for in the second quarter of 2017 within the Company's statement of income amounting to US\$ 82 after tax effects, as shown in note 21.2.5.

**21.2.2. Special Tax Settlement Program (Programa Especial de Regularização Tributária PERT)**

The PERT enabled relief for the settlement of tax and non-tax debts overdue up to April 30, 2017 to the Brazilian Federal Tax Authorities (Brazilian Federal Revenue Service and National Treasury Attorney's Office), including amounts under disputes involving these authorities.

The Company elected to join the PERT to settle the legal proceeding, in the amount of US\$ 1,977, with respect to a notice of deficiency issued due to the use of expenses arising from the Terms of Financial Commitment (TFC), signed by Petrobras and Petros Plan in 2008, as deductible in determining taxable profit. The TFC represents a commitment to cover obligations due to participants' accepted changes in the plan benefits and disputes resolved at that period.

The court ruled on this matter in the second quarter of 2017 granting the deduction of these expenses from the taxable profit computation, but limited the deduction to 20% of the payroll and compensation of key management participants in the plan. After assessing the fundamentals of this court ruling, the Company reassessed the probability of outflow of resources with respect to this dispute and estimated a portion of it as probable.

The Company was not able to use tax loss carry forwards to settle this amount as this tax dispute was in the scope of the National Treasury Attorney's Office. Accordingly, an assessment of the other reliefs was performed and, as a result, the Company decided to settle this tax dispute, totaling US\$ 1,977, by paying US\$ 1,317, which takes into account the benefits reliefs on interests, penalties and related charges. Of this amount, US\$ 432 was settled up to December 2017, and the remaining amount will be settled through 145 monthly installments bearing interest from January 2018 onwards.

In addition, pursuant the law 13.496 enacted on October 24, 2017, which enabled incremental relief relating to this matter, the remaining amount was recalculated and decreased by US\$ 239.

Pursuant to the Provisional Measure 807/2017 enacted on October 31, 2017, the period to join this program was extended from August 31 to November 14, 2017. Therefore, the Company decided in the third quarter of 2017 to settle other disputes relating to debts in the scope of the Brazilian Federal Revenue Service amounting to US\$ 226, following unfavorable court rulings that changed the Company's estimates about probability of outflow of resources to probable. After the relief under the PERT, the total amount of these disputes was reduced to US\$ 125, of which US\$ 103 was settled in January 2018 through a lump sum payment, and the remaining amount will be paid through 141 monthly installments. These disputes refer to:

Tax dispute relating to the use of tax benefit under the Thermolectric Priority Program (Programa Prioritário de Termoeletricidade) established by the Decree 3.371/2000, that allegedly enabled total relief (zero rate) of tax on imported products (*Imposto de Importação* - II) and the tax on manufactured products (*Imposto sobre Produtos Industrializados*-IPI) over the import of certain equipment necessary for setting up electricity generation units. After the reliefs provided for by PERT, this tax dispute in the amount of US\$ 104 was reduced to US\$ 48;

Tax dispute relating to the use of certain tax loss carry forwards as deduction from the computation of taxable income. After the reliefs provided for by this program, this tax dispute in the amount of US\$ 38 will be settled by paying US\$ 20;

Other debts related to contributions to private social service and vocational training entities linked to trade unions, as well as PIS and COFINS (Social Integration Program and Social Security Financing). These amounts totaled US\$ 25 that, after the relief provided for by this program was reduced to US\$ 19; and

The wholly-owned subsidiaries Transpetro and BR also decided to settle Brazilian federal taxes disputes amounting to US\$ 59. After the relief on interest, penalties and related charges, this amount will be settled by paying US\$ 38.

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Accordingly, the Company recognized the amount of US\$ 1,839 within the statement of income in 2017, made up of tax debts after reliefs and tax effects amounting to US\$ 1,117, reversals of deferred income tax assets for unused tax losses from 2012 to 2017 amounting to US\$ 711 and indexation charges of US\$ 22.

**21.2.3. Non-Tax Debts Settlement Program (Programa de Regularização de Débitos não Tributários PRD)**

The PRD enabled relief for the settlement of non-tax debts overdue to the Brazilian Federal Agencies and similar bodies up to October 25, 2017, including amounts under disputes and debts in the scope of other settlement programs involving these authorities.

The Company joined the PRD to settle some legal proceedings involving ANP, with respect to production tax debts for which the likelihood of losses were deemed probable, following a court ruling in August 2017 granting to ANP its arguments.

After assessing the benefits from relief on interest, penalties and related charges provided for by this program, the Company decided to settle these disputes, totaling US\$ 340 by paying US\$ 227 plus interest, of which US\$ 136 was settled payment in the fourth quarter of 2017 and the remaining amount in January 2018.

Accordingly, the Company recognized US\$ 164 within the statement of income in December 31, 2017, after tax effects, as shown in note 21.2.5.

**21.2.4. Settlement program under law 13.586/2017**

As presented in note 21.4, the law 13.586 enacted on December 28, 2017, formerly Provisional Measure 795/17, provided for the tax treatment of several relevant issues relating to the exploration and production of oil or natural gas. This law also established the settlement program of withholding income tax on remittances abroad related to charter contracts for vessels, enabling the regularization of events occurred in the period from 2008 to 2014.

The decision to join the program was based on the economic benefits thereof. Proceeding with the disputes would involve financial efforts to provide significant judicial deposits and this program gave rise to the possibility of ceasing disputes at administrative and judicial levels related to the period from 2008 to 2013 in the amount of US\$ 8,507, as well as amounts relating to the 2014 not yet under dispute. The company will pay US\$ 531 in 12 consecutive installments bearing interest at SELIC rate, of which the first was paid in January 2018.

Accordingly, the Company recognized US\$ 350 within the statement of income in December 31, 2017, after tax effects, as shown in note 21.2.5.

**21.2.5. Impacts of the tax settlement programs within statement of income**

	<b>PRT (*)</b>	<b>PERT</b>	<b>PRD</b>	<b>Law 13,586/17</b>	<b>Total</b>
Cost of sales			(131)		(131)
Other taxes	(169)	(366)	(25)	(323)	(883)
Finance expenses	(249)	(309)	(71)	(208)	(837)
Income taxes notice of deficiency	(98)	(565)			(663)
<b>Total after reliefs</b>	<b>(516)</b>	<b>(1,240)</b>	<b>(227)</b>	<b>(531)</b>	<b>(2,514)</b>
Impacts of PIS/COFINS on settlement programs		(69)	(7)		(76)
Income taxes deductible expenses	(51)	192	70	180	391
Other income and expenses reversal of provision (*)	485	11			496
<b>Total</b>	<b>(82)</b>	<b>(1,106)</b>	<b>(164)</b>	<b>(351)</b>	<b>(1,703)</b>
Income taxes reversal of unused tax losses from 2012 to 2017		(711)			(711)
<b>Impacts within the statement of income (before Indexation charges)</b>	<b>(82)</b>	<b>(1,817)</b>	<b>(164)</b>	<b>(351)</b>	<b>(2,414)</b>
Indexation charges		(22)			(22)
<b>Impacts within the statement of income</b>	<b>(82)</b>	<b>(1,839)</b>	<b>(164)</b>	<b>(351)</b>	<b>(2,436)</b>

(\*) A portion of this provision was recognized within the statement of income in the first quarter 2017 in the amount of US\$ 199.

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**21.3. Tax amnesty programs State Tax (Programas de Anistias Estaduais)**

In 2017, the Company elected to settle in cash VAT (ICMS) tax disputes concerning the states of Amazonas, Ceará, Minas Gerais and Pernambuco by joining states amnesty settlement programs, which exempted the company from having to pay interest and penalties. Accordingly, the Company charged US\$ 117 as other taxes.

**21.4. Brazilian Tax Law**

**21.4.1. Federal Law**

On December 28, 2017, the Brazilian Federal Government signed the Provisional Measure No. 795 into Law. 13,586 which outlines tax requirements applicable to the oil and gas exploration and development activities and also establishes a special regime for exploration, development and production of oil, gas and other liquid hydrocarbons.

It is expected that there will be greater stability and legal security in the industry following this new tax regulation model, allowing an increase in investments and a reduction in litigation. The main provisions of this law are presented below:

Immediate deduction of investments made in connection with the oil and gas exploration and production phases from income taxes basis of computation, as well as deductions of investments made in the development phase through accelerated depreciation (2.5 times the unit of production method rate).

Exclusion from Brazilian parent companies income tax basis, up to December 31, 2019, of a portion of income earned abroad, by direct or indirect subsidiary, or related to the activities of chartering by time or bare hull, operating lease, rent, loan of goods or rendering of services directly related to the phases of exploration and production of oil and natural gas;

Creation of Repetro-Sped expiring at December 2040, which has provisions which enhanced the former Repetro (Special Customs Regime for the Export and Import of Goods destined to Exploration and Production of Oil and Natural Gas Reserves), notably the tax relief over goods with definitive permanence in Brazil in addition to the previous relief relating to temporary admissions. In addition, the Repetro-Sped brought other important enhancements, such as: i) the possibility of migrating goods under the old regime to the new one, without paying the federal tax burden in the nationalization process; (ii) increasing the possibility of applying the regime to well equipment; iii) exemption of federal taxes for goods purchased by Brazilian suppliers, including the intermediary manufacturers; and iv) greater adherence and rationality in relation to the operations of the industry, minimizing



risks of noncompliance with the regime.

New rules relating to the determination of withholding income tax on remittances for payment of vessels charters. As set out in note 21.2.4, this law established a tax settlement program relating to withholding income tax on remittances for payment of vessels charters through 2014, enabling the company to settle disputes thereof.

In addition, the Social Integration Program (PIS) and Contribution to Social Security Financing (COFINS) rates over diesel and gasoline sales were increased pursuant to the Decree 9.101 enacted in July 2017. This tax burden was taken into account in the sale prices and, as a consequence, there was a significant increase in these taxes charges in 2017.

Conversely, the Brazilian Federal Supreme Court, in October 2017, ruled on the inclusion of amount of VAT tax within the computation basis of PIS and COFINS. According to its decision, sales revenues do not include the amount of VAT. Therefore, VAT must not be taken into account in determining the amount of PIS and COFINS.

**a) ANP Resolution 703/2017**

ANP enacted the Resolution No. 703 on September 26, 2017, establishing new criteria for reference price for the calculation of production taxes. The new calculation will be effective on January 1, 2018 and will be applied gradually until 2022, starting from a percentage of 20% according to the new rules. The new reference price for production taxes calculation takes into account different characteristics of the product in each exploratory area.

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**21.4.2. State laws**

**b) VAT (ICMS) tax and state rate over transactions involving crude oil operations State Law**

On December 30, 2015, the state of Rio de Janeiro enacted laws that increased the tax burden on the oil industry since March 2016, as follows:

Law No. 7,182 establishes a state Rate Control, Monitoring and Supervision of Research, Mining, Oil and Gas Exploration and Utilization Activities tax (Taxa de Controle, Monitoramento e Fiscalização das Atividades de Pesquisa, Lavra, Exploração e Aproveitamento de Petróleo e Gás TFGP) over each barrel of crude oil or equivalent unit of natural gas extracted in the State of Rio de Janeiro, and

Law No. 7,183 establishes a VAT (ICMS) tax over transactions involving crude oil operations. The Company believes that the taxation established by both laws is not legally justifiable, and therefore, the Company has supported the Brazilian Association of Companies for the Exploration and Production of Oil and Gas (ABEP *Associação Brasileira de Empresas de Exploração e Produção de Petróleo e Gás*), which has filed complaints challenging the constitutionality of such laws before the Brazilian Supreme Court.

The Brazilian Federal Attorney has expressed favorable opinions regarding the basis of the ABEP complaints and the granting of judicial injunctions in favor of the oil and gas industry, to avoid the associated tax burden imposed on it.

As the Brazilian Supreme Court has not ruled on the ABEP request for formal injunctions, the Company filed individual complaints before the State Court of Rio de Janeiro challenging both laws and, as a result, judicial injunctions were granted in favor of the Company in December 2016 and this tax burden has been suspended.

**c) VAT (ICMS) tax incentives over the Repetro-Sped**

Following the creation of Repetro-Sped pursuant to the new requirements provided for Provisional Measure No. 795 into Law. 13,586/2017 (see note 21.4.3), the Brazilian Federal Government authorized its states to provide tax incentives relating to VAT (ICMS) tax with direct impacts on the oil and gas industry.

Pursuant to the ICMS Convention 03/2018 enacted on January 17, 2018, ratified on February 1, 2018, the Brazilian Federal Government authorized its states to reduce the basis of VAT (ICMS) tax computation on imports or sale in the domestic market of goods with definitive permanence, as well as VAT (ICMS) exemption on import of goods with temporary permanence in Brazil. In addition, VAT (ICMS) exemption for goods migrating from the old to the new tax regime was also provided for.

At the date of issue of these financial statements, the State of Rio de Janeiro and the State of São Paulo were the only states enacting new regulations governing the tax incentives authorized by the Brazilian Federal Government.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***21.5. Deferred income taxes non-current****a) The changes in the deferred income taxes are presented as follows:**

Income taxes in Brazil comprise corporate income tax (IRPJ) and social contribution on net income (CSLL). Brazilian statutory corporate tax rates are 25% and 9%, respectively.

	Property, Plant and Equipment	Exploration and decommissioning costs	Others	Loans, trade and other receivables / payables (and financing leases)	Provision for legal cases	Tax losses	Inventories	Employee Benefits	Others	Total
Balance at January 1, 2016	(10,323)	1,291	7,613	(350)	792	5,215	353	1,199	(6)	5,784
Recognized in the statement of income for the year	1,078	(533)	(374)	36	183	(230)	21	522	210	913
Recognized in shareholders equity (****)			(4,629)	301		(3)		1,058		(3,273)
Cumulative translation adjustment	(1,960)	106	918	(68)	179	1,094	55	252	(12)	564
Others (**)		73	(16)	(9)	(26)	(36)		(22)	92	56
Balance at December 31, 2016	(11,205)	937	3,512	(90)	1,128	6,040	429	3,009	284	4,044
Recognized in the statement of income for the period (***)	363	(1,292)	(1,099)	(64)	1,134	278	130	(4)	139	(415)
Recognized in shareholders equity (****)			(887)			(69)		(273)	9	(1,220)

Cumulative translation adjustment	150	45	34	4	(40)	(67)	(6)	(34)	(11)	75
Use of tax credits						(271)				(271)
Others		(188)	(16)	20	(21)	120	16	(10)	108	29
Balance at December 31, 2017	(10,692)	(498)	1,544	(130)	2,201	6,031	569	2,688	529	2,242
Deferred tax assets										4,307
Deferred tax liabilities										(263)
Balance at December 31, 2016										4,044
Deferred tax assets										3,438
Deferred tax liabilities										(1,196)
Balance at December 31, 2017										2,242

(\*) Mainly includes impairment adjustments and capitalized borrowing costs.

(\*\*) Includes US\$ 77 transferred to liabilities associated with assets held for sale relating to Liquigás, PESA and NTS.

(\*\*\*) Does not include US\$ 52 relating to deferred income taxes of companies when classified as held for sale.

(\*\*\*\*) The amounts presented as Loans, trade and other receivables/payables and financing, relate to the tax effect on exchange rate variation recognized within other comprehensive income (cash flow hedge accounting) as set out note 33.2.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***b) Timing of reversal of deferred income taxes**

Deferred tax assets were recognized based on projections of taxable profit in future periods supported by the Company's 2018-2022 Business and Management Plan (BMP). The main goals and objectives outlined in its business plan include business restructuring, a divestment plan, demobilization of assets and reducing operating expenses.

Management considers that the deferred tax assets will be realized to the extent the deferred tax liabilities are reversed and expected taxable events occur based on its 2018-2022 BMP.

The estimated schedule of recovery/reversal of net deferred tax assets (liabilities) recoverable (payable) as of December 31, 2017 is set out in the following table:

	<b>Assets</b>	<b>Liabilities</b>
2018	683	(372)
2019	403	96
2020	397	121
2021	465	862
2022	498	24
2023 and thereafter	992	465
<b>Recognized deferred tax credits</b>	<b>3,438</b>	<b>1,196</b>
Brazil	511	
Abroad	2,660	
<b>Unrecognized deferred tax credits</b>	<b>3,171</b>	
<b>Total</b>	<b>6,609</b>	<b>1,196</b>

At December 31, 2017, the Company had tax loss carryforwards arising from offshore subsidiaries, for which no deferred tax assets had been recognized. These tax losses totaling US\$ 2,660 (US\$ 2,532 as of December 31, 2016) arose mainly from oil and gas exploration and production and refining activities in the United States of US\$ 2,370 (US\$ 2,276 as of December 31, 2016), as well as activities in Spain in the amount of US\$ 290 (US\$ 256 as of December 31, 2016).

An aging of the unrecognized tax carryforwards, from companies abroad is set out below:

	<b>Unrecognized deferred tax credits</b>
2020	42
2021	152
2022	6
2023	55
2024	36
2025	6
2026	113
2027	130
2028	147
2029	162
2030 and thereafter	1,811
Total	2,660

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*(Expressed in millions of US Dollars, unless otherwise indicated)***21.6. Reconciliation between statutory tax rate and effective tax expense rate**

The following table provides the reconciliation of Brazilian statutory tax rate to the Company's effective rate on income before income taxes:

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Net income before income taxes	1,997	(3,665)	(9,748)
Nominal income taxes computed based on Brazilian statutory corporate tax rates (34%)	(679)	1,247	3,314
Adjustments to arrive at the effective tax rate:			
Different jurisdictional tax rates for companies abroad	669	(157)	(251)
Brazilian income taxes on income of companies incorporated outside Brazil (*)	(70)	(320)	(751)
Tax incentives	169	51	11
Tax loss carryforwards (unrecognized tax losses)	(146)	(265)	(554)
Non-taxable income (non-deductible expenses), net (**)	(472)	(1,080)	(658)
Tax settlement programs (***)	(1,373)		
Others	74	(160)	(28)
Income taxes expense	(1,828)	(684)	1,137
Deferred income taxes	(467)	913	2,043
Current income taxes	(1,361)	(1,597)	(906)
Total	(1,828)	(684)	1,137
Effective tax rate of income taxes	91.5%	(18.7)%	11.7%

(\*) Relates to Brazilian income taxes on earnings of offshore investees, as established by Law No. 12,973/2014.

(\*\*) Includes results in equity-accounted investments and expenses relating to health care plan.

(\*\*\*) Income taxes in the scope of PRT and PERT and reversals of losses carry forwards from 2012 to 2017, as shown in note 21.2.4.

**22. Employee benefits (Post-Employment)**



	2017	2016
<b>Liabilities</b>		
Petros Pension Plan	10,728	10,752
Petros 2 Pension Plan	260	293
AMS Medical Plan	10,802	11,214
Other plans	40	38
 Total	 21,830	 22,297
 Current	 844	 820
Non-current	20,986	21,477
 Total	 21,830	 22,297

### 22.1. Petros Plan and Petros 2 Plan

The Company's post-retirement plans are managed by Fundação Petrobras de Seguridade Social (Petros Foundation), which was established by Petrobras as a nonprofit legal entity governed by private law with administrative and financial autonomy.

Petros Foundation has committees for assessing and resolving on risk management matters, mainly an Integrity Program Against Harmful Acts, established in 2017, with the purpose of improving its corporate governance.

#### a) Petros Plan Fundação Petrobras de Seguridade Social

The Petros Plan was established by Petrobras in July 1970 as a defined-benefit pension plan and currently provides post-retirement benefits for employees of Petrobras and Petrobras Distribuidora S.A., in order to complement government social security benefits. The Petros Plan has been closed to new participants since September 2002.

Petros Foundation performs an annual actuarial review of its costs using the capitalization method for most benefits. The employers (sponsors) make regular contributions in amounts equal to the contributions of the participants (active employees, assisted employees and retired employees), on a parity basis.

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As of December 31, 2017, the balance of the Terms of Financial Commitment (TFC), signed by Petrobras and Petros Foundation in 2008 is US\$ 3,720. The TFC is a financial commitment agreement to cover obligations under the pension plan, which amounts are due in 20 years, with 6% p.a. semiannual coupon payments based on the updated balance. The Company has provided crude oil and oil products pledged as security for the TFC totaling US\$ 4,067, updated in the third quarter of 2017 to reflect the increase in the commitments assumed in the TFC.

The employers' expected contributions to the plan for 2018 are US\$ 220 and interest payments on TFC US\$ 222.

The average duration of the actuarial liability related to the plan, as of December 31, 2017, is 12.51 years (13.06 years as of December 31, 2016).

**Deficit settlement plan Petros Plan**

Petros Foundation's financial statements for 2016 were approved by the Executive Council of Petros Foundation on May 26, 2017 and presented an accumulated deficit of US\$ 8,192 (US\$ 5,788 accumulated until 2015) in the Petros Plan, according to the general accepted accounting standards for the post-retirement sector, regulated in Brazil by the Post-Retirement Benefit Federal Council - CNPC.

The deficit determined by Petros Foundation is annually calculated by an independent actuary and is already recognized in the Company's financial statements in accordance with IFRS.

On June 19, 2017, the Superintendency of Post-retirement Benefits (PREVIC) issued the Conduct Adjustment Declaration (TAC) for Petros Plan, determining a deadline for the implementation of its plan for reduction of the accumulated deficit computed at the end of 2015.

On September 12, 2017, the Executive Council of Petros Foundation approved the deficit of the year 2015. This amount was updated based on interest and inflation and reached US\$ 8,253 at December 31, 2017.

The Company and the Secretariat of Management and Governance for the State-owned Companies (*Secretaria de Coordenação e Governança das Empresas Estatais* - SEST) assessed the deficit settlement plan and additional contributions from participants and sponsors will commence in March 2018.

Pursuant to relevant regulation, the sponsors and participants will cover this deficit based on their respective proportions of regular contributions. Accordingly, the Company will cover approximately US\$ 4,141 of this deficit and the contributions will occur for 18 years through decreasing values, of which the estimated amount for the first year is US\$ 450.

The additional contributions of the participants during their employed and assisted phases were considered in the actuarial evaluation of 2017, reducing the present value of the obligation, in the amount of US\$ 4.1 billion, while the

additional contributions of the sponsor will reduce the actuarial obligation at the time of the disbursement, without impacting the income statement.

### **Split of Petros Plan**

On February 15, 2018, the PREVIC authorized the split of Petros Plan, expected to occur on March 31, 2018, into two separate plans: Petros Plan Renegotiated and Petros Plan Non-renegotiated.

This split arises from the renegotiation procedures held in 2006-2007 period and in 2012, when 75% of the participants accepted the option to change to a model that sets forth solely inflation indexation on the annual adjustment of their benefits. The other participants' benefits remained adjusted by the same rate as the Petrobras workforce had their salaries adjusted.

Petros Foundation will assess the effect of the split on the deficit settlement plan, whose additional contributions will commence in March 2018. The results of this study may trigger a revision of the settlement plan in 2019.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***Reconciliation between results registered by Petros and the Company**

The table below presents the reconciliation of the deficit of Petros Plan registered by Petros Foundation, according to the standards issued by CNPC, and by sponsor Petrobras, according to international accounting standards (IAS 19):

	<b>2017</b>	<b>Petros Plan 2016</b>
Deficit registered by Petros	1,209	8,189
Extraordinary sponsor contributions	4,037	
Effects of the TFC over plan assets	3,684	3,642
Ordinary sponsor contributions	2,829	3,069
Financial assumptions	1,528	982
Actuarial valuation method	(2,803)	(5,372)
Others	244	242
Net actuarial liability registered by the Company	10,728	10,752

The main differences are:

**Sponsor contributions** Petros Foundation uses the discounted cash flow of expected sponsor contributions, while Petrobras uses the realized sponsor contributions.

**Effects of the TFC over plan assets** Petros Foundation accounts for its receivables arising from the TFC.

**Financial assumptions** the main difference is the discount rate used by Petros Foundation, based on actuarial target, while the discount rate used by Petrobras is based on the yield curve of a long-term Brazilian Government Bonds (NTN), as set out in note 5.4.

**Actuarial valuation method** Petrobras uses the projected unit credit method to determine the present value of its defined benefit obligations, which represents a more accelerated term of capitalization when compared to the aggregate method of capitalization used by Petros Foundation.

**b) Petros 2 Plan Fundação Petrobras de Seguridade Social**

Petros 2 Plan was established in July 2007 by Petrobras and certain subsidiaries as a variable contribution plan recognizing past service costs for contributions for the period from August 2002 to August 29, 2007. The Petros 2 Plan currently provides post-retirement benefits for employees of Petrobras, Petrobras Distribuidora S.A., Stratara Asfaltos, Termobahia, Termomacaé, Transportadora Brasileira Gasoduto Brasil-Bolívia S.A. TBG, Petrobras Transporte S.A. Transpetro, Petrobras Biocombustível and Araucária Nitrogenados. The plan is open to new participants although there will no longer be payments relating to past service costs.

Certain elements of the Petros 2 Plan have defined benefit characteristics, primarily the coverage of disability and death risks and the guarantee of minimum defined benefit and lifetime income. These actuarial commitments are treated as defined benefit components of the plan and are accounted for by applying the projected unit credit method. Contributions paid for actuarial commitments that have defined contribution characteristics are accrued monthly in the statement of income and are intended to constitute a reserve for programmed retirement. The contributions for the portion of the plan with defined contribution characteristics were US\$ 283 in 2017.

The defined benefit portion of the contributions was suspended from July 1, 2012 to June 30, 2018, as determined by the Executive Council of Petros Foundation, based on advice of the actuarial consultants from Petros Foundation. Therefore, the entire contributions are being applied to the individual accounts of plan participants.

For 2018 the employers expected contributions to the defined contribution portion of the plan are US\$ 279.

The average duration of the actuarial liability related to the plan, as of December 31, 2017 is 43.53 years (43.20 at December 31, 2016).

## **22.2. Other plans**

The Company also sponsors other pension and health care plans of certain of its Brazilian and international subsidiaries. Most of these plans are unfunded and their assets are held in trusts, foundations or similar entities governed by local regulations.

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The actuarial liability of the subsidiary Liquigás is reclassified as held for sale, as set out in note in note 10.1.

**22.3. Pension Plans assets**

Pension plans assets follow a long term investment strategy based on the risks assessed for each different class of assets and provide for diversification, in order to lower portfolio risk. The portfolio profile must comply with the Brazilian National Monetary Council (*Conselho Monetário Nacional* - CMN) regulations.

Petros Foundation establishes investment policies for 5-year periods, reviewed annually. Petros uses an asset liability management model (ALM) to address net cash flow mismatches of the benefit plans, based on liquidity and solvency parameters, simulating a 30-year period.

Portfolio allocation limits for the period between 2018 and 2022 for the Petros Plan are 45% to 75% in fixed-income securities, 10% to 35% in variable-income securities, 4% to 8% in real estate, 2% to 8% in loans to participants, as well as 0% to 5% in structured finance projects. Allocation limits for Petros 2 Plan for the same period are: 65% to 90% in fixed-income securities, 5% to 20% in variable-income securities, 0% to 5% in real estate, 2% to 8% in loans to participants, 0% to 5% in structured finance projects and 0% to 2% in investments abroad.

The pension plan assets by type of asset are set out as follows:

Type of asset	2017		2016			
	Quoted prices in active markets	Unquoted prices	Total fair value	%	Total fair value*	%
<b>Receivables</b>		1,139	1,139	8%	1,306	8%
<b>Fixed income</b>	6,683	2,003	8,686	58%	7,078	46%
Corporate bonds		118	118		62	
Government bonds	6,683	61	6,744		6,019	
Fixed income funds		1,815	1,815		986	
Other investments		9	9		11	
<b>Variable income</b>	2,877	285	3,162	21%	4,657	30%
Common and preferred shares	2,877		2,877		4,493	
Other investments		285	285		164	

<b>Structured investments</b>	373	373	2%	731	5%	
Private equity funds	307	307		636		
Venture capital funds	14	14		16		
Real estate Funds	52	52		79		
<b>Real estate properties</b>	1,045	1,045	7%	1,141	7%	
	9,560	4,845	14,405	96%	14,913	96%
Loans to participants	620	620	4%	632	4%	
	9,560	5,465	15,025	100%	15,545	100%

\* Re-presented values for better comparability with the current year.

As of December 31, 2017, the investment portfolio included debentures of US\$ 32, Company's common and preferred shares in the amount of US\$ 14 and US\$ 20, respectively, and real estate properties leased by the Company in the amount of US\$ 397.

Loans to participants are measured at amortized cost, which is considered to be an appropriate estimate of fair value.

In 2017, the Company improved its monitoring model over Petros Foundation, mainly: enhancement on internal controls over investment portfolio; establishment of specific committees to provide technical advisory for the members indicated by the Company to the Executive and Fiscal Councils of Petros Foundation, in accordance with relevant regulation establishing practices to be performed by the Board of Directors and Executive Officers of the sponsors.

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**22.4. Medical Benefits: Health Care Plan *Assistência Multidisciplinar de Saúde ( AMS )***

Petrobras, Petrobras Distribuidora S.A., Petrobras Transporte S.A. Transpetro, Petrobras Biocombustível, Transportadora Brasileira Gasoduto Brasil-Bolívia TBG and Termobahia operate a medical benefit plan for their employees in Brazil (active and retired) and their dependents: the AMS health care plan. The plan is managed by the Company based on a self-supporting benefit assumption and includes health prevention and health care programs. The plan is mainly exposed to the risk of an increase in medical costs due to new technologies, new types of coverage and to a higher level of usage of medical benefits. The Company continuously improves the quality of its technical and administrative processes, as well as the health programs offered to beneficiaries in order to hedge such risks.

The employees make fixed monthly contributions to cover high-risk procedures and variable contributions for a portion of the cost of the other procedures, both based on the contribution tables of the plan, which are determined based on certain parameters, such as salary and age levels. The plan also includes assistance towards the purchase of certain medicines in registered drugstores throughout Brazil. There are no health care plan assets.

Benefits are paid and recognized by the Company based on the costs incurred by the participants, of which the Company satisfies 70% of these costs as governed by the collective bargaining agreement.

The average duration of the actuarial liability related to this health care plan, as of December 31, 2017, is 22.08 years (22.04 as of December 31, 2016).

**CGPAR resolutions**

On January 18, 2018, the Inter-ministerial Commission for Corporate Governance and Administration of Participations of the Union (CGPAR), through CGPAR Resolutions 22 and 23, established guidelines and parameters of governance and cost limits to health care plans operated by state-owned companies.

The main objective of the resolutions is to make feasible the sustainability and the economic, financial and actuarial balance of the health plans operated by state-owned companies.

The company has up to 48 months to adjust the AMS health plan to this new regulation provisions and is assessing the financial impacts it may cause, including among others, a possible decrease in its actuarial liability following the parity basis of contribution, between the Company and the participants, determined by this rule.

**22.5. Net actuarial liabilities and expenses calculated by independent actuaries and fair value of plans assets**

Aggregate information is presented for other plans, whose total assets and liabilities are not material.





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*(Expressed in millions of US Dollars, unless otherwise indicated)***a) Changes in the actuarial liabilities, in the fair value of the assets and in the amounts recognized in the statement of financial position**

	Pension Plans		2017 Medical Plan	Other plans	Total
	Petros	Petros 2	AMS		
<b>Changes in the present value of obligations</b>					
Obligations at the beginning of the year	25,872	678	11,214	78	37,842
Interest expense:	2,776	72	1,222	10	4,080
Term of financial commitment (TFC)	325				325
Actuarial	2,451	72	1,222	10	3,755
Current service cost	89	44	161	4	298
Contributions paid by participants	68				68
Benefits paid	(1,905)	(34)	(466)	(3)	(2,408)
Remeasurement: Experience (gains) / losses (*)	(2,755)	61	(520)	7	(3,207)
Remeasurement: (gains) / losses demographic assumptions	22	(30)	(63)	(9)	(80)
Remeasurement: (gains) / losses financial assumptions	1,293	113	(567)	7	846
Others				(6)	(6)
Cumulative Translation Adjustment	(379)	(17)	(179)	(3)	(578)
Obligations at the end of the year	25,081	887	10,802	85	36,855
<b>Changes in the fair value of plan assets</b>					
Fair value of plan assets at the beginning of the year	15,120	385		40	15,545
Interest income	1,609	40		3	1,652
Contributions paid by the sponsor (Company)	230		467	2	699
Contributions paid by participants	68				68
Term of financial commitment (TFC) paid by the Company	223				223
Benefits Paid	(1,905)	(34)	(466)	(3)	(2,408)
Remeasurement: Return on plan assets due to lower interest income	(786)	249		4	(533)
Others					
Cumulative Translation Adjustment	(206)	(13)	(1)	(1)	(221)
Fair value of plan assets at the end of the year	14,353	627	0	45	15,025

**Amounts recognized in the Statement of Financial Position**

Present value of obligations	25,081	887	10,802	85	36,855
(-) Fair value of plan assets	(14,353)	(627)		(45)	(15,025)
Net actuarial liability as of December 31,	10,728	260	10,802	40	21,830

**Changes in the net actuarial liability**

Balance as of January 1,	10,752	293	11,214	38	22,297
Remeasurement effects recognized in other comprehensive					
income	(654)	(105)	(1,150)	1	(1,908)
Costs incurred in the period	1,256	76	1,383	11	2,726
Contributions paid	(230)		(467)	(2)	(699)
Payments related to Term of financial commitment (TFC)	(223)				(223)
Others				(6)	(6)
Cumulative Translation Adjustment	(173)	(4)	(178)	(2)	(357)
Balance as of December 31,	10,728	260	10,802	40	21,830

(\*) It includes additional contributions of participants regarding the deficit settlement plan as set out in note 22.1.

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	Pension Plan		2016 Medical Plan	Other plans	Total
	Petros	Petros 2	AMS		
<b>Changes in the present value of obligations</b>					
Obligations at the beginning of the year	18,170	297	6,753	143	25,363
Interest expense:	2,900	48	1,093	9	4,050
Term of financial commitment (TFC)	427				427
Actuarial	2,473	48	1,093	9	3,623
Current service cost	83	21	128	18	250
Contributions paid by participants	92				92
Benefits paid	(1,332)	(16)	(351)	(2)	(1,701)
Remeasurement: Experience (gains) / losses	(1,357)	(12)	(778)	1	(2,146)
Remeasurement: (gains) / losses demographic assumptions	74	(6)	(40)	1	29
Remeasurement: (gains) / losses financial assumptions	3,551	276	2,994	12	6,833
Others				(128)	(128)
Cumulative Translation Adjustment	3,691	70	1,415	24	5,200
Obligations at the end of the year	25,872	678	11,214	78	37,842
<b>Changes in the fair value of plan assets</b>					
Fair value of plan assets at the beginning of the year	12,233	226		54	12,513
Interest income	1,955	36		5	1,996
Contributions paid by the sponsor (Company)	195		354	9	558
Contributions paid by participants	92				92
Term of financial commitment (TFC) paid by the Company	202				202
Benefits Paid	(1,332)	(16)	(351)	(2)	(1,701)
Remeasurement: Return on plan assets due to lower interest income	(667)	87			(580)
Others				(35)	(35)
Cumulative Translation Adjustment	2,442	52	(3)	9	2,500
Fair value of plan assets at the end of the year	15,120	385	0	40	15,545
<b>Amounts recognized in the Statement of Financial Position</b>					
Present value of obligations	25,872	678	11,214	78	37,842
(-) Fair value of plan assets	(15,120)	(385)		(40)	(15,545)

Net actuarial liability as of December 31,	10,752	293	11,214	38	22,297
<b>Changes in the net actuarial liability</b>					
Balance as of January 1,	5,937	71	6,753	89	12,850
Remeasurement effects recognized in other comprehensive					
income	2,935	171	2,176	14	5,296
Costs incurred in the period	1,028	33	1,221	22	2,304
Contributions paid	(195)		(354)	(9)	(558)
Payments related to Term of financial commitment (TFC)	(202)				(202)
Others				(93)	(93)
Cumulative Translation Adjustment	1,249	18	1,418	15	2,700
Balance as of December 31,	10,752	293	11,214	38	22,297

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*(Expressed in millions of US Dollars, unless otherwise indicated)***b) Defined benefit costs**

	<b>Pension Plans</b>		<b>2017</b>	<b>Other Plans</b>	<b>Total</b>
	<b>Petros</b>	<b>Petros 2</b>	<b>Medical Plan</b>		
			<b>AMS</b>		
Service cost	89	44	161	4	298
Interest on net liabilities (assets)	1,167	32	1,222	7	2,428
Net expenses for the year	1,256	76	1,383	11	2,726
Related to active employees:					
Included in the cost of sales	236	40	263		539
Operating expenses in statement of income	103	24	136	10	273
Related to retirees	917	12	984	1	1,914
Net expenses for the year	1,256	76	1,383	11	2,726

	<b>Pension Plans</b>		<b>2016</b>	<b>Other Plans</b>	<b>Total</b>
	<b>Petros</b>	<b>Petros 2</b>	<b>Medical Plan</b>		
			<b>AMS</b>		
Service cost	83	21	128	18	250
Interest on net liabilities (assets)	945	12	1,093	4	2,054
Net expenses for the year	1,028	33	1,221	22	2,304
Related to active employees:					
Included in the cost of sales	257	18	287	2	564
Operating expenses in statement of income	128	11	154	19	312
Related to retirees	643	4	780	1	1,428
Net expenses for the year	1,028	33	1,221	22	2,304

	<b>Pension Plans</b>		<b>2015 Medical Plan</b>		<b>Total</b>
	<b>Petros</b>	<b>Petros 2</b>	<b>AMS</b>	<b>Other Plans</b>	
	Service cost	77	35	58	
Interest on net liabilities (assets)	801	29	933	15	1,778
<b>Net expenses for the year</b>	<b>878</b>	<b>64</b>	<b>991</b>	<b>27</b>	<b>1,960</b>
Related to active employees:					
Included in the cost of sales	258	33	204	2	497
Operating expenses in statement of income	133	27	128	24	312
Related to retirees	487	4	659	1	1,151
<b>Net expenses for the year</b>	<b>878</b>	<b>64</b>	<b>991</b>	<b>27</b>	<b>1,960</b>

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*(Expressed in millions of US Dollars, unless otherwise indicated)***c) Sensitivity analysis of the defined benefit plans**

The effect of a 100 basis points (bps) change in the assumed discount rate and medical cost trend rate is as set out below:

	Discount Rate				Medical Cost	
	Pension Benefits		Medical Benefits		Medical Benefits	
	+100 bps	-100 bps	+100 bps	-100 bps	+100 bps	-100 bps
Pension Obligation	(2,642)	3,247	(1,268)	1,568	1,687	(1,380)
Current Service cost and interest cost	(63)	78	(60)	72	213	(170)

**d) Actuarial assumptions**

Assumptions	2017	2016
Discount rate - (real rate)	5.35% <sup>(1)</sup> / 5.45% <sup>(2)</sup> / 5.41% <sup>(3)</sup>	5.74% <sup>(1)</sup> / 5.69% <sup>(2)</sup> / 5.72% <sup>(3)</sup>
Expected Inflation (Brazilian price index-IPCA)	3.96% <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup> <sup>(4)</sup>	4.87% <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup> <sup>(4)</sup>
Nominal discount rate (real rate + inflation)	9.52% <sup>(1)</sup> / 9.63% <sup>(2)</sup> / 9.59% <sup>(3)</sup>	10.89% <sup>(1)</sup> / 10.84% <sup>(2)</sup> / 10.87% <sup>(3)</sup>
Expected salary growth - real rate	1.19% <sup>(1)</sup> <sup>(5)</sup> / 2.53% <sup>(2)</sup> <sup>(5)</sup>	1.53% <sup>(1)</sup> <sup>(5)</sup> / 2.58% <sup>(2)</sup> <sup>(5)</sup>
Expected salary growth - nominal (real rate + Inflation)	5.19% <sup>(1)</sup> <sup>(5)</sup> / 6.59% <sup>(2)</sup> <sup>(5)</sup>	6.47% <sup>(1)</sup> <sup>(5)</sup> / 7.57% <sup>(2)</sup> <sup>(5)</sup>
Medical plan turnover	0.498% p.a <sup>(6)</sup>	0.597% p.a <sup>(6)</sup>
Pension plan turnover	Null	Null
Expected changes in medical and hospital costs	11.3% a 4.5% p.a <sup>(7)</sup>	13.91% to 4.00% p.a <sup>(7)</sup>
Mortality table	EX-PETROS 2013 (both genders) <sup>(1)</sup> <sup>(3)</sup> AT-2000 female, smoothed in a 10% coefficient <sup>(2)</sup>	EX-PETROS 2013 (both genders) <sup>(1)</sup> <sup>(3)</sup> AT-2000 female, smoothed in a 10% coefficient <sup>(2)</sup>
Disability table	American Group <sup>(1)</sup> <sup>(3)</sup>	TASA 1927 <sup>(1)</sup> <sup>(3)</sup> / LIGHT-low <sup>(2)</sup>
Mortality table for disabled participants	American Group smoothed in 40% <sup>(2)</sup> AT-49 male <sup>(1)</sup> <sup>(3)</sup>	AT-49 male amplified in a 10% coefficient <sup>(1)</sup> <sup>(3)</sup>
	IAPB 1957- strong <sup>(2)</sup>	



- (1) Petros Plan for Petrobras Group.
- (2) Petros 2 Plan.
- (3) AMS Plan.
- (4) Inflation reflects market projections: 3.96% for 2018 and converging to 4.50% in 2025 onwards.
- (5) Expected salary growth only of Petrobras, the sponsor, based on the Salaries and Benefits Plan.
- (6) Average turnover (only of Petrobras, the sponsor) according to age and employment term.
- (7) Decreasing rate, converging in 30 years to the long-term expected inflation. Refers only to Petrobras (sponsor) rate.
- (8) Except for Petros 2 Plan, for which it was used the eligibility as the rules of Regime Geral de Previdência Social (RGPS) and the rules.

e) **Expected maturity analysis of pension and medical benefits**

	2017				Total
	Pension Plan		Medical Plan		
	Petros	Petros 2	AMS	Other plans	
Up to 1 Year	1,495	32	403	2	1,932
1 To 2 Years	1,446	31	419	1	1,897
2 To 3 Years	1,402	30	432	1	1,865
3 To 4 Years	1,364	30	443	1	1,838
Over 4 Years	19,374	764	9,105	80	29,323
Total	25,081	887	10,802	85	36,855

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**22.6. Other defined contribution plans**

Petrobras, through its subsidiaries in Brazil and abroad, also sponsors other defined contribution pension plans for employees. Contributions paid of US\$ 2 in 2017 were recognized in the statement of income.

**22.7. Profit sharing**

The Company's profit sharing benefits comply with Brazilian legal requirements and those of the Brazilian Secretariat of Coordination and Governance of State-Owned Enterprises (SEST), of the Ministry of Planning, Budget and Management, and of the Ministry of Mines and Energy, and are computed based on the consolidated net income attributable to the shareholders of Petrobras.

The amount of profit sharing benefits is computed based on the results of six corporate indicators, for which annual goals are defined by the Executive Board and approved by the Board of Directors pursuant to the review of the Business and Management Plan (BMP). The annual goals are based on the results of the following corporate indicators:

Maximum permissible levels of crude oil and oil products spill;

Lifting cost excluding production taxes in Brazil;

Crude oil and NGL production in Brazil;

Feedstock processed - excluding NGL - in Brazil,

Vessel operating efficiency; and

Percentage of compliance with natural gas delivery schedules.

The results of the six individual goals are factored into a consolidated result that will determine the percentage of the profit to be distributed as a profit sharing benefit to employees. However, in the event the Company records a net loss for the period and all the annual goals are achieved, the profit sharing benefit will be half a month salary for each employee added to half of the lowest amount of profit sharing paid in the prior year, as established in the Company's

collective bargaining agreement.

Although the loss attributable to shareholders of Petrobras recognized for 2017, the annual goals were achieved and, as a result, the company accounted for the amount of US\$ 151 in 2017 as other income and expenses regarding profit sharing benefits in accordance with clauses of the collective bargaining agreement.

## 22.8. Voluntary Separation Incentive Plan

From January 2014 to December 31, 2017, the Company implemented voluntary separation incentive plans (PIDV) as presented below:

	<b>Enrollments</b>	<b>Separations</b>	<b>Cancellations</b>	<b>Outstanding</b>
Petrobras (PIDV 2014 and 2016)	19,499	(16,441)	(2,801)	257
Petrobras Distribuidora (PIDV BR 2014, 2015 and 2016)	2,163	(1,678)	(468)	17
<b>Total</b>	<b>21,662</b>	<b>(18,119)</b>	<b>(3,269)</b>	<b>274</b>

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As of December 31, 2017 changes in the provision are set out as follows:

	<b>12.31.2017</b>	<b>12.31.2016</b>
Opening Balance	811	199
Enrollments		1,239
Revision of provisions	(237)	(11)
Separations in the period	(558)	(656)
Cumulative translation adjustment	18	40
Closing Balance	34	811
Current	34	811
Non-current		

**23. Equity****23.1. Share capital (net of share issuance costs)**

As of December 31, 2017 and December 31, 2016, subscribed and fully paid share capital was US\$ 107,380 and share issuance costs were US\$ 279, represented by 7,442,454,142 outstanding common shares and 5,602,042,788 outstanding preferred shares, all of which are registered, book-entry shares with no par value.

Preferred shares have priority on returns of capital, do not grant any voting rights and are non-convertible into common shares.

**23.2. Capital transactions****23.2.1. Incremental costs directly attributable to the issue of shares**

Includes any transaction costs directly attributable to the issue of new shares, net of taxes.

**23.2.2. Change in interest in subsidiaries**

Includes any excess of amounts paid/received over the carrying value of the interest acquired/disposed. Changes in interests in subsidiaries that do not result in loss of control of the subsidiary are equity transactions, such as the change

in BR Distribuidora, as set out in note 10, which amounted to US\$ 479.

### **23.3. Profit reserves**

#### **23.3.1. Legal reserve**

Represents 5% of the net income for the year, calculated pursuant to article 193 of the Brazilian Corporation Law.

#### **23.3.2. Statutory reserve**

Appropriated by applying a minimum of 0.5% of the year-end share capital and is retained to fund technology research and development programs. The balance of this reserve may not exceed 5% of the share capital, pursuant to article 55 of the Company's bylaws.

#### **23.3.3. Tax incentives reserve**

Government grants are recognized in the statement of income and are appropriated from retained earnings to the tax incentive reserve in the shareholders' equity pursuant to article 195-A of Brazilian Corporation Law. This reserve may only be used to offset losses or increase share capital.

The effect of the tax incentives in the north and northeast regions of Brazil from Superintendência de Desenvolvimento do Nordeste (SUDENE) and Superintendência de Desenvolvimento da Amazônia (SUDAM) were not allocated to the tax incentives reserve. However, the impact of tax incentives will be allocated to the tax incentives reserve in future periods, pursuant to Chapter I of Law 12,973/14.

The accumulated amount of tax incentives derived from the statements of income for the period from 2014 to 2017, to be allocated to the tax incentives reserve in upcoming periods, is US\$ 39.

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*(Expressed in millions of US Dollars, unless otherwise indicated)*

**23.3.4. Profit retention reserve**

Includes funds intended for capital expenditures, primarily in oil and gas exploration and development activities, as per the capital budget of the Company, pursuant to article 196 of the Brazilian Corporation Law.

The accumulated deficit balance of US\$ 87 as of December 31, 2017 will be allocated to the profit retention reserve.

**23.4. Other comprehensive income**

In 2017, the Company principally recognized as other comprehensive income the following effects:

Cumulative translation adjustment of US\$ 851, mainly due to exchange rate differences arising from the translation of these consolidated financial statements to the presentation currency. In addition, the sale of Petrobras Chile and Guarani (see note 10.1) triggered the recycling of cumulative translation adjustments previously recognized in shareholders' equity to the income statement within other income and expenses, totaling US\$ 37.

Actuarial gain on defined benefit plans in the amount of US\$ 1,635, after taxes.

Foreign exchange rate variation gain of US\$ 1,724, after taxes and amounts reclassified to the statement of income, recognized in the Company's equity, as a result of its cash flow hedge accounting policy. At December 31, 2017, the cumulative balance of foreign exchange variation losses, net of tax effects, is US\$ 9,573 (see note 33.2).

**23.5. Dividends**

Shareholders are entitled to receive minimum mandatory dividends (and/or interest on capital) of 25% of the adjusted net income for the year proportional to the number of common and preferred shares, pursuant to Brazilian Corporation Law. To the extent the Company proposes dividend distributions, preferred shares have priority in dividend distribution, which is based on the highest of 3% of the preferred shares' net book value, or 5% of the preferred share capital. Preferred shares participate under the same terms as common shares in capital increases resulting from the capitalization of profit reserves or retained earnings.

Due to the loss recorded in 2017 and 2016, the Board of Directors did not propose dividend distributions for those years.

### 23.6. Earnings per share

	2017			2016			2015	
Common	Preferred	Total	Common	Preferred	Total	Common	Preferred	
(52)	(39)	(91)	(2,760)	(2,078)	(4,838)	(4,821)	(3,621)	
454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	13,044,496,930	7,442,454,142	5,602,042,788	
(0.01)	(0.01)	(0.01)	(0.37)	(0.37)	(0.37)	(0.65)	(0.64)	
(0.02)	(0.02)	(0.02)	(0.74)	(0.74)	(0.74)	(1.30)	(1.30)	

(\*) Petrobras ADSs are equivalent to two shares.

Basic earnings per share are calculated by dividing the net income (loss) attributable to shareholders of Petrobras by the weighted average number of outstanding shares during the period.

Diluted earnings (losses) per share are calculated by adjusting the net income (loss) attributable to shareholders of Petrobras and the weighted average number of outstanding shares during the period taking into account the effects of all dilutive potential shares (equity instrument or contractual arrangements that are convertible into shares).

Basic and diluted earnings (losses) are identical as the Company has no potential share in issue.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***24. Sales revenues**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Diesel	25,049	25,524	30,532
Automotive gasoline	16,765	16,263	16,320
Liquefied petroleum gas	3,999	3,083	2,881
Jet fuel	3,131	2,573	3,325
Naphtha	2,637	2,472	2,594
Fuel oil (including bunker fuel)	1,392	1,167	2,297
Other oil products	3,775	3,372	3,468
Subtotal oil products	56,748	54,454	61,417
Natural gas	5,174	3,952	5,894
Ethanol, nitrogen products and renewables	3,878	3,743	3,868
Electricity	3,620	1,942	3,944
Services and others	913	811	906
Domestic market	70,333	64,902	76,029
Exports	13,075	8,439	9,692
Sales abroad (*)	5,419	8,064	11,593
Foreign market	18,494	16,503	21,285
Sales revenues (**)	88,827	81,405	97,314

(\*) Sales revenues from operations outside of Brazil, including trading and excluding exports. In 2016, it includes sales revenues from the former subsidiary PESA.

(\*\*) Sales revenues by business segment are set out in note 29.

As shown in note 6.1, IFRS 15 provisions will govern the accounting treatment for revenues from contracts with customers from January 1, 2018.

In 2017, there was no customer whose sales revenues expressed 10% or more of the Company's sales revenues. In 2016, sales from transactions with two customers reached approximately 10% or more of the Company's sales revenue, totaling US\$ 8,640 and US\$ 7,691 (US\$ 9,793 and US\$ 8,146 in 2015). These sales revenues mainly



impacted the Refining, Transportation and Marketing (RT&M) business segment.

## 25. Other income and expenses

	2017	2016	2015
Provision for the class action agreement	(3,449)		
Pension and medical benefits retirees	(1,914)	(1,428)	(1,151)
Unscheduled stoppages and pre-operating expenses	(1,598)	(1,859)	(1,239)
Gains / (losses) related to legal, administrative and arbitration proceedings	(898)	(1,393)	(1,569)
Allowance for impairment of other receivables	(432)	(671)	(374)
Institutional relations and cultural projects	(258)	(253)	(428)
Profit sharing	(151)		
Health, safety and environment	(70)	(80)	(95)
Operating expenses with thermoelectric power plants	(67)	(96)	(119)
Reclassification of cumulative translation adjustments CTA	(37)	(1,457)	
Provision for debt assumed from suppliers with subcontractors		(105)	
Government grants	91	173	17
Gain on remeasurement of investment retained with loss of control	217		
Voluntary Separation Incentive Plan PIDV	237	(1,228)	(115)
Amounts recovered from Lava Jato investigation	252	131	72
Gains / (losses) on decommissioning of returned/abandoned areas	337	1,491	(144)
Expenses/Reimbursements from E&P partnership operations	372	569	530
Ship/Take or Pay agreements	543	282	225
Gains / (losses) on disposal/write-offs of assets (*)	1,498	293	(758)
Others	(272)	424	(197)
<b>Total</b>	<b>(5,599)</b>	<b>(5,207)</b>	<b>(5,345)</b>

(\*) Includes returned areas and cancelled projects, gains on the divestment of NTS in the second quarter of 2017 (see note 10.1), as well as losses on materials and supplies in the amount of US\$ 309 mainly recognized in the third quarter of 2017 due to revised projects portfolio.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***26. Costs and Expenses by nature**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Raw material and products for resale	(20,053)	(18,870)	(29,110)
Materials, third-party services, freight, rent and other related costs	(19,049)	(14,920)	(20,951)
Depreciation, depletion and amortization	(13,307)	(13,965)	(11,591)
Employee compensation	(9,045)	(9,984)	(9,079)
Production taxes	(7,900)	(4,879)	(6,064)
Provision for the class action agreement	(3,449)		
Other taxes (*)	(1,843)	(714)	(2,796)
Unscheduled stoppages and pre-operating expenses	(1,598)	(1,859)	(1,239)
Impairment (losses) / reversals	(1,191)	(6,193)	(12,299)
(Losses) /Gains on legal, administrative and arbitration proceedings	(898)	(1,393)	(1,569)
Allowance for impairment of trade receivables	(708)	(1,131)	(941)
Exploration expenditures written off (includes dry wells and signature bonuses)	(279)	(1,281)	(1,441)
Institutional relations and cultural projects	(258)	(253)	(428)
Changes in inventories	110	(437)	(155)
Health, safety and environment	(70)	(80)	(95)
Reclassification of cumulative translation adjustment	(37)	(1,457)	
Provision for debt acknowledgments of suppliers with subcontractors		(105)	
Amounts recovered from Lava Jato investigation	252	131	72
Gain on remeasurement of investment retained with loss of control	217		
Gains and losses on disposal/write-offs of assets (**)	1,498	293	(758)
<b>Total</b>	<b>(77,608)</b>	<b>(77,097)</b>	<b>(98,444)</b>
<b>In the Statement of income</b>			
Cost of sales	(60,147)	(55,417)	(67,485)
Selling expenses	(4,538)	(3,963)	(4,627)
General and administrative expenses	(2,918)	(3,319)	(3,351)
Exploration costs	(800)	(1,761)	(1,911)
Research and development expenses	(572)	(523)	(630)
Other taxes (*)	(1,843)	(714)	(2,796)

Impairment	(1,191)	(6,193)	(12,299)
Other income and expenses	(5,599)	(5,207)	(5,345)
<b>Total</b>	<b>(77,608)</b>	<b>(77,097)</b>	<b>(98,444)</b>

(\*) It includes the impact of tax settlement programs in the amount of US\$ 883, mainly recognized in the second quarter of 2017 as set out note in 21.2.

(\*\*) Includes returned areas and cancelled projects, as well as the divestment in NTS as set out in note 10.1.

## 27. Net finance income (expense)

	2017	2016	2015
Debt interest and charges	(7,388)	(7,764)	(6,858)
Foreign exchange gains (losses) and indexation charges on net debt (*)	(4,129)	(2,507)	(3,834)
Income from investments and marketable securities (Government Bonds)	580	547	693
Financial result on net debt	(10,937)	(9,724)	(9,999)
Capitalized borrowing costs	1,976	1,729	1,773
Gains (losses) on derivatives	(64)	(111)	256
Interest income from marketable securities	24	5	25
Unwinding of discount on the provision for decommissioning costs	(762)	(662)	(231)
Other finance expenses and income, net	(622)	291	(659)
Other foreign exchange gains (losses) and indexation charges, net	490	717	394
<b>Net finance income (expenses)</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(8,441)</b>
Income	1,047	1,053	1,412
Expenses	(7,395)	(6,958)	(6,437)
Foreign exchange gains (losses) and indexation charges	(3,547)	(1,850)	(3,416)
<b>Total</b>	<b>(9,895)</b>	<b>(7,755)</b>	<b>(8,441)</b>

(\*) Includes debt raised in Brazil (in Brazilian reais) indexed to the U.S. dollar.

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*(Expressed in millions of US Dollars, unless otherwise indicated)***28. Supplemental information on statement of cash flows**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Additional information on cash flows:</b>			
<b>Amounts paid/received during the period:</b>			
Withholding income tax paid on behalf of third-parties	857	932	1,034
<b>Capital expenditures and financing activities not involving cash</b>			
Purchase of property, plant and equipment on credit	133	123	171
Finance leases	86	90	
Provision/(reversals) for decommissioning costs	4,503	937	4,145
Use of deferred tax and judicial deposit for the payment of contingency	314	138	960

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*(Expressed in millions of US Dollars, unless otherwise indicated)***29. Segment information**

The operating segment information is reported in the manner in which the Company's senior management assesses business performance and makes decisions regarding investments and resource allocation.

	<b>Refining, Exploration and Production</b>	<b>Transportation &amp; Marketing</b>	<b>Gas &amp; Power</b>	<b>Biofuel</b>	<b>Distribution</b>	<b>Corporate</b>	<b>Eliminations</b>	<b>Total</b>
<b>Consolidated assets by operating segment-12.31.2017</b>								
Current assets	7,575	12,670	1,811	64	2,961	27,472	(5,422)	47,131
Non-current assets	137,044	38,396	16,744	126	3,160	9,274	(509)	204,235
Long-term receivables	7,619	3,330	2,395	4	1,074	7,489	(461)	21,450
Investments	1,429	1,492	830	33	5	6		3,795
Property, plant and equipment	126,487	33,400	13,231	89	1,862	1,629	(48)	176,650
Operating assets	91,386	29,217	10,580	85	1,603	1,306	(48)	134,129
Under construction	35,101	4,183	2,651	4	259	323		42,521
Intangible assets	1,509	174	288		219	150		2,340
Total Assets	144,619	51,066	18,555	190	6,121	36,746	(5,931)	251,366
<b>Consolidated assets by operating segment-12.31.2016</b>								
Current assets	5,604	12,460	3,592	405	3,039	24,934	(5,265)	44,769
Non-current assets	134,492	40,120	15,896	117	3,191	8,835	(437)	202,214
Long-term receivables	7,630	3,312	2,006	4	1,017	6,838	(387)	20,420
Investments	1,449	1,104	466	13	14	6		3,052
Property, plant and equipment	123,056	35,515	13,094	100	1,936	1,819	(50)	175,470
Operating assets	90,716	31,150	11,862	97	1,654	1,472	(50)	136,901
Under construction	32,340	4,365	1,232	3	282	347		38,569
Intangible assets	2,357	189	330		224	172		3,272

Total Assets	140,096	52,580	19,488	522	6,230	33,769	(5,702)	246,983
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*(Expressed in millions of US Dollars, unless otherwise indicated)***Consolidated Statement of Income by operating segment**

	<b>Jan-Dec/2017</b>							
	<b>Exploration and Production</b>	<b>Refining, Transportation &amp; Marketing</b>	<b>Gas &amp; Power</b>	<b>Biofuels</b>	<b>Distribution</b>	<b>Corporate</b>	<b>Eliminations</b>	<b>Total</b>
Sales revenues	42,184	67,037	12,374	213	27,567		(60,548)	88,827
Intersegments	40,762	16,142	3,027	201	416		(60,548)	
Third parties	1,422	50,895	9,347	12	27,151			88,827
Cost of sales	(27,937)	(57,778)	(8,797)	(222)	(25,501)		60,088	(60,147)
Gross profit (loss)	14,247	9,259	3,577	(9)	2,066		(460)	28,680
Income (expenses)	(3,750)	(3,603)	(676)	(22)	(1,266)	(8,217)	73	(17,461)
Selling	(125)	(1,731)	(1,793)	(2)	(995)	27	81	(4,538)
General and administrative	(331)	(457)	(165)	(22)	(274)	(1,669)		(2,918)
Exploration costs	(800)							(800)
Research and development	(333)	(13)	(26)			(200)		(572)
Other taxes	(503)	(203)	(258)	(7)	(42)	(830)		(1,843)
Impairment of assets	43	(781)	(446)	(7)				(1,191)
Other income and expenses	(1,701)	(418)	2,012	16	45	(5,545)	(8)	(5,599)
Net income / (loss) before financial results and income taxes	10,497	5,656	2,901	(31)	800	(8,217)	(387)	11,219
Net finance income (expenses)						(9,895)		(9,895)
Results in equity-accounted investments	136	443	117	(26)	2	1		673
Net income / (loss) before income taxes	10,633	6,099	3,018	(57)	802	(18,111)	(387)	1,997

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Income taxes	(3,571)	(1,922)	(985)	10	(272)	4,780	132	(1,828)
Net income (loss) for the period	7,062	4,177	2,033	(47)	530	(13,331)	(255)	169
Net income (loss) attributable to:								
Shareholders of Petrobras	7,021	4,235	1,915	(47)	521	(13,481)	(255)	(91)
Non-controlling interests	41	(58)	118		9	150		260
Net income (loss) for the period	7,062	4,177	2,033	(47)	530	(13,331)	(255)	169

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*(Expressed in millions of US Dollars, unless otherwise indicated)***Consolidated Statement of Income by operating segment**

	<b>Jan-Dec/2016</b>							
	<b>Exploration and Production</b>	<b>Refining, Transportation &amp; Marketing</b>	<b>Gas &amp; Power</b>	<b>Biofuels</b>	<b>Distribution</b>	<b>Corporate</b>	<b>Eliminations</b>	<b>Total</b>
Sales revenues	33,675	62,588	9,401	240	27,927		(52,426)	81,405
Intersegments	32,195	17,090	2,490	231	420		(52,426)	
Third parties	1,480	45,498	6,911	9	27,507			81,405
Cost of sales	(24,863)	(48,444)	(6,790)	(264)	(25,757)		50,701	(55,417)
Gross profit (loss)	8,812	14,144	2,611	(24)	2,170		(1,725)	25,988
Income (expenses)	(6,789)	(5,425)	(1,439)	(62)	(2,084)	(5,968)	87	(21,680)
Selling	(143)	(1,846)	(768)	(2)	(1,309)	10	95	(3,963)
General and administrative	(346)	(442)	(206)	(25)	(271)	(2,029)		(3,319)
Exploration costs	(1,761)							(1,761)
Research and development	(198)	(57)	(17)	(1)		(250)		(523)
Other taxes	(85)	(98)	(220)	(4)	(29)	(278)		(714)
Impairment of assets	(3,272)	(2,457)	(375)	(7)	(82)			(6,193)
Other income and expenses	(984)	(525)	147	(23)	(393)	(3,421)	(8)	(5,207)
Net income / (loss) before financial results and income taxes	2,023	8,719	1,172	(86)	86	(5,968)	(1,638)	4,308
Net finance income (expenses)						(7,755)		(7,755)
Results in equity-accounted investments	32	(75)	80	(265)	10			(218)
Net income / (loss) before income taxes	2,055	8,644	1,252	(351)	96	(13,723)	(1,638)	(3,665)

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Income taxes	(687)	(2,964)	(397)	28	(29)	2,809	556	(684)
Net income (loss) for the period	1,368	5,680	855	(323)	67	(10,914)	(1,082)	(4,349)
Net income (loss) attributable to:								
Shareholders of Petrobras	1,425	5,746	732	(323)	67	(11,403)	(1,082)	(4,838)
Non-controlling interests	(57)	(66)	123			489		489
Net income (loss) for the period	1,368	5,680	855	(323)	67	(10,914)	(1,082)	(4,349)

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*(Expressed in millions of US Dollars, unless otherwise indicated)***Consolidated Statement of Income by operating segment****Jan-Dec/2015**

	<b>Exploration and Production</b>	<b>Refining, Transportation &amp; Marketing</b>	<b>Gas &amp; Power</b>	<b>Biofuels</b>	<b>Distribution</b>	<b>Corporate</b>	<b>Eliminations</b>	<b>Total</b>
Sales revenues	35,680	74,321	13,145	229	33,406		(59,467)	97,314
Intersegments	34,178	22,451	2,073	213	552		(59,467)	
Third parties	1,502	51,870	11,072	16	32,854			97,314
Cost of sales	(25,171)	(60,384)	(10,539)	(252)	(30,849)		59,710	(67,485)
Gross profit (loss)	10,509	13,937	2,606	(23)	2,557		243	29,829
Income (expenses)	(13,883)	(5,834)	(2,211)	(95)	(2,785)	(6,363)	212	(30,959)
Selling	(225)	(1,999)	(511)	(2)	(2,124)	20	214	(4,627)
General and administrative	(418)	(438)	(236)	(29)	(277)	(1,953)		(3,351)
Exploration costs	(1,911)							(1,911)
Research and development	(172)	(117)	(53)	(9)	(1)	(278)		(630)
Other taxes	(160)	(709)	(412)	(2)	(69)	(1,444)		(2,796)
Impairment of assets	(9,830)	(1,664)	(683)	(46)	(76)			(12,299)
Other expenses, net	(1,167)	(907)	(316)	(7)	(238)	(2,708)	(2)	(5,345)
Net income / (loss) before financial results and income taxes	(3,374)	8,103	395	(118)	(228)	(6,363)	455	(1,130)
Net finance income (expenses)						(8,441)		(8,441)
Results in equity-accounted investments	(309)	356	123	(199)	9	(157)		(177)
Net income / (loss) before income taxes	(3,683)	8,459	518	(317)	(219)	(14,961)	455	(9,748)
Income taxes	1,200	(2,746)	(132)	41	78	2,851	(155)	1,137
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300	(8,611)

Net income (loss)								
attributable to:								
Shareholders of								
Petrobras	(2,480)	5,727	237	(276)	(142)	(11,816)	300	(8,450)
Non-controlling								
interests	(3)	(14)	149		1	(294)		(161)
Net income (loss)	(2,483)	5,713	386	(276)	(141)	(12,110)	300	(8,611)

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*(Expressed in millions of US Dollars, unless otherwise indicated)***30. Provisions for legal proceedings****30.1. Provisions for legal proceedings, judicial deposits and contingent liabilities**

The Company recognizes provisions based on the best estimate of the costs of proceedings for which it is probable that an outflow of resources embodying economic benefits will be required and that can be reliably estimated. These proceedings mainly include:

Labor claims, in particular: (i) a review of the methodology by which the minimum compensation based on an employee's position and work schedule (Remuneração Mínima por Nível e Regime - RMNR) is calculated; (ii) lawsuits relating to overtime pay and (iii) actions of outsourced employees;

Tax claims including: (i) claims relating to Brazilian federal tax credits applied that were disallowed; (ii) demands relating to the VAT (ICMS) tax collection on jet fuel sales and (iii) alleged misappropriation of VAT (ICMS) tax credits on import of platforms;

Civil claims relating to: (i) agreement to settle the Consolidated Securities Class Action before the United States District Court for the Southern District of New York; (ii) collection of royalties over the shale extraction; (iii) non-compliance with contractual terms relating to oil platform construction; (iv) compensation relating to an easement over a property; (v) collection of production taxes over natural gas production; (vi) penalties applied by ANP relating to measurement systems.

Provisions for legal proceedings are set out as follows:

	<b>12.31.2017</b>	<b>12.31.2016</b>
<b>Current and Non-current liabilities</b>		
Civil claims	4,342	575
Labor claims	1,364	1,226
Tax claims	1,229	1,528
Environmental claims	91	60
Other claims		2
Total	7,026	3,391

Current liabilities	2,256	
Non-current liabilities	4,770	3,391
	<b>12.31.2017</b>	<b>12.31.2016</b>
Opening Balance	3,391	2,247
Additions	3,937	997
Use of provision	(454)	(654)
Accruals and charges	285	350
Others		(52)
Cumulative translation adjustment	(133)	503
Closing Balance	7,026	3,391

In preparing its financial statements for the period ended December 31, 2017, the Company considered all available information concerning legal proceedings in which the Company is a defendant, in order to estimate the amounts of obligations and probability that outflows of resources will be required.

Excluding foreign exchange translation effects (see note 2), the main changes in the provision for legal proceedings in 2017 were primarily attributable to the class action settlement provisioned in the last quarter, to unfavorable court rulings that changed probabilities of outflows of resources relating to certain claims to probable, as well as indexation charges over the balance of provision, as presented below:

#### **Labor claims**

Provision for labor claims increased mainly due to the assessment of court rulings on several labor disputes occurred during this period and to indexation charges over the balance of provision, partially offset by the reversion of a provision made to a claim filed by Sindipetro Norte Fluminense relating to the methodology used to consider overtime into the calculation of paid weekly rest following a favorable decision on the Company's appeal granted by the Superior Labor Court ( *Tribunal Superior do Trabalho* - TST ).

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*(Expressed in millions of US Dollars, unless otherwise indicated)*

**Tax claims**

Provision for tax claims decreased primarily reflecting the reversion of a provision previously recognized in 2016 with respect to disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation, following the Company's decision to benefit from the Special Tax Settlement Program (*Programa Especial de Regularização Tributária* PRT), as shown in note 21.2.1.

In addition, there were some provisions recognized and reversed during this period due to unfavorable court rulings and the decision to settle them along with the reliefs provided by the PRT, relating to:

Disallowed tax credits applied for income taxes and other Brazilian Federal taxes computation, as set out in note 21.2.1; and

Deduction of amounts paid to Petros Plan from the taxable profit computation, use of tax benefits over the import of certain equipment and the use of tax loss carry forwards as a deduction from the taxable income computation, as shown in note 21.2.2.

**Civil claims**

Provision for civil claims increased following the agreement to settle the Consolidated Securities Class Action, as set out in note 30.4.1, assessment of court rulings occurred in this period denying the Company's appeals with respect to production taxes collection over gas production in Urucu field, fines imposed by ANP relating to measurement systems and other civil claims, as well as indexation charges over the balance of provisions.

In addition, there were some provisions recognized and reversed during 2017, due to settlements reached and unfavorable rulings payed and joined to PRD, in respect of:

Agreements to settle Opt-out Claims filed before the United States District Court for the Southern District of New York, as set out in note 30.4.1;

Disputes with ANP relating to production taxes over oil and gas production, as set out in note 21.2.3; and

Arbitration award against the Company determined by the International Chamber of Commerce on the merits of P-62 construction.

### 30.2. Judicial deposits

Judicial deposits made in connection with legal proceedings are set out in the table below according to the nature of the corresponding lawsuits:

	12.31.2017	12.31.2016
<b>Non-current assets</b>		
Tax	3,302	1,803
Civil	891	1,101
Labor	1,209	1,006
Environmental	176	84
Others	4	5
<b>Total</b>	<b>5,582</b>	<b>3,999</b>

	12.31.2017	12.31.2016
Opening Balance	3,999	2,499
Additions	1,601	952
Use of provision	(138)	(147)
Accruals and charges	226	185
Others		(28)
Cumulative translation adjustment	(106)	538
<b>Closing Balance</b>	<b>5,582</b>	<b>3,999</b>

In 2017, the Company made judicial deposits in the amount of US\$ 1,601 mainly resulting from an unfavorable decision issued by the Regional Federal Court of Rio de Janeiro (*Tribunal Regional Federal* - TRT/RJ) in October 2017, with respect to withholding income tax on remittances for payments of vessel charters occurred from 1999 to 2002, as set out in note 30.3.



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*(Expressed in millions of US Dollars, unless otherwise indicated)***30.3. Contingent liabilities**

Contingent liabilities for which either the Company is unable to make a reliable estimate of the expected financial effect that might result from resolution of the proceeding, or a cash outflow is not probable, are not recognized as liabilities in the financial statements but are disclosed in the notes to the financial statements, unless the likelihood of any outflow of resources embodying economic benefits is considered remote.

The estimates of contingent liabilities for legal proceedings are indexed to inflation and updated by applicable interests. As of December 31, 2017, estimated contingent liabilities for which the possibility of loss is not considered remote are set out in the following table:

<b>Nature</b>	<b>12.31.2017</b>	<b>12.31.2016</b>
Tax	39,137	47,830
Labor	7,202	7,225
Civil General	9,621	9,049
Civil Environmental	2,354	2,172
Others		1
Total	58,314	66,277

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A brief description of the nature of the main contingent liabilities (tax, civil, environmental and labor) is set out in the following table:

Description of tax matters	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Secretariat of the Federal Revenue of Brazil</b>		
1) Withholding income tax (IRRF), Contribution of Intervention in the Economic Domain (CIDE), Social Integration Program (PIS) and Contribution to Social Security Financing (COFINS) on remittances for payments of vessel charters. Current status: In October 2017, the Regional Federal Court (Tribunal Regional Federal - TRF) of the State of Rio de Janeiro ruled that the Company should have paid withholding income tax (Imposto de Renda Retido na Fonte- IRRF) on remittances for payments of vessel charters, occurred from 1999 to 2002, which have a current debt of US\$ 2.7 billion. The legal argument involves the legality of the normative rule issued by the Federal Revenue of Brazil, which ensured no taxation over those remittances. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company, and will continue to defend its opinion.  The Company joined to the settlement program established by law 13,586/17, which enabled the regularization of administrative and judicial proceedings relating to IRRF from 2008 to 2013, including the tax deficiency notice issued in January 2, 2018, as set out in note 21.2.4.  The other claims, concerning CIDE and PIS/COFINS, involve lawsuits in different administrative and judicial stages, for which the Company understand there is a possible likelihood of loss, since there are legal predictions in line with the understanding of the Company, including the mentioned tax deficiency notice.	13,041	15,479
2) Income from foreign subsidiaries and associates located outside Brazil not included in the computation of taxable income (IRPJ and CSLL). Current status: In 2017, the Company received a new tax deficiency notice for not including income from subsidiaries located outside Brazil. This and the other claims involve lawsuits in different administrative and judicial stages. The Company considers the likelihood of loss as possible, since there are decisions from Superior Courts favorable to the understanding of the Company.	3,988	3,095
3) Requests to compensate federal taxes disallowed by the Brazilian Federal Tax Authority.		

Current status: This claim involves lawsuits in different administrative and judicial stages.	3,621	3,375
4) Incidence of social security contributions over contingent bonuses paid to employees. Current status: Awaiting the hearing of an appeal at the administrative level, including a new tax deficiency notice received by the Company.	1,541	1,053
5) Collection of Contribution of Intervention in the Economic Domain (CIDE) on transactions with fuel retailers and service stations protected by judicial injunctions determining that fuel sales were made without gross-up of such tax. Current status: This claim involves lawsuits in judicial stages.	672	656
6) Deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of several expenses related to employee benefits. Current status: The court ruled on this matter in the second quarter of 2017 granting the deduction of these expenses from the taxable profit computation, but limited it to 20% of the payroll and compensation of key management participants in the plan. After assessing the fundamentals of this court ruling, the Company reassessed the probability of outflow of resources with respect to this dispute and estimated it as probable.  The other claims of this item, which have different legal basis, remain with their likelihood of loss as possible, and are in different administrative and judicial stages.	613	2,355
7) Immediate deduction from the basis of calculation of taxable income (income tax - IRPJ and social contribution - CSLL) of crude oil production development costs. Current status: The likelihood of loss is now considered remote, since the Administrative Board of Tax Appeals (Conselho Administrativo de Recursos Fiscais - CARF) granted unanimous decisions favorable to the Company in administrative proceedings.		6,305
<b>Plaintiff: State of São Paulo Finance Department</b>		
8) Penalty for the absence of a tax document while relocating a rig to an exploratory block, and on the return of this vessel, as well as collection of the related VAT (ICMS), as a result of the temporary admission being unauthorized, because the customs clearance has been done in Rio de Janeiro instead of São Paulo. Current status: This claim involves lawsuits in judicial stages. Regarding the absence of a tax document while relocating a rig, there was a definitive decision in favor of the Company, which reduced the balance of this contingent liability.	761	1,703
9) Deferral of payment of VAT (ICMS) taxes on B100 Biodiesel sales and the charge of a 7% VAT rate on B100 on Biodiesel interstate sales, including states in the Midwest, North and Northeast regions of Brazil and the State of Espírito Santo. Current status: This claim involves lawsuits at administrative level.	887	834
<b>Plaintiff: States of RJ, BA and AL Finance Departments</b>		
10) VAT (ICMS) on dispatch of liquid natural gas (LNG) and C5+ (tax document not accepted by the tax authority), as well as challenges on the rights to this VAT tax credit. Current status: This claim involves lawsuits in different administrative and judicial stages.	1,366	1,354

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*(Expressed in millions of US Dollars, unless otherwise indicated)***Municipal governments of the cities of Anchieta, Aracruz, Guarapari, Itapemirim, Marataízes, Linhares, Vila Velha and**

failure to withhold and pay tax on services provided offshore (ISSQN) in favor of some municipalities in the State of Espírito Santo. The allegation that the service was performed in their respective coastal waters.

This claim involves lawsuits in different administrative and judicial stages. 1,2

**States of RJ, SP, PR, RO and MG Finance Departments**

Internal VAT (ICMS) due to differences in rates on jet fuel sales to airlines in the domestic market, among other questions relating to tax benefits.

This claim involves lawsuits in administrative and judicial stages. 1,0

**States of PR, AM, BA, ES, PA, PE and PB Finance Departments**

Discrepancy of VAT (ICMS) over alleged differences in the control of physical and fiscal inventories.

This claim involves lawsuits in different administrative and judicial levels. 9

**States of RJ, SP, ES, BA, PE, MG, RS, AL and SE Finance Departments**

Appropriation of VAT tax credit (ICMS) that, per the tax authorities, are not related to property, plant and equipment.

This claim involves lawsuits in different administrative and judicial stages. 9

**States of RJ, RN, AL, AM, PA, BA, GO, MA, SP and PE Finance Departments**

Failure to write-down VAT (ICMS) credits related to zero tax rated or non-taxable sales made by the Company's customers.

This claim involves lawsuits in different administrative and judicial stages. 1,0

**States of SP, RS and SC Finance Departments**

Discrepancy of VAT (ICMS) related to natural gas imports from Bolivia, alleging that these states were the final destination (consumers) of the gas.

This claim involves lawsuits in different administrative and judicial stages, as well as three civil lawsuits in the Federal Court. 8

**States of SP, CE, PB, RJ, BA, PA and AL Finance Departments**

Discrepancy of VAT (ICMS) and VAT credits on internal consumption of bunker fuel and marine diesel, destined to chartered vessels.

This claim involves several tax notices from the states in different administrative and judicial stages. 5

**States of AM, BA, RS and RJ Finance Departments**

Discrepancy about the basis of calculation of VAT (ICMS) on interstate sales and transfers between different stores from the same company.

This claim involves lawsuits in different administrative and judicial stages. 4

**States of RJ, SP, SE and BA Finance Departments**

appropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to property, plant and  
 : This claim involves lawsuits in different administrative and judicial stages. 5

**ates of MG, MT, GO, RJ, PA, CE, BA, PR, SE, AL, RN, SP and PR Finance Departments**

appropriation of VAT tax credit (ICMS) on the acquisitions of goods that, per the tax authorities, are not related to inventories.  
 : This claim involves lawsuits in different administrative and judicial stages. 2

**ate of Pernambuco Finance Department**

Incorrect application of VAT (ICMS) tax base with respect to interstate sales of natural gas transport through city-gates in the  
 Pernambuco destined to the distributors in that State. The Finance Department of the State of Pernambuco understands that activity  
 industrial activity which could not be characterized as an interstate sale transaction (considering that the Company has facilities  
 Pernambuco), and consequently charging the difference on the tax levied on the sale and transfer transactions.  
 : This claim involves lawsuits in different administrative and judicial stages. 3

tax matters 4,3

matters 39,1

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Notes to the financial statements

*(Expressed in millions of US Dollars, unless otherwise indicated)*

Description of labor matters	Estimate	
	12.31.2017	12.31.2016
<b>Plaintiff: Sindipetro of ES, RJ, BA, MG, SP, PE, PB, SE, AL, RN, CE, PI, PR, SC and RS.</b>		
1) Class actions requiring a review of the methodology by which the minimum compensation based on an employee's position and work schedule (Remuneração Mínima por Nível e Regime - RMNR) is calculated. Current status: Awaiting the Superior Labor Court to judge appeals filed by the Company. The judgement on the Company's collective bargaining agreement is stayed pending the Superior Labor Court decision on the appeal.		
Due to an unfavorable court decision relating to individual bargaining agreements and favorable court decision relating to collective bargaining agreements, the Company consider the likelihood of loss as possible.	4,516	4,383
<b>Plaintiff: Sindipetro of Norte Fluminense - SINDIPETRO/NF</b>		
2) The plaintiff claims Petrobras failed to pay overtime for standby work exceeding 12-hours per day. It also demands that the Company respects a 12-hour limit of standby work per workday, as well as an 11-hour period for rest between workdays, subject to a daily fine. Current status: Awaiting the Superior Labor Court to judge appeals filed by the plaintiff.	389	369
<b>Plaintiff: Sindipetro of ES, RJ, MG, BA, SP, PR, CE, PI, SC, AL, SE and RS</b>		
3) Class Actions regarding wage underpayments to certain employees due to expected changes in the methodology used to consider overtime into the calculation of paid weekly rest, allegedly computed based on ratios that are higher than the 1/6 ratio established by Law No. 605/49. Current status: The Superior Labor Court (Tribunal Superior do Trabalho - TST) unified, in all of its classes, favorable understanding to the Company's opinion relating to the paid weekly rest, whereas there are TST decisions favorable to the plaintiffs on individual and class actions judged before the mentioned unification. However, two of these class actions, relating to claims filed by SINDIPETRO/MG and SINDIPETRO/NF, had their decisions suspended by the TST, in trial sessions held on September 26, 2017 and February 20, 2018, due to some motions to set aside the judgments proposed by the Company. For this reason and in face of the remote possibility of a reversal on this decision, the likelihood of loss is now considered remote.	121	311
4) Other labor matters	2,176	2,162
<b>Total for labor matters</b>	<b>7,202</b>	<b>7,225</b>

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	<b>Estimate</b>	
	<b>12.31.2017</b>	<b>12.31.2016</b>
<b>Description of civil matters</b>		
<b>Plaintiff: Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP</b>		
1) Proceedings challenging an ANP order requiring Petrobras to unite Lula and Cernambi fields on the BM-S-11 joint venture; to unite Baúna and Piracicaba fields; to unite Tartaruga Verde and Mestiça fields; and to unite Baleia Anã, Baleia Azul, Baleia Franca, Cachalote, Caxaréu, Jubarte and Pirambu, in the Parque das Baleias complex, which would cause changes in the payment of special participation charges. Current status: This list involves claims that are disputed in court and in arbitration proceedings. The Company has made judicial deposits on the Lula/Cernambi and the Baúna/Piracaba fields proceedings for the alleged differences resulting from the special participation. However, with the reversal of the favorable injunction, currently the payment of these alleged differences have been made directly to ANP, until a final judicial decision is handed down. On the Parque das Baleias complex proceeding, the Superior Court of Justice ( Superior Tribunal de Justiça - STJ ) ruled that is the Chamber of Arbitration which has the responsibility to determine if the claim should be arbitrated or not. On the Tartaruga Verde and Mestiça fields unitization proceeding, the Regional Federal Court of the Second Region has the opinion that the Chamber of Arbitration has jurisdiction, and authorized this arbitration. Therefore, the arbitrations on the Lula/Cernambi and Baúna/Piracicaba fields unitization are currently stayed, while the Judiciary states there is no obstacle to continue with the Parque das Baleias complex and the Tartaruga Verde and Mestiça fields arbitrations. The change in the amount relates to the indexation charge and the inclusion of production taxes on the Parque das Baleias complex, which collection is stayed due to judicial and arbitral decision.	2,633	1,992
2) Administrative proceedings challenging an ANP order requiring Petrobras to pay additional special participation fees and royalties (production taxes) with respect to several fields, including a misunderstanding about the oil prices used on the calculation of production taxes on Lula field. It also includes contention about fines imposed by ANP due to alleged failure to comply with the minimum exploration activities program, as well as alleged irregularities relating to compliance with oil and gas industry regulation. Current status: In August 2017, the Company had an adverse judicial sentence relating to a fine issued by ANP. Therefore, in the third quarter, several proceedings had the probability of loss considered as probable. However, one claim relating to Lula field had the probability of loss considered as remote, following a favorable decision in administrative stage.		
The other claims involve lawsuits in different administrative and judicial stages.	1,635	1,668

**Plaintiff: Several plaintiffs in Brazil and EIG Management Company in USA**



3) Arbitration in Brazil and lawsuit in the USA regarding Sete Brasil. Current status: The arbitrations are at different stages, with no court ruling at this moment. The lawsuit filed by EIG and affiliates alleges that the Company committed fraud by inducing plaintiffs to invest in Sete Brasil Participações S. A. ( Sete ) through communications that failed to disclose the alleged corruption scheme. The District Court of the District of Columbia partially granted the Company's motion to dismiss. Petrobras entered another motion to dismiss the remaining part of the lawsuit and the proceeding is currently stayed in the first instance due to this appeal. On October 30, 2017, the Company filed a response to EIG's counter-arguments presented in the appeal.	2,127	1,644
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**Plaintiff: Refinaria de Petróleo de Manguinhos S.A.**

4) Lawsuit seeking to recover damages for alleged anti-competitive practices with respect to gasoline, diesel and LPG sales in the domestic market. Current status: This claim is in the judicial stage. In a recent decision, the Brazilian Judicial Branch did not consider the Company's practices as anti-competitive, supporting previous opinion of the Brazilian Antitrust Regulator (CADE). Thus, the likelihood of loss is now deemed remote.		575
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**Plaintiff: Vantage Deepwater Company and Vantage Deepwater Drilling Inc.**

5) Arbitration in the United States for unilateral termination of the drilling service contract tied to ship-probe Titanium Explorer. Current status: The merits hearing has been held and the award of the Arbitration Tribunal is expected to be rendered in the first quarter of 2018.	400	400
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<b>6) Other civil matters</b>	2,826	2,770
<b>Total for civil matters</b>	9,621	9,049

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**Petróleo Brasileiro S.A. Petrobras**

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**of environmental matters**

**12.31.**

**Ministério Público Federal, Ministério Público Estadual do Paraná, AMAR - Associação de Defesa do Meio Ambiente de  
AP - Instituto Ambiental do Paraná and IBAMA - Instituto Brasileiro de Meio Ambiente e Recursos Naturais**

proceeding related to specific performance obligations, indemnification and compensation for damages related to an environmental  
occurred in the State of Paraná on July 16, 2000.

s: The court partially ruled in favor of the plaintiff. However, both parties (the plaintiff and the Company) filed an appeal.

**Instituto Brasileiro de Meio Ambiente - IBAMA and Ministério Público Federal**

Administrative proceedings arising from environmental fines related to exploration and production operations (Upstream) contested because  
ent over the interpretation and application of standards by IBAMA, as well as a public civil action filed by the Ministério Público  
alleged environmental damage due to the accidental sinking of P-36 Platform.

s: A number of defense trials and the administrative appeal regarding the fines are pending, and others are under judicial

With respect to the civil action, the Company appealed the ruling that was unfavorable in the lower court and monitors the use of  
e that will be judged by the Regional Federal Court.

environmental matters

environmental matters

**30.4. Class action and related proceedings**

**30.4.1. Class action and related proceedings in the USA**

Between December 8, 2014 and January 7, 2015, five putative securities class action complaints were filed against the  
Company, Petrobras International Finance Company S.A. ( PifCo ), Petrobras Global Finance B.V. ( PGF, and  
collectively with the Company and PifCo, the Petrobras Defendants ), certain underwriters of debt securities (the  
Underwriter Defendants ), among other defendants (the Defendants ), in the United States District Court for the  
Southern District of New York ( SDNY or the District Court ). These actions were consolidated on February 17, 2015  
(the Consolidated Securities Class Action or Class Action ). The Court appointed a lead plaintiff, Universities  
Superannuation Scheme Limited ( USS ), on March 4, 2015. In sum and substance, the complaints in the Consolidated  
Securities Class Action asserted claims under the Securities Exchange Act of 1934, as amended (the Exchange Act )  
and Securities Act of 1933, as amended (the Securities Act ), alleging that in the Company s press releases, filings with  
the U.S. Securities and Exchange Commission (the SEC ) and other communications, the Company made materially  
false and misleading statements and omissions regarding the value of its assets, the amounts of the Company s  
expenses and net income, the effectiveness of the Company s internal controls over financial reporting, and the

Company's anti-corruption policies, due to the alleged corruption purportedly committed in connection with certain contracts, which allegedly artificially inflated the market value of the Company's securities.

In addition to the Consolidated Securities Class Action, 33 lawsuits were filed by individual investors before the same judge in the SDNY, and one was filed in the United States District Court for the Eastern District of Pennsylvania (collectively, the Individual Actions), consisting of allegations similar to those in the Consolidated Securities Class Action.

Between August 2015 and December 2015, the Company and certain other defendants made motions to dismiss the complaints and amended complaints in the Consolidated Securities Class Action and certain of the Individual Actions. Certain, but not all, of the claims were definitively dismissed and others were dismissed but with leave to re-plead. Thus, the actions continued against the Company and other defendants with respect to certain claims. Following the motion to dismiss stage, the complaint that was then considered operative for the subsequent proceedings in the Class Action was the fourth consolidated amended complaint (FAC) filed on November 30, 2015 by plaintiff USS, Employees Retirement System of the State of Hawaii (Hawaii), North Carolina Department of State Treasurer (North Carolina) (collectively, Class Plaintiffs), and one other plaintiff whose claims were later dismissed.

The judge scheduled a consolidated trial for the Class Action and the Individual Actions to begin on September 19, 2016, except that the judge ordered that any Individual Actions filed in the SDNY after December 31, 2015 would be stayed in all respects until after the completion of the trial. Six of the Individual Actions have been stayed as a result of this order.

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On February 2, 2016, the judge granted Class Plaintiffs' motion for class certification, certifying a class under the Securities Act represented by Hawaii and North Carolina (the Securities Act Class) and a class under the Exchange Act represented by USS (the Exchange Act Class). The Securities Act Class was defined, in relevant part, as all purchasers who purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in domestic transactions, directly in, pursuant and/or traceable to public offerings on May 15, 2013 and March 11, 2014, and were damaged thereby. The Exchange Act Class was defined, in relevant part, as all purchasers who, between January 22, 2010 and July 28, 2015, purchased or otherwise acquired Petrobras securities, including debt securities issued by PifCo and/or PGF on the New York Stock Exchange or pursuant to other domestic transactions, and were damaged thereby.

On June 15, 2016, the United States Court of Appeals for the Second Circuit (Second Circuit) granted the Petrobras Defendants (and other defendants) motion requesting interlocutory appellate review of the District Court's class certification of the Class Action. The Petrobras Defendants (and other defendants) moved in District Court for a stay of all District Court proceedings, which the district judge denied on June 24, 2016 and, on June 27, 2016, the parties filed motions for summary judgment. The Petrobras Defendants (and other defendants) then moved in the Second Circuit for a stay of all District Court proceedings. On August 2, 2016, the Second Circuit granted the motion to stay all District Court proceedings during the pendency of the appeal.

Between on or about October 21, 2016 and September 13, 2017, Petrobras' board of directors approved agreements to settle 21 of the Individual Actions (the Settled Individual Actions), leaving 13 remaining pending Individual Actions (six of which had been stayed since filed) (the Pending Individual Actions). The terms of the settlements for the Settled Individual Actions are confidential and Petrobras denies all allegations of wrongdoing. The settlements are aimed at eliminating the uncertainties, burdens and expense of ongoing litigation.

Based on the settlements reached in the Settled Individual Actions and advanced stages of negotiations in certain other Pending Individual Actions, the Company charged US\$448 million to the statement of income as other income and expenses (US\$ 76 in 2017 and US\$ 372 in 2016).

On July 7, 2017, the Second Circuit vacated, in part, the class certification decision in the Class Action and remanded the case to the District Court for further proceedings. The Second Circuit partially granted the appeal by the Petrobras Defendants (and other defendants), reversing some aspects of the District Court's ruling and affirming others. Among other issues, the Second Circuit ruled that the district judge failed to consider whether the question of whether the transactions occurred in the United States could be determined through a common set of evidence, and whether, if not, common issues would predominate over individual ones. The effect of the Second Circuit's decision was to vacate the classes certified by the District Court pending additional proceedings in the District Court on remand.

On July 21, 2017, the Petrobras Defendants (and other defendants) filed a request for panel rehearing or en banc rehearing with the Second Circuit regarding portions of the Second Circuit's decision affirming the District Court's order, which was denied on August 24, 2017.

On November 1, 2017, the Petrobras Defendants (and other defendants) filed a petition for writ of certiorari in the United States Supreme Court appealing the Second Circuit's decision. On November 3, 2017, the Second Circuit granted the Company's unopposed motion to stay the mandate, which was filed by Petrobras on August 30, 2017.

At the end of December 2017, the Company signed an agreement in principle to settle the Consolidated Securities Class Action, which is still subject to court approval (the Class Action Settlement).

The Class Action Settlement is intended to resolve all pending and prospective claims by purchasers of Petrobras securities in the United States and by purchasers of Petrobras securities that are listed for trading or that clear or settle through the Depository Trust Company in the United States, including the Pending Individual Actions. Under the Class Action Agreement, the parties have agreed to the certification, for settlement purposes only, of a new class defined as all persons who (i) during the time Period between January 22, 2010 and July 28, 2015, inclusive (the Class Period), purchased or otherwise acquired Petrobras Securities, including debt securities issued by PifCo and/or PGF, on the New York Stock Exchange or pursuant to other Covered Transactions; and/or (ii) purchased or otherwise acquired debt securities issued by Petrobras, PifCo, and/or PGF, in Covered Transactions, directly in, pursuant and/or traceable to a May 13, 2013 public offering registered in the United States and/or a March 10, 2014 public offering registered in the United States before Petrobras made available to its security holders an earnings statement covering a period of at least twelve months beginning after the effective date of the offerings (i.e. before August 11, 2014 in the case of the May 13, 2013 public offering and before May 15, 2015 in the case of the March 10, 2014 public offering). Covered Transactions is defined to mean (i) any transaction in a Petrobras Security listed for trading on the New York Stock Exchange (NYSE); (ii) any transaction in a Petrobras Security that cleared or settled through the Depository Trust Company's book-entry system; or (iii) any transaction in a Petrobras Security that otherwise qualifies as domestic under the Supreme Court's decision in *Morrison v. National Australia Bank*, 561 U.S. 247 (2010). Excluded from the definition of Covered Transaction are purchases of any Petrobras Security on the Brazilian Stock Exchange (B3).

If approved, the Class Action Settlement eliminates the risk of an adverse judgment which, as Petrobras has previously reported, could have a material adverse effect on the Company and its financial situation, and puts an end to the uncertainties, burdens and costs of protracted litigation.

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Under the Class Action Settlement, Petrobras (together with its subsidiary PGF) has agreed to pay US\$ 2,950 to resolve claims in two installments of US\$ 983 and a further installment of US\$ 984. The first installment was paid on March 1, 2018. The second installment will be paid within 10 days of final approval of the Class Action Settlement. The third installment will be paid by the later of (i) six months after final approval, or (ii) January 15, 2019. Accordingly, the Company charged US\$ 3,449 to its statement of income for the last quarter of 2017 as other expenses and income, taking into account the gross up of tax related to the Petrobras's portion of the settlement.

On January 16, 2018, United States Supreme Court granted a joint motion to defer consideration of Petrobras's petition for a writ of certiorari, pending final approval of the Class Action Settlement.

A stipulation between the settling parties containing the terms of the Class Action Settlement was submitted to the District Court for preliminary approval. On February 23, 2018, the District Court held a hearing on preliminary approval of the settlement, and subsequently granted preliminary approval on February 28, 2018. Notice is being provided to potential class members who will have an opportunity to opt out of the settlement and make any objections to the District Court, which the District Court will then review.

After the notice and objection period, the District Court is scheduled to hold a hearing on June 4, 2018 to determine whether to grant final approval of the Class Action Settlement. If final approval is not granted by the District Court, or if the settlement does not become final for any other reason, the Company will return to its position prior to the Class Action Settlement and, depending on the outcome of the subsequent litigation, the Company might be required to pay substantial amounts, which could have a material adverse effect on the Company's financial condition, its consolidated results of operations or its consolidated cash flows for an individual reporting period.

Individuals are seeking measures against Petrobras in Brazil to annul and/or suspend the Class Action Settlement. No adverse action has been taken to date against the settlement.

The plaintiffs in the Pending Individual Actions will be eligible to participate in the settlement. These plaintiffs will also have the option to opt out of the Class Action Settlement and, if they do, any such actions will continue.

The Pending Individual Actions involve highly complex issues that are subject to substantial uncertainties and depend on a number of factors such as the novelty of the legal theories, the information produced in discovery, the timing of court decisions, rulings by the court on key issues, and analysis by retained experts. Except as set forth above, the Company is unable to determine at this time whether the plaintiffs in the Pending Individual Actions will determine to participate or not in the Class Action Agreement or to make a reliable estimate of eventual loss, if any, arising from certain Pending Individual Actions if they determine to opt out of the Class Action Agreement.

The Company intends to defend these actions vigorously.

### **30.4.2. Class action in the Netherlands**

On January 23, 2017, the Stichting Petrobras Compensation Foundation ( Foundation ) filed a class action before the district court in Rotterdam, in the Netherlands, against Petrobras and its subsidiaries Petrobras International Braspetro B.V. (PIBBV) and Petrobras Global Finance B.V. (PGF); joint venture Petrobras Oil & Gas B.V. (PO&G), and some former managers of Petrobras.

This Foundation allegedly represents an unidentified group of investors and demands judicial remedies for alleged damages caused to investors who purchased securities issued by Petrobras and PGF outside the United States, before July 28, 2015, due to alleged illegal acts. The Foundation also alleges financial losses are connected to the facts uncovered by the Lava-Jato investigation and to purported false and misleading financial information released by the Company.

Petrobras, PGF, PIBBV and PO&G filed their first response to the claim on May 3, 2017 (first docket date), presenting the law firms that will defend these companies and requesting a hearing to discuss some aspects of the case.

On August 23, 2017, a hearing was held at the District Court in Rotterdam to establish the timeframe for proceedings. The next steps are: (i) initial arguments by defendants in November 2017, (ii) the Foundation's reply in March 2018, and (iii) the oral hearing on June 28, 2018. The Court ruling is expected to be presented in September 2018. Petrobras (and other defendants) presented preliminary defenses in November 29, 2017.

This class action involves complex issues that are subject to substantial uncertainties and depend on a number of factors such as the legitimacy of the Foundation as the plaintiffs' attorney, the applicable rules to this complaint, the information produced in discovery, analysis by experts, the timing of court decisions and rulings by the court on key issues. Currently, it is not possible to determine if the Company will be responsible for the payment of compensation as a result of this action as this assessment depends on the outcome of these complex issues. Moreover, it is uncertain which investors are able to file complaints related to this matter against the Company.

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In addition, the claims asserted are broad, span a multi-year period and involve a wide range of activities, and, at the current stage, the impacts of such claims are highly uncertain. The uncertainties inherent in all such matters affect the amount and timing of the ultimate resolution of these actions. As a result, the Company is unable to make a reliable estimate of eventual loss arising from this action. The Company is victim of the corruption scheme uncovered by the Lava-Jato investigation and aims to present and prove this condition before the Netherlands Authorities.

The uncertainties inherent in all such matters do not enable the Company to identify possible risks related to this action. Compensation for the alleged damages will only be determined by court rulings on complaints to be filed by individual investors, unless agreements to settle Opt-out Claims occur. The Foundation is not able to demand compensation for damages.

Petrobras and its subsidiaries deny the allegations presented by the Foundation and intend to defend themselves vigorously.

#### **30.4.3. Other Related Investor Claims**

Petrobras is also currently a party to arbitration and judicial proceedings in Brazil, all of which are currently in their initial stages. In each case, the proceedings were brought by investors that purchased Petrobras shares traded in Brazilian Stock Exchange (B3), alleging damages caused by facts uncovered in the Lava Jato Operation.

### **30.5. Contingent assets**

#### **30.5.1. Recovery of PIS and COFINS**

The Company filed civil lawsuits against the Federal Government claiming to recover PIS and COFINS paid over finance income and foreign exchange variation gains, claiming that paragraph 1 of article 3 of Law No. 9,718/98 is unconstitutional, comprising:

- i) PIS: from February 1999 to November 2002; and
- ii) COFINS: from February 1999 to January 2004.

The court granted the Company, in all of the lawsuits, the definitive right to recover those taxes, but it required prior examination and approval by the court of the settlement reports (court-ordered liquidation stage). In 2017, there were a settlement reports issued in favor of the Company relating to the most significant amount to be recovered, however their final approvals by the court are still pending.



As of December 31, 2017, the Company had non-current receivables of US\$ 944 (US\$ 980 as of December 31, 2016) related to PIS and COFINS, which are indexed to inflation.

**31. Commitment to purchase natural gas**

The Company has an active GSA agreement (Gas Supply Agreement ) entered into with Yacimientos Petroliferos Fiscales Bolivianos - YPF to purchase certain minimum volumes of natural gas at prices linked to the international fuel oil price through 2019, after which the agreement may be extended until all contracted volume has been delivered.

As of December 31, 2017, the total amount of the GSA for the 2018-2019 period is nearly 22 billion cubic meters of natural gas (equivalent to 30.08 million cubic meters per day) and corresponds to a total estimated value of US\$ 3.42 billion. Based on the aforementioned extension clause, the Company foresees an extension of the GSA term to April 2020 on the same volume basis according to current indicators, representing an estimated additional amount of US\$ 3.40 billion.

**32. Collateral for crude oil exploration concession agreements**

The Company has granted collateral to the Brazilian Agency of Petroleum, Natural Gas and Biofuels (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis - ANP*) in connection with the performance of the Minimum Exploration Programs established in the concession agreements for petroleum exploration areas in the total amount of US\$ 2,205 of which US\$ 878 were still in force as of December 31, 2017, net of commitments undertaken. The collateral comprises crude oil from previously identified producing fields, pledged as collateral, amounting to US\$ 806 and bank guarantees of US\$ 72.

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The Company is exposed to a variety of risks arising from its operations, including price risk (related to crude oil and oil products prices), foreign exchange rates risk, interest rates risk, credit risk and liquidity risk. Corporate risk management is part of the Company's commitment to act ethically and comply with the legal and regulatory requirements of the countries where it operates. To manage market and financial risks the Company prefers structuring measures through adequate capital and leverage management. The Company takes account of risks in its business decisions and manages any such risk in an integrated manner in order to enjoy the benefits of diversification.

A summary of the positions of the derivative financial instruments held by the Company and recognized in other current assets and liabilities as of December 31, 2017, as well as the amounts recognized in the statement of income and other comprehensive income and the guarantees given is set out as follows:

	<b>Statement of Financial Position</b>				
	<b>Notional value</b>		<b>Fair value</b>		
	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>Asset Position (Liability) Maturity</b>		
	<b>12.31.2017</b>	<b>12.31.2016</b>	<b>12.31.2017</b>	<b>12.31.2016</b>	
<b>Derivatives not designated for hedge accounting</b>					
Future contracts - total (*)	(15,561)	(1,866)	(98)	(8)	
Long position/Crude oil and oil products	43,862	88,303			2018
Short position/Crude oil and oil products	(59,423)	(90,169)			2018
Options - total (*)		120			
Call/Crude oil and oil products					2018
Put/Crude oil and oil products		120			2018
Forward contracts - total				0.3	
Long position/Foreign currency forwards (BRL/USD)(**)	US\$ 55		0.3		2018
Short position/Foreign currency forwards (BRL/USD)(**)	US\$ 78	US\$ 15	(0.3)	0.3	2018
Swap			105		
Foreign currency / Cross-currency Swap (**)	GBP 700		92		2026
	GBP 600		13		2034

Foreign currency / Cross-currency Swap (**)								
<b>Derivatives designated for hedge accounting</b>								
Swap							(10)	
Interest	Libor / Fixed rate (**)	US\$	0	US\$	371		(10)	
Total recognized in the Statement of Financial Position							7	(17.7)

(\*) Notional value in thousands of bbl.

(\*\*) Amounts in US\$ and GBP are presented in million.

	Gains/ (losses) recognized						Guarantees	
	in			Gains/(losses) recognized in the			given as	
	the statement of income			Shareholders			collateral	
	(*)			Equity (**)			12.31.2012	12.31.2016
	2017	2016	2015	2017	2016	2015		
Commodity derivatives	(144)	(48)	238	(9)			205	55
Foreign currency derivatives	89	(55)	27	1	7	9	(50)	
Interest rate derivatives	(9)	(8)	(9)	6	4	1		
	(64)	(111)	256	(2)	11	10	155	55
Cash flow hedge on exports (***)	(3,154)	(2,841)	(2,057)	2,611	13,620	(19,075)		
Total	(3,218)	(2,952)	(1,801)	2,609	13,631	(19,065)	155	55

(\*) Amounts recognized in finance income in the period.

(\*\*) Amounts recognized as other comprehensive income in the period.

(\*\*\*) Using non-derivative financial instruments as designated hedging instruments, as set out in note 33.2.

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A sensitivity analysis of the derivative financial instruments for the different types of market risks as of December 31, 2017 is set out following:

Financial Instruments	Risk	Reasonably		
		Probable Scenario (*)	possible scenario	Remote Scenario
<b>Derivatives not designated for hedge accounting</b>				
Future contracts	Crude oil and oil products -price changes		(240)	(479)
Forward contracts	Foreign currency - depreciation BRL x USD	(0.3)	5	11
		(0.3)	(235)	(468)

(\*) The probable scenario was computed based on the following risks: oil and oil products prices: fair value on December 31, 2017 / R\$ x U.S. Dollar - a 1.8% appreciation of the Real. Source: Focus and Bloomberg.

**33.1. Risk management of price risk (related to crude oil and oil products prices)**

Petrobras does not regularly use derivative instruments to hedge exposures to commodity price cycles related to products purchased and sold to fulfill operational needs. However, derivatives may be used in specific circumstances depending on business environment analysis and assessment of whether the Business and Management targets are being met. The use of derivatives in 2017 as hedging instruments aimed to manage the price risk of certain short-term commercial transactions.

**33.2. Foreign exchange risk management**

The Company's Risk Management Policy provides for, as an assumption, an integrated risk management extensive to the whole corporation, pursuing the benefit from the diversification of its businesses.

By managing its foreign exchange risk, the Company takes into account the group of cash flows derived from its operations. This concept is especially applicable to the risk relating to the exposure of the Brazilian Real against the U.S. dollar, in which future cash flows in U.S. dollar, as well as cash flows in Brazilian Real affected by the fluctuation between both currencies, such as cash flows derived from diesel and gasoline sales in the domestic market, are assessed in an integrated manner.

Accordingly, the financial risk management mainly involves structured actions by using natural hedges derived from the business of the Company.

The foreign exchange risk management strategy may involve the use of derivative financial instruments to hedge certain liabilities, minimizing foreign exchange rate risk exposure, especially when the Company is exposed to a foreign currency in which no cash inflows are expected, for example, Pound Sterling.

In the short-term, the foreign exchange risk is managed by applying resources in cash or cash equivalent denominated in Brazilian Real, U.S. Dollar or in another currency.

**a) Cash Flow Hedge involving the Company's future exports**

Considering the natural hedge aforementioned, the Company designates hedging relationships to account for the effects of the existing hedge between a foreign exchange gain or loss from proportions of its long-term debt obligations (denominated in U.S. dollars) and foreign exchange gain or loss of its highly probable U.S. dollar denominated future export revenues, so that gains or losses associated with the hedged transaction (the highly probable future exports) and the hedging instrument (debt obligations) are recognized in the statement of income in the same periods.

Foreign exchange gains and losses on proportions of cash flows from debt obligations (non-derivative financial instruments), as well as foreign exchange rate forward contracts (derivative financial instruments) have been designated as hedging instruments. Derivative financial instruments expired during the year were replaced by debts in the hedging relationships for which they had been designated.

Individual hedging relationships were designated in a one-to-one proportion, meaning that the highly probable future exports for each month and the proportions of cash flows from debt obligations, hedged in individual hedging relationship, an equal in US dollar amount. Only a portion of the Company's forecast exports are considered highly probable.

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Whenever a portion of future exports for a certain period, for which their foreign exchange gains and losses hedging relationship has been designated is no longer highly probable, the Company revokes the designation and the cumulative foreign exchange gains or losses that have been recognized in other comprehensive income remain separately in equity until the forecast exports occur.

If future exports, for foreign exchange gains and losses hedging relationship has been designated is no longer expected to occur, any related cumulative foreign exchange gains or losses that have been recognized in other comprehensive income from the date the hedging relationship was designated to the date the Company revoked the designation is immediately recycled from equity to the statement of income.

In addition, when a financial instrument designated as a hedging instrument expires or settled, the Company may replace it with another financial instrument in a manner in which the hedge relationship continues to occur. Likewise, whenever a hedged transaction effectively occurs, its financial instrument previously designated as a hedging instrument may be designate for a new hedge relationship.

The carrying amounts, the fair value as of December 31, 2017, and a schedule of expected reclassifications to the statement of income of cumulative losses recognized in other comprehensive income (shareholders' equity) based on a US\$ 1.00 / R\$ 3.3080 exchange rate are set out below:

Hedging Instrument	Hedged Transactions	Nature of the Risk	Present value of hedging instrument notional value		
			Maturity Date	12.31.2017 (US\$ million)	(R\$ million)
Foreign exchange gains and losses on proportion of non-derivative financial instruments cash flows	Foreign exchange gains and losses on a portion of highly probable future monthly exports revenues	Foreign Currency Real vs U.S. Dollar Spot Rate	January 2018 to December 2027	58,400	193,189

Changes in the present value of hedging instrument notional value	US\$	R\$ million
Amounts designated as of December 31, 2016	61,763	201,293
	21,129	68,252

Additional hedging relationships designated, designations revoked and hedging instruments re-designated		
Exports affecting the statement of income	(3,986)	(12,703)
Principal repayments / amortization	(20,506)	(65,726)
Foreign exchange variation		2,073
Amounts designated as of December 31, 2017	58,400	193,189

The average ratio of future exports for which cash flow hedge accounting was designed to the highly probable future exports is 65.8%.

A roll-forward schedule of cumulative foreign exchange losses recognized in other comprehensive income as of December 31, 2017 is set out below:

	Exchange rate	Tax effect	Total
Balance at January 1, 2016	(30,739)	10,451	(20,288)
Recognized in shareholders' equity	10,779	(3,665)	7,114
Reclassified to the statement of income - occurred exports	2,542	(864)	1,678
Reclassified to the statement of income - exports no longer expected or not occurred	299	(100)	199
Balance at December 31, 2016	(17,119)	5,822	(11,297)
Recognized in shareholders' equity	(543)	185	(358)
Reclassified to the statement of income - occurred exports	3,151	(1,071)	2,080
Reclassified to the statement of income - exports no longer expected or not occurred	3	(1)	2
Balance at December 31, 2017	(14,508)	4,935	(9,573)

Additional hedging relationships may be revoked or additional reclassification adjustments from equity to the statement of income may occur as a result of changes in forecast export prices and export volumes following a review of the Company's business plan. Based on a sensitivity analysis considering a US\$ 10/barrel decrease in Brent prices stress scenario, when compared to the Brent price projections in our BMP-2018-2022, would not indicate a reclassification adjustment from equity to the statement of income.

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A schedule of expected reclassification of cumulative foreign exchange losses recognized in other comprehensive income to the statement of income as of December 31, 2017 is set out below:

	2018	2019	2020	2021	2022	2023	2024	2025 to 2027	Total
Expected realization	(5,063)	(3,487)	(2,812)	(2,401)	(2,730)	(1,455)	(311)	3,751	(14,508)

IFRS 9 is effective from January 1, 2018 and provides for new requirements for hedge accounting. See note 6 for additional information on impacts of this new accounting standard on the Company's financial statements.

**b) Cross currency swap Pounds Sterling x Dollar**

In the first quarter of 2017, the Company, through its wholly owned subsidiary Petrobras Global Trading B.V. (PGT), entered into cross currency swaps maturing in 2026 and 2034, with notional amounts of £ 700 million and £ 600 million, respectively, in order to hedge its Pounds/U.S. Dollar exposure arising from bonds issued amounting to £ 1,300. The Company does not expect to settle these swaps before their expiration dates.

**c) Sensitivity analysis for foreign exchange risk on financial instruments**

A sensitivity analysis is set out below, showing the probable scenario for foreign exchange risk on financial instruments, computed based on external data along with stressed scenarios (a 25% and a 50% change in the foreign exchange rates), except for assets and liabilities of foreign subsidiaries, when transacted in a currency equivalent to their respective functional currencies.

Financial Instruments	Exposure at 12.31.2017	Risk	Probable Scenario (*)	Reasonably possible scenario	Remote Scenario
Assets	3,783		(66)	946	1,891
Liabilities (**)	(63,455)	Dollar/Real	1,112	(15,864)	(31,728)
Cash flow hedge on exports	58,401		(1,024)	14,600	29,200
	(1,271)		22	(318)	(637)
Liabilities	(96)	Yen/Dollar		(24)	(48)
	(96)			(24)	(48)



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Assets	3	Euro/Real	1	2
Liabilities	(26)		1	(7)
	(23)		1	(6)
Assets	6,308	Euro/Dollar	(51)	1,577
Liabilities	(10,592)		86	(2,648)
	(4,284)		35	(1,071)
Assets	2	Pound Sterling/Real	1	1
Liabilities	(23)		1	(6)
	(21)		1	(5)
Assets	3,209	Pound Sterling /Dollar	(50)	802
Liabilities	(4,816)		76	(1,204)
Derivative - cross currency swap	1,757		(28)	439
	150		(2)	37
Total	(5,545)		57	(1,387)
				(2,772)

(\*) On December 31, 2017, the probable scenario was computed based on the following risks: R\$ x U.S. Dollar - a 1.8% appreciation of the Real / Japanese Yen x U.S. Dollar - a 0.4% depreciation of the Japanese Yen/ Euro x U.S. Dollar: a 0.8% depreciation of the Euro / Pound Sterling x U.S. Dollar: a 1.6% depreciation of the Pound Sterling / Real x Euro - a 2.6% appreciation of the Real / Real x Pound Sterling - a 3.3% appreciation of the Real. Source: Focus and Bloomberg.

(\*\*) It includes the Class Action provision as set out note 30.4.

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**33.3. Interest rate risk management**

The Company considers that interest rate risk does not create a significant exposure and therefore, preferably does not use derivative financial instruments to manage interest rate risk, except for specific situations encountered by certain subsidiaries of Petrobras.

**33.4. Capital management**

The Company's objectives in its capital management is to achieve an adequate level of return on its capital structure in order to safeguard its ability to continue as a going concern, adding value to its shareholders and investors. Its main sources of funding have been cash provided by its operating activities, divestments, loan agreements with commercial banks and debt issuance in the international capital markets.

In line with the assumptions in the 2018-2022 Business and Management Plan, the Company does not foresee net proceeds from financing for the two year period 2017-2018. However, the Company has continually assessed options of funding following its liability management strategy, aiming at improving its debt repayment profile and achieving a lower cost of its debt along with an indebtedness level matching the capital expenditures. Currently, the average repayment term is 8.62 years.

Over the period covered by our Business and Management Plan, the Company aims at reducing leverage, preserving cash and prioritizing capital expenditures, primarily in oil and gas production in Brazil in highly productive and profitable areas based on its main targets and assumptions.

As a part of the financing planning, the Company expects to raise funds by means of its venture and divestment program for the 2017-2018 period, which foresees US\$ 21 billion of proceeds. However, this divestment portfolio is dynamic and the occurrence of the transactions depend on business conditions, market conditions and the Company's continuing assessment of its businesses, due to these reasons the rating conditions for assets available for sale were not fulfilled as set out in note 4.13.

**33.5. Credit risk**

Credit risk management in Petrobras aims at minimizing risk of not collecting receivables, financial deposits or collateral from third parties or financial institutions through efficient credit analysis, granting and management based on quantitative and qualitative parameters that are appropriate for each market segment in which the Company operates.

The commercial credit portfolio is broad and diversified and comprises clients from the domestic and foreign markets. Credit granted to financial institutions is related to collaterals received, cash surplus invested and derivative financial

instruments. It is spread among investment grade international banks rated by international rating agencies and Brazilian banks with low credit risk.

### **33.5.1. Credit quality of financial assets**

#### **a) Trade and other receivables**

Most of the company's customers have no credit agency ratings. Thus, credit commissions assess creditworthiness and define credit limits, which are regularly monitored, based on the customer's main activity, commercial relationship and credit history with Petrobras, solvency, financial situation and external market assessment of the customer.

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Credit quality of cash and cash equivalents, as well as marketable securities is based on external credit ratings provided by Standard & Poor's, Moody's and Fitch. The credit quality of those financial assets, that are neither past due nor have been impaired, are set out below:

	Cash and cash equivalents		Marketable securities (*)	
	2017	2016	2017	2016
AAA		5,217		
AA	752	7	609	
A	14,864	11,372		
BBB	801	42		
BB	3,566	2,794		
B	4	10		
AAA.br	126	373		874
AA.br	818	1,369		
A.br	1,239			
BB.br	317		1,162	
Other ratings	32	21		
	22,519	21,205	1,771	874

(\*) It does not include São Martinho's common shares described in note 7.

**33.6. Liquidity risk**

Liquidity risk is represented by the possibility of a shortage of cash or other financial assets in order to settle the Company's obligations on the agreed dates and is managed by the Company based on policies such as: centralization of cash management, optimization of the level of cash and cash equivalents held and reduction of working capital; maintenance of an adequate cash balance to ensure that cash needed for investments and short-term obligations is met even in adverse market conditions; increase in the average debt maturity, increase in funding sources from domestic and international markets, and developing a strong presence in the capital markets and also searching for new funding sources (such as new markets and financial products), as well as funds under the partnership and divestment program.

A maturity schedule of the Company's finance debt (undiscounted), including face value and interest payments is set out as follows:

<b>Maturity</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023 and thereafter</b>	<b>Balance at December 31, 2017</b>	<b>Balance at December 31, 2016</b>
Principal	5,524	6,570	9,849	12,927	18,183	57,477	110,530	119,734
Interest	6,055	5,845	5,398	4,782	4,000	34,647	60,728	58,406
<b>Total</b>	<b>11,579</b>	<b>12,415</b>	<b>15,247</b>	<b>17,709</b>	<b>22,183</b>	<b>92,124</b>	<b>171,258</b>	<b>178,140</b>

### 33.7. Insurance

The Company's insurance strategy involves acquiring insurance to cover risks that may produce material impacts and to cover risks that are subject to compulsory insurance coverage (pursuant to legal or contractual requirements). The remaining risks are self-insured and Petrobras intentionally assumes the entire risk by abstaining from contracting insurance. The Company assumes a significant portion of its risk, by entering into insurance policies that have deductible clauses up to the equivalent to US\$ 180.

The main information concerning the insurance coverage outstanding at December 31, 2017 is set out below:

<b>Assets</b>	<b>Types of coverage</b>	<b>Amount insured</b>
Facilities, equipment inventory and products inventory	Fire, operational risks and engineering risks	155,352
Tankers and auxiliary vessels	Hulls	3,525
Fixed platforms, floating production systems and offshore drilling units	Oil risks	34,240
<b>Total</b>		<b>193,117</b>

Petrobras does not have loss of earnings insurance or insurance related to automobiles and pipeline networks in Brazil.

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Fair values are determined based on market prices, when available, or, in the absence thereof, on the present value of expected future cash flows.

The hierarchy of the fair values of the financial assets and liabilities, recorded on a recurring basis, is set out below:

Level 1: inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.

Level 2: inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: inputs are unobservable inputs for the asset or liability.

	Fair value measured based on			Total
	Level I	Level II	Level III	fair value recorded
<b>Assets</b>				
Marketable securities	1,829			1,829
Foreign currency derivatives		105		105
Balance at December 31, 2017	1,829	105		1,934
Balance at December 31, 2016	784	0.3		784.3
<b>Liabilities</b>				
Commodity derivatives	(98)			(98)
Interest rate derivatives				
Balance at December 31, 2017	(98)			(98)
Balance at December 31, 2016	(8)	(10)		(18)

There were no material transfers between levels for the periods presented.

The estimated fair value for the Company's long term debt, computed based on the prevailing market rates, is set out in note 17.1.

The fair values of cash and cash equivalents, short-term debt and other financial assets and liabilities are equivalent or do not differ significantly from their carrying amounts.

### **35. Subsequent events**

#### **35.1. Second installment of the exploratory block BM-S-8 sale**

The production sharing agreement with respect to the Norte de Carcará area, entered into by the Brazilian Federal Government, Statoil, Petrogal and Exxon, was made official on February 2, 2018 through the Brazilian Federal Register (official gazette). This fact completes the conditions precedent for the second payment of the exploratory block BM-S-8 sold by the Company in July 2016, in the amount of US\$ 300.

The company expects to receive this amount before March 31, 2018, and the third installment of this sale, in the amount of US\$ 900, is still pending certain future events related to the signing of a unitization agreement.

#### **35.2. Extrajudicial Mediation with Sete Brasil**

On March 1, 2018, the Company's Board of Directors approved the key terms for a possible agreement in the context of the extrajudicial mediation procedure in progress with Sete Brasil Participações S.A. Under Judicial Recovery ( Sete Brasil ).

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The signing of the agreement between Petrobras and Sete Brasil is conditional upon presentation, by Sete Brasil, of an international-class drilling rig operator with experience in deep waters, in accordance with the approval criteria of Petrobras. This agreement is further conditioned to the success in the negotiation and approval, by the relevant bodies of both companies, of the final terms and conditions of the documents necessary to its implementation.

**35.3. Revolving credit facility**

On March 7, 2018, the Company entered into a revolving credit facility (RCF) with a syndicate of 17 banks, in the amount of US\$ 4.350 and maturing in March 2023. The Company may use this line of credit up to the month prior to maturity and the maintenance of the limit with the banks will cost 0.51% p.a. In the case of use, funds raised will bear interest at 6M Libor + 1.3% p.a. rate if the Company is investment grade rated at the date of the withdrawal. Otherwise, it will bear interest at 6M Libor + 1.7% p.a. rate.

**36. Information related to guaranteed securities issued by subsidiaries**

**36.1. Petrobras Global Finance B.V. (PGF)**

Petróleo Brasileiro S.A. - Petrobras fully and unconditionally guarantees the debt securities issued by Petrobras Global Finance B.V. (PGF), a 100-percent-owned finance subsidiary of Petrobras. There are no significant restrictions on the ability of Petrobras to obtain funds from PGF.



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Supplementary information (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

**Supplementary information**

**Supplementary information on Oil and Gas Exploration and Production (unaudited)**

This section provides supplemental information on oil and gas exploration and production activities of the Company. The information included in items (i) through (iii) provides historical cost information pertaining to costs incurred in exploration, property acquisition and development, capitalized costs and results of operations. The information included in items (iv) and (v) presents information on Petrobras' estimated net proved reserve quantities, standardized measure of estimated discounted future net cash flows related to proven reserves, and changes in estimated discounted future net cash flows.

Beginning in 1995, the Federal Government of Brazil undertook a comprehensive reform of the country's oil and gas regulatory system. On November 9, 1995, the Brazilian Constitution was amended to authorize the Federal Government to contract with any state or privately owned company to carry out the activities related to the upstream and downstream segments of the Brazilian oil and gas sector. This amendment eliminated Petrobras' effective monopoly. The amendment was implemented by the Oil Law, which liberated the fuel market in Brazil beginning January 1, 2002.

The Oil Law established a regulatory framework ending Petrobras' exclusive agency and enabling competition in all aspects of the oil and gas industry in Brazil. As provided in the Oil Law, Petrobras was granted the exclusive right for a period of 27 years to exploit the petroleum reserves in all fields where the Company had previously commenced production. However, the Oil Law established a procedural framework for Petrobras to claim exclusive exploratory (and, in case of success, development) rights for a period of up to three years with respect to areas where the Company could demonstrate that it had established prospects. To perfect its claim to explore and develop these areas, the Company had to demonstrate that it had the requisite financial capacity to carry out these activities, alone or through financing or partnering arrangements.

The Company, on December 31, 2017, maintains activities in Brazil; South America, which includes Argentina, Colombia and Bolivia; North America, which includes Mexico and the United States of America; and Turkey (others). The equity-accounted investments are comprised of the operations of Petrobras Oil and Gas B.V. (PO&G) in Africa, mainly Nigeria. However, the Company only estimates reserves in Brazil, the United States, Nigeria and Argentina.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)***i) Capitalized costs relating to oil and gas producing activities**

As set out in note 4.7, the Company uses the successful efforts method of accounting for appraisal and development costs of crude oil and natural gas production. In addition, notes 4.8 and 4.9 presents the accounting policies applied by the Company for recognition, measurement and disclosure of property, plant and equipment and intangible assets.

The following table summarizes capitalized costs for oil and gas exploration and production activities with the related accumulated depreciation, depletion and amortization, and asset retirement obligations:

	Consolidated entities					Total	Total	Equity Method Investees
	Brazil	South America	North America	Africa	Others			
December 31, 2017								
Unproved oil and gas properties	5,803	109				109	5,912	
Proved oil and gas properties	96,195	111	4,656			4,767	100,962	3,134
Support Equipment	86,021	606	81		392	1,079	87,100	6
Gross Capitalized costs	188,019	826	4,737		392	5,955	193,974	3,140
Depreciation, depletion and amortization	(63,245)	(504)	(2,217)		(12)	(2,733)	(65,978)	(1,287)
Net capitalized costs	124,774	322	2,520		380	3,222	127,996	1,853
December 31, 2016								
Unproved oil and gas properties	6,978	115	276			391	7,369	
Proved oil and gas properties	87,925	88	4,264			4,352	92,277	2,811
Support Equipment	84,549	473	70		4	547	85,096	6
Gross Capitalized costs	179,452	676	4,610		4	5,290	184,742	2,817
Depreciation, depletion and amortization	(55,580)	(348)	(1,917)		(4)	(2,269)	(57,849)	(1,165)
Net capitalized costs	123,872	328	2,693			3,021	126,893	1,652
December 31, 2015								
Unproved oil and gas properties	6,720	133	396			529	7,249	

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Proved oil and gas properties	70,822	2,016	4,107		6,123	76,945	2,899
Support Equipment	70,931	1,066	65	4	1,135	72,066	88
Gross Capitalized costs	148,473	3,215	4,568	4	7,787	156,260	2,987
Depreciation, depletion and amortization	(40,763)	(2,037)	(1,574)	(4)	(3,615)	(44,378)	(1,282)
Net capitalized costs	107,710	1,178	2,994		4,172	111,882	1,705

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)***ii) Costs incurred in oil and gas property acquisition, exploration and development activities**

Costs incurred are summarized below and include both amounts expensed and capitalized:

	Consolidated entities					Total	Total	Equity Method Investees
	Brazil	South America	North America	Abroad Africa	Others			
December 31, 2017								
Acquisition costs:								
Proved								
Unproved	903						903	
Exploration costs	1,223	33	4		37	1,260		4
Development costs	11,553	23	230		253	11,806		294
<b>Total</b>	<b>13,679</b>	<b>56</b>	<b>234</b>		<b>290</b>	<b>13,969</b>		<b>298</b>
December 31, 2016								
Acquisition costs:								
Proved								
Unproved		98				98	98	
Exploration costs	1,459	44	6		1	1,510		5
Development costs	12,429	176	148		324	12,753		389
<b>Total</b>	<b>13,888</b>	<b>318</b>	<b>154</b>		<b>473</b>	<b>14,361</b>		<b>394</b>
December 31, 2015								
Acquisition costs:								
Proved								
Unproved								
Exploration costs	3,266	59	83		142	3,408		10
Development costs	15,536	451	397		848	16,384		431
<b>Total</b>	<b>18,802</b>	<b>510</b>	<b>480</b>		<b>990</b>	<b>19,792</b>		<b>441</b>

**(iii) Results of operations for oil and gas producing activities**

The Company's results of operations from oil and gas producing activities for the years ended December 31, 2017, 2016 and 2015 are shown in the following table. The Company transfers substantially all of its Brazilian crude oil and gas production to the Refining, Transportation & Marketing segment in Brazil. The internal transfer prices calculated by the Company's model may not be indicative of the price the Company would have realized had this production been sold in an unregulated spot market. Additionally, the prices calculated by the Company's model may not be indicative of the future prices to be realized by the Company. Gas prices used are those set out in contracts with third parties.

Production costs are lifting costs incurred to operate and maintain productive wells and related equipment and facilities, including operating employees' compensation, materials, supplies, fuel consumed in operations and operating costs related to natural gas processing plants.

Exploration expenses include the costs of geological and geophysical activities and projects without economic feasibility. Depreciation and amortization expenses relate to assets employed in exploration and development activities. In accordance with Codification Topic 932 Extractive Activities Oil and Gas, income taxes are based on statutory tax rates, reflecting allowable deductions. Interest income and expense are excluded from the results reported in this table.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)***(iii) Results of operations for oil and gas producing activities**

	<b>Consolidated entities Abroad</b>					<b>Total</b>	<b>Total</b>	<b>Equity Method Investees</b>
	<b>Brazil</b>	<b>South America</b>	<b>North America</b>	<b>Africa</b>	<b>Others</b>			
<b>December 31, 2017</b>								
Net operation revenues:								
Sales to third parties	482	215	725			940	1,422	443
Intersegment	40,762						40,762	
	41,244	215	725			940	42,184	443
Production costs	(17,894)	(71)	(163)			(234)	(18,128)	(51)
Exploration expenses	(686)	(37)	(77)			(114)	(800)	1
Depreciation, depletion and amortization	(9,466)	(44)	(302)		(8)	(354)	(9,820)	(123)
Impairment of oil and gas properties	169	(13)	(113)			(126)	43	
Other operating expenses	(2,571)	(12)	(125)		(274)	(411)	(2,982)	(19)
Results before income tax expenses	10,796	38	(55)		(282)	(299)	10,497	251
Income tax expenses	(3,672)	(13)	18		96	101	(3,571)	(98)
Results of operations (excluding corporate overhead and interest costs)								
	7,124	25	(37)		(186)	(198)	6,926	153
<b>December 31, 2016</b>								
Net operation revenues:								
Sales to third parties	693	224	563			787	1,480	381
Intersegment	31,689	506				506	32,195	31
	32,382	730	563			1,293	33,675	412
Production costs	(13,939)	(315)	(132)			(447)	(14,386)	(56)
Exploration expenses	(1,603)	(35)	(122)		(1)	(158)	(1,761)	(4)

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Depreciation, depletion and amortization	(10,051)	(99)	(327)		(426)	(10,477)	(170)
Impairment of oil and gas properties	(3,102)	(126)	(44)		(170)	(3,272)	
Other operating expenses	(1,497)	(97)	(184)	22	(259)	(1,756)	(28)
Results before income tax expenses	2,190	58	(246)	21	(167)	2,023	154
Income tax expenses	(745)	(44)		12	(32)	(777)	(108)
Results of operations (excluding corporate overhead and interest costs)	1,445	14	(246)	33	(199)	1,246	46
<b>December 31, 2015</b>							
Net operation revenues:							
Sales to third parties	2,867	303	590		893	3,760	561
Intersegment	30,951	969			969	31,920	19
	33,818	1,272	590		1,862	35,680	580
Production costs	(17,023)	(556)	(189)		(745)	(17,768)	(209)
Exploration expenses	(1,582)	(18)	(311)		(329)	(1,911)	(30)
Depreciation, depletion and amortization	(7,403)	(301)	(246)		(547)	(7,950)	(187)
Impairment of oil and gas properties	(9,165)	(207)	(458)		(665)	(9,830)	(278)
Other operating expenses	(2,932)	47	(91)	(160)	(204)	(3,136)	(43)
Income before income tax expenses	(4,287)	237	(705)	(160)	(628)	(4,915)	(167)
Income tax expenses	1,458	(77)	1	16	(60)	1,398	(84)
Results of operations (excluding corporate overhead and interest costs)	(2,829)	160	(704)	(144)	(688)	(3,517)	(251)

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**Petróleo Brasileiro S.A. Petrobras**

Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

**(iv) Reserve quantities information**

As presented in note 5.1, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated 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 prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain. The project to extract the hydrocarbons must have commenced or the operator must be reasonably certain that it will commence within a reasonable time. Reserves estimate involves a high degree of judgment and complexity and its application affects different items of these Financial Statements.

The Company's estimated net proved oil and gas reserves and changes thereto for the years 2017, 2016 and 2015 are shown in the following table. Proved reserves are estimated by the Company's reservoir geologists and engineers in accordance with the reserve definitions prescribed by the Securities and Exchange Commission.

Developed oil and gas reserves are reserves of any category that can be expected to be recovered: (i) through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared to the cost of a new well; and (ii) through installed extraction equipment and infrastructure operational at the time of the reserves estimate if the extraction is done by means not involving a well.

In some cases, substantial new investments in additional wells and related facilities will be required to recover these proved reserves and are named proved undeveloped reserves. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of reserves are subject to changes as additional information becomes available.



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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

A summary of the annual changes in the proved reserves of oil is as follows (in millions of barrels):

Proved developed and undeveloped reserves - Consolidated Entities	Crude oil in Brazil(*)	Abroad			Total crude oil abroad	Synthetic oil in Brazil	Total
		South America	North America	Africa			
Reserves at December 31, 2014	10,850.9	66.5	119.9		186.5	7.9	11,045.1
Revisions of previous estimates	(1,968.9)	(3.5)	(18.1)		(21.6)	0.1	(1,990.4)
Extensions and discoveries	407.1	4.8			4.8		411.9
Improved Recovery	0.4	0.7			0.7		1.1
Sales of reserves	(2.3)	(4.5)			(4.5)		(6.8)
Purchases of reserves							
Production for the year	(743.1)	(11.7)	(11.2)		(22.8)	(1.0)	(767.0)
Reserves at December 31, 2015	8,544.1	52.3	90.6		142.9	6.9	8,693.9
Revisions of previous estimates	179.5	0.1	17.9		18.0	0.8	198.4
Extensions and discoveries	87.8						87.8
Improved Recovery							
Sales of reserves		(46.6)			(46.6)		(46.6)
Purchases of reserves		0.7			0.7		0.7
Production for the year	(748.5)	(5.7)	(12.1)		(17.8)	(0.9)	(767.2)
Reserves at December 31, 2016	8,063.0	0.8	96.4		97.3	6.8	8,167.1
Revisions of previous estimates	649.3	0.3	31.4		31.7	0.2	681.1
Extensions and discoveries	69.1	0.3			0.3		69.4
Improved Recovery	212.7						212.7
Sales of reserves							
Purchases of reserves							
Production for the year	(744.6)	(0.2)	(13.2)		(13.4)	(1.0)	(759.0)
Reserves at December 31, 2017	8,249.4	1.2	114.6		115.8	6.0	8,371.3

\* In 2017, it includes 263.7 million barrels related to assets held for sale.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to rounding off.

Proved developed and undeveloped reserves - Equity Method Investees	Abroad			Total of crude oil Brazil's Synthetic Oil	Total
	Crude Oil abroad	South America	North America Africa		
Reserves at December 31, 2014	18.0	54.1	72.1	72.1	72.1
Revisions of previous estimates	(2.2)	5.2	3.1	3.1	3.1
Extensions and discoveries					
Improved Recovery		16.2	16.2	16.2	16.2
Sales of reserves					
Purchases of reserves					
Production for the year	(1.2)	(9.7)	(10.9)	(10.9)	(10.9)
Reserves at December 31, 2015	14.6	65.8	80.4	80.4	80.4
Revisions of previous estimates		11.9	11.9	11.9	11.9
Extensions and discoveries					
Improved Recovery					
Sales of reserves	(14.1)		(14.1)	(14.1)	(14.1)
Purchases of reserves					
Production for the year	(0.5)	(8.7)	(9.2)	(9.2)	(9.2)
Reserves at December 31, 2016		69.0	69.0	69.0	69.0
Revisions of previous estimates		2.6	2.6	2.6	2.6
Extensions and discoveries					
Improved Recovery					
Sales of reserves					
Purchases of reserves					
Production for the year		(8.2)	(8.2)	(8.2)	(8.2)
Reserves at December 31, 2017		63.4	63.4	63.4	63.4

Apparent differences in the sum of the numbers are due to rounding off.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

A summary of the annual changes in the proved reserves of natural gas is as follows (in billions of cubic feet):

	Natural Gas in Brazil(*)	Abroad			Total Natural Gas Abroad	Brazil Synthetic Gas	Total
		South America	North America	Africa			
<b>Proved developed and undeveloped reserves - Consolidated Entities</b>							
Reserves at December 31, 2014	11,170.3	730.8	180.0	910.8	10.6	12,091.5	
Revisions of previous estimates	(1,178.3)	16.8	(17.0)	(0.2)	0.2	(1,178.3)	
Extensions and discoveries	417.6	74.6		74.6		492.2	
Improved Recovery	0.2	27.7		27.7		27.9	
Transfers of reserves	(1.3)	(90.2)		(90.2)		(91.5)	
Purchases of reserves							
Production for the year	(820.8)	(79.2)	(24.5)	(103.7)	(1.4)	(925.6)	
Reserves at December 31, 2015	9,587.7	680.5	138.5	819.1	9.3	10,416.1	
Revisions of previous estimates	(476.2)	22.9	(19.3)	3.6	1.2	(471.8)	
Extensions and discoveries	92.1					92.1	
Improved Recovery	0.1					0.1	
Transfers of reserves		(631.9)		(631.9)		(631.9)	
Purchases of reserves		93.3		93.3		93.3	
Production for the year	(809.7)	(50.9)	(32.1)	(82.9)	(1.4)	(894.0)	
Reserves at December 31, 2016	8,394.0	113.9	87.2	201.1	9.2	8,604.4	
Revisions of previous estimates	(81.5)	19.5	(24.9)	(5.5)	0.1	(86.4)	
Extensions and discoveries	37.4	41.0		41.0		78.4	
Improved Recovery	204.2					204.2	
Transfers of reserves							
Purchases of reserves							
Production for the year	(877.9)	(14.2)	(21.3)	(35.5)	(1.2)	(914.1)	
Reserves at December 31, 2017	7,676.1	160.2	40.9	201.1	8.1	7,885.4	

\* In 2017, it includes 173.7 billion cubic feet related to assets held for sale.

Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including fuel gas consumed in operations and excluding reinjected gas. Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 33% of our total proved reserves of natural gas at December, 2017.

Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to rounding off.

	Abroad			Total Natural Gas Brazil s Abroad Gas Synthetic Total
	Natural Gas in Brazil	South America	North America Africa	
<b>Proved developed and undeveloped reserves - Equity Method Investees</b>				
Reserves at December 31, 2014		27.6	19.3	46.9
Revisions of previous estimates		(10.4)	(2.7)	(13.1)
Extensions and discoveries				
Improved Recovery				
Sales of reserves				
Purchases of reserves				
Production for the year		(0.3)		(0.3)
Reserves at December 31, 2015		16.9	16.6	33.5
Revisions of previous estimates			(4.1)	(4.1)
Extensions and discoveries				
Improved Recovery				
Sales of reserves		(16.8)		(16.8)
Purchases of reserves				
Production for the year		(0.1)		(0.1)
Reserves at December 31, 2016			12.5	12.5
Revisions of previous estimates			5.7	5.7
Extensions and discoveries				
Improved Recovery				
Sales of reserves				
Purchases of reserves				
Production for the year			(0.9)	(0.9)
Reserves at December 31, 2017			17.3	17.3

Natural gas production volumes used in this table are the net volumes withdrawn from our proved reserves, including fuel gas consumed in operations and excluding reinjected gas. Our disclosure of proved gas reserves also includes fuel gas volumes, which represent 100% of our total proved reserves of natural gas at December, 2017.

Apparent differences in the sum of the numbers are due to rounding off.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

The tables below summarizes information about the changes in total proved reserves of crude oil and natural gas, in millions of barrels of oil equivalent, in our consolidated entities and equity method investees for 2017, 2016 and 2015:

	Abroad			Total oil equivalent abroad	Total synthetic oil equivalent Brazil	Total for all products
	Oil equivalent in Brazil(*)	South America	North America			
<b>Proved developed and undeveloped reserves</b>						
Reserves at December 31, 2014	12,712.6	188.3	150.1	338.3	9.6	13,060.7
Revisions of previous estimates	(2,165.3)	(0.7)	(20.9)	(21.6)	0.1	(2,187.1)
Extensions and discoveries	476.7	17.2		17.2		494.0
Improved Recovery	0.4	5.3		5.3		5.8
Sales of reserves	(2.5)	(19.5)		(19.5)		(22.0)
Purchases of reserves						
Production for the year	(879.9)	(24.9)	(15.3)	(40.2)	(1.3)	(921.3)
Reserves at December 31, 2015	10,142.1	165.7	113.7	279.4	8.5	10,430.0
Revisions of previous estimates	100.2	3.9	14.7	18.6	1.0	119.8
Extensions and discoveries	103.2					103.2
Improved Recovery						
Sales of reserves		(151.9)		(151.9)		(151.9)
Purchases of reserves		16.3		16.3		16.3
Production for the year	(883.4)	(14.2)	(17.4)	(31.6)	(1.2)	(916.2)
Reserves at December 31, 2016	9,462.0	19.8	111.0	130.8	8.3	9,601.1
Revisions of previous estimates	635.7	3.5	27.2	30.7	0.2	666.6
Extensions and discoveries	75.4	7.1		7.1		82.5
Improved Recovery	246.7					246.7
Sales of reserves						
Purchases of reserves						
Production for the year	(891.0)	(2.6)	(16.7)	(19.3)	(1.2)	(911.4)
Reserves at December 31, 2017	9,528.8	27.9	121.5	149.3	7.4	9,685.5

\* In 2017, it includes 292.7 million barrels of oil equivalent related to assets held for sale.  
Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to rounding off.

Proved developed and undeveloped reserves - Equity Method Investees	Abroad			Total oil equivalent abroad	Total synthetic oil equivalent for all products
	Oil equivalent in Brazil	South America	North America		
Reserves at December 31, 2014		22.6	57.3	79.9	79.9
Revisions of previous estimates		(3.9)	4.8	0.9	0.9
Extensions and discoveries					
Improved Recovery			16.2	16.2	16.2
Sales of reserves					
Purchases of reserves					
Production for the year		(1.3)	(9.7)	(11.0)	(11.0)
Reserves at December 31, 2015		17.4	68.6	86.0	86.0
Revisions of previous estimates			11.2	11.2	11.2
Extensions and discoveries					
Improved Recovery					
Sales of reserves		(16.9)		(16.9)	(16.9)
Purchases of reserves					
Production for the year		(0.5)	(8.7)	(9.2)	(9.2)
Reserves at December 31, 2016		0.0	71.1	71.1	71.1
Revisions of previous estimates			3.5	3.5	3.5
Extensions and discoveries					
Improved Recovery					
Sales of reserves					
Purchases of reserves					
Production for the year			(8.3)	(8.3)	(8.3)
Reserves at December 31, 2017			66.3	66.3	66.3

Apparent differences in the sum of the numbers are due to rounding off.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

Proved developed and undeveloped reserves - Consolidated and Equity Method Investees	Abroad				Total synthetic oil equivalent		Total for all products
	Oil equivalent in Brazil (*)	South America	North America	Africa	oil equivalent abroad	in Brazil	
Reserves at December 31, 2014	12,712.6	211.0	150.1	57.3	418.4	9.6	13,140.6
Revisions of previous estimates	(2,165.3)	(4.6)	(20.9)	4.8	(20.8)	0.1	(2,186.2)
Extensions and discoveries	476.7	17.2			17.2		493.9
Improved Recovery	0.4	5.3		16.2	21.5		21.9
Sales of reserves	(2.5)	(19.5)			(19.5)		(22.0)
Purchases of reserves							
Production for the year	(879.9)	(26.2)	(15.3)	(9.7)	(51.2)	(1.3)	(932.3)
Reserves at December 31, 2015	10,142.1	183.1	113.7	68.6	365.4	8.5	10,516.0
Revisions of previous estimates	100.2	3.9	14.7	11.2	29.8	1.0	131.0
Extensions and discoveries	103.2						103.2
Improved Recovery							
Sales of reserves		(168.8)			(168.8)		(168.8)
Purchases of reserves		16.3			16.3		16.3
Production for the year	(883.4)	(14.7)	(17.4)	(8.7)	(40.8)	(1.2)	(925.4)
Reserves at December 31, 2016	9,462.0	19.8	111.0	71.1	201.8	8.3	9,672.2
Revisions of previous estimates	635.7	3.5	27.2	3.5	34.3	0.2	670.1
Extensions and discoveries	75.4	7.1			7.1		82.5
Improved Recovery	246.7						246.7
Sales of reserves							
Purchases of reserves							
Production for the year	(891.0)	(2.6)	(16.7)	(8.3)	(27.7)	(1.2)	(919.8)
Reserves at December 31, 2017	9,528.8	27.9	121.5	66.3	215.6	7.4	9,751.7

\* In 2017, it includes 292.7 million barrels of oil equivalent related to assets held for sale. Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.



Apparent differences in the sum of the numbers are due to rounding off.

In 2017, we incorporated 670.1 million boe of proved reserves by revising of previous estimates, including 355.4 million boe due to economic revisions, mainly due to the increase in prices, and 314.7 million boe due to technical revisions, mainly due to better than forecasted behavior from reservoirs, in the pre-salt layer of Santos and Campos basins, both in Brazil. In addition, we added 246.7 million boe in our proved reserves resulting from positive responses from improved recovery (water injection), and added 82.5 million boe in our proved reserves due to extensions and discoveries, mainly in the pre-salt of Santos basin.

Considering a production of 919.8 million boe in 2017, the company total proved reserves resulted in 9,751.7 million boe. This 919.8 million boe production does not consider the production of Extended Well Tests (EWTs) in exploratory blocks and production in Bolivia, since the Bolivian Constitution prohibits the disclosure and registration of its reserves.

In 2016, we incorporated 103 million boe of proved reserves from extensions and discoveries in Brazil (Santos Basin), and we added 131 million boe to our proved reserves due to revisions of previous estimates, as a result of drilling of new production development wells and better reservoir response in onshore and offshore post-salt fields, in Brazil and the USA, and as result of positive answers from the reservoirs, recovery mechanisms (water injection) and operating efficiency of production systems in operation, as well as the growing drilling activities and tie-back activities, in the pre-salt layer of Santos and Campos Basins.

We reduced 169 million boe of our proved reserves due to sales of minerals in situ and increased 16 million boe in our proved reserves due to purchases of minerals in situ, resulting in a net effect of a decrease of 153 million boe in our proved reserves. The net result of these additions and disposals, excluding production, was an increase of 81 million boe to our proved reserves in 2016. Considering a production of 925 million boe in 2016, our decrease of proved reserves was 844 million boe.

In 2015, our proved reserves decreased by 2,186 million boe due to revisions of previous estimates, mostly as result of the decrease in oil prices during fiscal year of 2015, and decreased by 22 million boe due to sales of proved reserves. This decrease was partially offset by the incorporation of 494 million boe of proved reserves from discoveries of new accumulations and extensions in Brazil, specifically in the Santos, Campos and Espírito Santo Basins, and in Argentina, in the Neuquina Basin, and the incorporation of 22 million boe due to improved recovery. The net result (excluding production) was a decrease of 1,692 million boe in our proved reserves in 2015. Considering a production of 932 million boe in 2015, our net decrease of proved reserves was 2,625 million boe.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	2017				2016				2015			
	Crude Oil (millions of barrels)	Synthetic (billions cubic feet)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)	Crude Oil (millions of barrels)	Synthetic (billions cubic feet)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)	Crude Oil (millions of barrels)	Synthetic (billions cubic feet)	Natural Gas (billions cubic feet)	Synthetic Gas (billions cubic feet)
<b>Net proved developed reserves:</b>												
Consolidated Entities												
Brazil*	4,282.2	6.0	4,515.9	8.1	4,250.1	6.8	5,034.2	9.2	4,266.5	6.9	5,320.5	9.3
South America	0.7		56.7		0.5		33.7		39.7		366.3	
North America	72.1		24.2		79.6		83.6		53.6		122.5	
Abroad	72.8		80.9		80.1		117.3		93.4		488.8	
<b>Total Consolidated Entities</b>	<b>4,355.0</b>	<b>6.0</b>	<b>4,596.8</b>	<b>8.1</b>	<b>4,330.2</b>	<b>6.8</b>	<b>5,151.5</b>	<b>9.2</b>	<b>4,359.8</b>	<b>6.9</b>	<b>5,809.3</b>	<b>9.3</b>
Equity Method Investees												
South America									6.6		8.0	
Africa	29.6		9.3		32.5		8.6		28.0		10.4	
Abroad	29.6		9.3		32.5		8.6		34.7		18.4	
<b>Total Equity Method Investees</b>	<b>29.6</b>	<b></b>	<b>9.3</b>	<b></b>	<b>32.5</b>	<b></b>	<b>8.6</b>	<b></b>	<b>34.7</b>	<b></b>	<b>18.4</b>	<b></b>
<b>Total Consolidated and Equity Method Investees</b>	<b>4,384.6</b>	<b>6.0</b>	<b>4,606.0</b>	<b>8.1</b>	<b>4,362.7</b>	<b>6.8</b>	<b>5,160.1</b>	<b>9.2</b>	<b>4,394.5</b>	<b>6.9</b>	<b>5,827.7</b>	<b>9.3</b>

**Net proved  
undeveloped  
reserves:**

Consolidated Entities						
Brazil**	3,967.2	3,160.2	3,812.9	3,359.7	4,277.7	4,267.2
South America						
North America	0.5	103.5	0.3	80.2	12.5	314.2
Abroad	42.6	16.7	16.8	3.6	37.0	16.0
Total Consolidated Entities						
	43.0	120.2	17.1	83.8	49.5	330.3
Equity Method Investees						
South America						
Africa					7.9	8.9
Abroad	33.8	8.0	36.5	3.9	37.8	6.2
Total Equity Method Investees						
	33.8	8.0	36.5	3.9	45.7	15.1
Total Consolidated and Equity Method Investees						
	4,044.0	3,288.5	3,866.5	3,447.5	4,372.9	4,612.6

\* In 2017, it includes 191.9 million barrels of oil equivalent and 131.8 billion cubic feet related to assets held for sale

\*\* In 2017, it includes 71.9 million barrels of oil equivalent and 41.9 billion cubic feet related to assets held for sale. Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to rounding off.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

**(v) Standardized measure of discounted future net cash flows relating to proved oil and gas quantities and changes therein**

The standardized measure of discounted future net cash flows, related to the above proved oil and gas reserves, is calculated in accordance with the requirements of Codification Topic 932 Extractive Activities Oil and Gas.

Estimated future cash inflows from production in Brazil are computed by applying the average price during the 12-month period prior to the ending date of the period covered by the report, determined as an unweighted arithmetic average of the first-day-of-the-month price for each month within such period, unless prices are defined by contractual arrangements, excluding escalations based upon future conditions. Future price changes are limited to those provided by contractual arrangements existing at the end of each reporting year. Future development and production costs are those estimated future expenditures necessary to develop and produce year-end estimated proved reserves based on year-end cost, assuming continuing economic conditions. Estimated future income taxes (including future social contributions on net income - *CSLL*) are calculated by applying appropriate year-end statutory tax rates. The amounts presented as future income taxes expenses reflect allowable deductions considering statutory tax rates. Discounted future net cash flows are calculated using 10% mid-period discount factors. This discounting requires a year-by-year estimate of when the future expenditures will be incurred and when the reserves will be produced.

The valuation prescribed under Codification Topic 932 Extractive Activities Oil and Gas requires assumptions as to the timing and amount of future development and production costs. The calculations are made as of December 31 each year and should not be relied upon as an indication of Petrobras future cash flows or the value of its oil and gas reserves.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

	Consolidated entities Abroad					Total	Total	Equity Method Investees
	Brazil**	South America	North America	Africa	Others			
<b>December 31, 2017</b>								
Future cash inflows	439,058	912	5,361			6,274	445,332	3,487
Future production costs	(213,037)	(412)	(2,291)			(2,703)	(215,740)	(857)
Future development costs	(46,731)	(147)	(649)			(796)	(47,527)	(524)
Future income tax expenses	(63,087)	(89)	(86)			(175)	(63,262)	(339)
Undiscounted future net cash flows	116,204	265	2,335			2,600	118,803	1,768
10 percent midyear annual discount for timing of estimated cash flows*	(52,516)	(138)	(707)			(845)	(53,361)	(474)
Standardized measure of discounted future net cash flows	63,687	126	1,628			1,755	65,442	1,294
<b>December 31, 2016</b>								
Future cash inflows	357,374	600	3,809			4,408	361,783	2,950
Future production costs	(209,413)	(239)	(2,153)			(2,392)	(211,806)	(1,088)
Future development costs	(42,357)	(120)	(531)			(652)	(43,009)	(703)
Future income tax expenses	(46,234)	(65)	(40)			(105)	(46,338)	(229)
Undiscounted future net cash flows	59,370	175	1,084			1,259	60,630	929
10 percent midyear annual discount for timing of estimated cash flows*	(24,946)	(78)	(255)			(332)	(25,279)	(346)
Standardized measure of discounted future net cash flows	34,424	98	830			927	35,351	584
<b>December 31, 2015</b>								
Future cash inflows	462,364	6,541	4,720			11,261	473,625	3,942
Future production costs	(256,130)	(3,165)	(2,684)			(5,849)	(261,979)	(1,404)
Future development costs	(65,449)	(1,056)	(992)			(2,048)	(67,497)	(1,228)
Future income tax expenses	(61,408)	(527)	(23)			(550)	(61,958)	(349)
Undiscounted future net cash flows	79,377	1,793	1,021			2,814	82,191	961
	(36,608)	(588)	(148)			(736)	(37,344)	(449)

10 percent midyear annual discount  
for timing of estimated cash flows\*

Standardized measure of discounted future net cash flows	42,769	1,205	873	2,078	44,847	512
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\* Semiannual capitalization

\*\* Includes the amount of US\$ 1,770 millions related to assets classified as held for sale in 2017.  
Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

Apparent differences in the sum of the numbers are due to rounding off.

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)***(v) Standardized measure of discounted future net cash flows relating to proved oil and gas quantities and changes therein**

	Consolidated entities					Total	Total	Equity Method Investees
	Brazil*	South America	North America	Africa	Others			
Balance at January 1, 2017	34,424	98	830			927	35,351	583
Sales and transfers of oil and gas, net of production cost	(23,394)	(60)	(564)			(624)	(24,018)	(261)
Development cost incurred	11,553	23	230			253	11,806	294
Net change due to purchases and sales of minerals in place								
Net change due to extensions, discoveries and improved recovery related costs	4,187	69				69	4,256	
Revisions of previous quantity estimates	8,264	37	443			480	8,744	51
Net change in prices, transfer prices and in production costs	50,326	3	735			738	51,064	494
Changes in estimated future development costs	(15,878)	(31)	(144)			(175)	(16,053)	(25)
Accretion of discount	3,442	14	76			90	3,532	58
Net change in income taxes	(9,237)	(18)	(2)			(20)	(9,257)	(92)
Other - unspecified		(9)	25			16	16	190
Balance at December 31, 2017	63,687	126	1,628			1,755	65,442	1,294
Balance at January 1, 2016	42,770	1,205	873			2,078	44,848	511
Sales and transfers of oil and gas, net of production cost	(18,425)	(351)	(432)			(783)	(19,208)	(208)
Development cost incurred	12,429	176	148			324	12,753	389
Net change due to purchases and sales of minerals in place		(1,094)				(1,094)	(1,094)	(54)
Net change due to extensions, discoveries and improved recovery related costs	1,234		484			484	1,718	67

Revisions of previous quantity estimates	1,197		223		223	1,420	242
Net change in prices, transfer prices and in production costs	(27,031)		(760)		(760)	(27,791)	(477)
Changes in estimated future development costs	9,175		231		231	9,406	(18)
Accretion of discount	4,277	162	82		244	4,521	52
Net change in income taxes	8,799		(1)		(1)	8,798	62
Other - unspecified		(1)	(19)		(19)	(19)	17
Balance at December 31, 2016	34,424	98	830		927	35,351	583

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Supplementary information on Oil and Gas Exploration and Production (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

Balance at January 1, 2015	173,707	1,082	3,306	4,388	178,095	1,292
Sales and transfers of oil and gas, net of production cost	(17,330)	(560)	(403)	(963)	(18,293)	(248)
Development cost incurred	15,536	451	397	848	16,384	431
Net change due to purchases and sales of minerals in place	(34)	(58)		(58)	(92)	
Net change due to extensions, discoveries and improved recovery related costs	6,522	324		324	6,846	487
Revisions of previous quantity estimates	(29,592)	2	(655)	(653)	(30,245)	134
Net change in prices, transfer prices and in production costs	(185,071)	150	(2,809)	(2,659)	(187,730)	(1,737)
Changes in estimated future development costs	(6,948)	(370)	538	168	(6,780)	(121)
Accretion of discount	17,371	157	314	471	17,842	130
Net change in income taxes	68,608	67	93	160	68,768	337
Other - unspecified		(40)	92	52	52	(193)
Balance at December 31, 2015	42,769	1,205	873	2,078	44,847	512

\* Includes the amount of US\$ 1,770 millions related to assets classified as held for sale in 2017. Bolivian proved reserves are not included due to restrictions determined by Bolivian Constitution.

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**Petróleo Brasileiro S.A. Petrobras**

Supplementary information General public concerned under Law 13.303/16 (unaudited)

*(Expressed in millions of US Dollars, unless otherwise indicated)*

**Additional information of general public concern Law 13.303/16 (unaudited)**

On June 30th, 2016 the Brazilian federal government enacted the Law 13.303 providing for new guidelines, rules and procedures applicable to the Company as it is a partially state-owned enterprise.

In compliance with the relevant rule, on June 29, 2017 the Company released the 2016 Annual Letter of Public Policies and Corporate Governance presenting the main information regarding commitments to the achievement of public policy objectives, which are summarized below:

**I Priority Thermoelectric Program (Programa Prioritário de Termelétricidade- PPT)**

On February 24, 2000, the Brazilian federal government enacted the Decree No. 3.371 governing the implementation of thermoelectric power plants in Brazil through the Priority Thermoelectric Program (PPT). The thermoelectric power plants in the scope of this program were entitled to supply natural gas for up to 20 years with a pre-established price indexed to the U.S. inflation. The gas supply for the program, in 2017, generated revenues of approximately US\$ 356 and costs of US\$ 725. As of December 31, 2017, the company had three plants in the scope of this program and one of which had its contract terminated in 2018.

**II National Program for Rationalization of the Use of Oil and Gas Products (Programa Nacional de Racionalização do Uso dos Derivados do Petróleo e do Gás Natural CONPET)**

On February 18, 1991, the Brazilian federal government established the National Program for Rationalization of the Use of Oil and Gas Products (CONPET), which was intended to develop an anti-waste culture in the use of non-renewable natural resources. The Company is also a member of the Brazilian Labeling Program (*Programa Brasileiro de Etiquetagem*) in partnership with the National Institute of Metrology, Quality and Technology (INMETRO), which goal is to stimulate the production and use of gas appliances and vehicles with lower carbon emission. In 2017, the costs associated with CONPET were immaterial.

**III Program for the Mobilization of National Oil and Natural Gas Industry (Programa de Mobilização da Indústria Nacional de Petróleo e Gás Natural PROMINP)**

On December 19, 2003, the Brazilian federal government enacted the Decree 4.945 aiming at promoting enhancing operations of the domestic industry of goods and services, in a competitive and sustainable manner with respect to oil and gas projects in Brazil and abroad. In 2017, this project was discontinued.