Repsol S.A. and Subsidiaries

Independent Auditor's Report on Consolidated Financial Statements for the year ended 31 December 2017 and Consolidated Management Report

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Translation of a report originally issued in Spanish based on our work performed in accordance with the audit regulations in force in Spain. In the event of a discrepancy, the Spanish-language version prevails.

INDEPENDENT AUDITOR'S REPORT ON CONSOLIDATED FINANCIAL STATEMENTS

To the Shareholders of REPSOL, S.A.,

Report on the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of REPSOL, S.A. (the Parent) and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2017, and the consolidated statement of profit or loss, consolidated statement of comprehensive income, consolidated statement of changes in total equity, consolidated statement of cash flows and notes to the consolidated financial statements for the year then ended.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated equity and consolidated financial position of the Group as at 31 December 2017, and its consolidated results and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRSs) and the other provisions of the regulatory financial reporting framework applicable to the Group in Spain.

Basis for Opinion

We conducted our audit in accordance with the audit regulations in force in Spain. Our responsibilities under those regulations are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report.

We are independent of the Group in accordance with the ethical requirements, including those pertaining to independence, that are relevant to our audit of the consolidated financial statements in Spain pursuant to the audit regulations in force. In this regard, we have not provided any services other than those relating to the audit of financial statements and there have not been any situations or circumstances that, in accordance with the aforementioned audit regulations, might have affected the requisite independence in such a way as to compromise our independence.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

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Key Audit Matters

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

Assessment of the recoverability of the cash-generating units (CGUs) in the Upstream segment and of the goodwill assigned thereto.

Description	Procedures applied in the audit
As described in Notes 10, 11 and 12 to the accompanying consolidated financial statements, at 31 December 2017 the net property, plant and equipment of the CGUs in the Upstream segment amounted to EUR 13,632 million, the joint ventures and associates of the Upstream segment amounted to EUR 5,714 million and the goodwill assigned thereto, which related mainly to the goodwill that arose on the acquisition of Talisman Energy, amounted to EUR 2,347 million. At least once a year, the Group tests each of the CGUs in this segment for impairment to assess the recoverability of the assets associated with those CGUs and of the goodwill corresponding to them, which depends on the economic situation of the Upstream businesses and on the future cash flows calculated by the Group, which require significant judgements and estimates to be made. The most significant judgements and estimates relate to future oil and gas prices, estimates of crude oil and gas reserves, discount rates and other assumptions concerning the business, such as capital expenditure or the costs associated with the extraction of oil and gas.	Our audit procedures included the review of the relevant controls established by management in relation to the asset recoverability assessment process. We also assessed the methodology and assumptions applied by the Group for the preparation of the future cash flows. We checked the estimates of the future oil and gas prices against the forward curves existing at year-end and the forecasts of analysts, investment banks and reference agencies, such as the International Energy Agency and the US Energy Information Administration. In order to review the discount rates calculated by the Company, we involved our internal valuation experts who reviewed the market information available and the calculation methodology used and carried out an independent verification. We also compared the assumptions concerning the business with the budgets of the Group's various business units, and with the actual data from previous years.

Assessment of the recoverability of the cash-generating units (CGUs) in the Upstream segment and of the goodwill assigned thereto.

Description	Procedures applied in the audit
Because significant judgements and estimates are involved and as a result of the volatility of the oil and gas prices, particularly in recent years, the situation described was considered to be a key matter in our audit.	For certain assets and liabilities associated with projects and businesses acquired in the Talisman Energy transaction, we compared the carrying amounts with the information contained in an independent valuer's report obtained by the Repsol Group (see Note 13). In relation to the verification of this independent valuer's report, we assessed the findings and conclusions of this specialist and its competence, capability and objectivity in order to determine the adequacy of its work for use as audit evidence. Also, in relation to the goodwill associated with the Upstream segment, we reviewed the calculations that support the recoverability of the goodwill by comparing the highest recoverable amount of the CGUs, reviewed in accordance with the aforementioned procedures, with the carrying amount of the related assets. We also obtained and assessed the sensitivity analysis prepared by Group management, in which we checked how management stressed those assumptions to which the impairment test is most sensitive, i.e. those with the greatest effect on the determination of the recoverable amount of the assets. Lastly, we reviewed the disclosures included by the Group in the accompanying consolidated financial statements in relation to these matters to assess whether they are adequate.

Estimate of oil and gas reserves.

Description

As described in Note 3 to the accompanying consolidated financial statements, the estimation of crude oil and gas reserves is an area in which significant judgement is required, which directly affects processes, such as the assessment of the recoverability of the Upstream segment's assets and the depreciation of investments in areas with reserves.

Technical uncertainties are involved in determining the level of reserves in each block, as well as sophisticated contractual agreements that determine the percentage of net reserves corresponding to the Group. The impact that these matters have on the assessment of the recoverability of these assets and on the depreciation of these investments is the reason why the situation described was considered to be a key matter in our audit.

Procedures applied in the audit

Our audit procedures included, among others, the obtainment of an adequate understanding of the oil and gas reserve estimation process and the review of the relevant controls established by management in connection with this process. We obtained and analysed the main changes in reserves in 2017 and we verified whether the increases and decreases in reserves had taken place in the correct period, and compared the reserves estimated by the Group with the information contained in the oil and gas reserve audit reports prepared by independent engineering firms (see Note 3).

In relation to the verification of these audit reports on reserves, prepared by companies specialised in the oil and gas industry with an extensive track record in the assessment of reservoirs, we assessed the findings and conclusions of these specialists and their competence, capability and objectivity for making the reserve estimates, and determined the adequacy of their work for use as audit evidence. We reviewed the consistency of the data provided by the Group to those companies and reviewed the reports issued by the latter, reconciling them to the reserves used by the Repsol Group for the purposes of the depreciation and recoverability of the various assets.

Assessment of the recoverability of assets in Venezuela.

Description

As described in Note 21.3 to the accompanying consolidated financial statements, at 31 December 2017 the exposure of the Repsol Group's net assets in Venezuela amounted to approximately EUR 1,480 million, which relates mainly to the financing provided in US dollars to its joint ventures (Cardón IV and Petroquiriquire) in that country and, to a lesser extent, the accounts receivable from Petróleos de Venezuela, S.A. (PDVSA).

The situation of high economic, political and regulatory instability in Venezuela, the declaration of a state of economic emergency in Venezuela, the regulated foreign exchange system, an economy with extremely high levels of inflation and an oil industry with a high level of public sector intervention and involvement, may affect both the valuation and the timing with which the Repsol Group will receive the estimated cash flows from the operation of its assets in Venezuela. These are the reasons why the situation described was considered to be a key matter in our audit.

Procedures applied in the audit

Our audit procedures included, among others, understanding the process followed by the Group in measuring the assets in Venezuela and, in particular, reviewing the relevant controls established by management in connection with this process.

We reviewed the recoverability of the CGUs specific to Venezuela in accordance with the procedures described in the first key audit matter. Also, we assessed the recoverability of the financing granted by the Group to the Venezuelan joint ventures and the accounts receivable from PDVSA by reviewing the hypotheses and assumptions used to test these financial assets for impairment and reviewing their consistency with the other assumptions used to analyse the Group's exposure in Venezuela. Furthermore, we performed substantive procedures aimed at verifying compliance with the contractual clauses and other analytical substantive procedures to review the performance of the businesses affected. We also obtained the report of the independent auditor of the component Cardón IV, which contains an unqualified opinion, and supervised its work and reviewed its conclusions, in accordance with NIA-ES 600.

In addition, we checked the assessment of the impairment losses due to credit risk in Venezuela calculated by the Repsol Group using the information contained in the independent expert's report obtained by the Group to support management's judgements (see Note 21.3). In relation to the verification of this independent expert's report, we assessed the findings and conclusions of this expert and its competence, capability and objectivity in

Assessment of the recoverability of assets in Venezuela.

Description	Procedures applied in the audit
	order to determine the adequacy of its work for use as audit evidence. Also, we reviewed the appropriate application of the functional currency defined by the Group and assessed the impact that the different foreign exchange regulations (inter alia, foreign exchange agreements, currency auctions, etc.) have on the transactions of the Group companies in Venezuela. Lastly, we reviewed the disclosures included by the Group in the accompanying consolidated financial statements (see Notes 7,12 and 21) in relation to these matters to assess whether they are adequate.

Recoverability of deferred tax assets and income tax estimate.

Description	Procedures applied in the audit
The consolidated balance sheet as at 31 December 2017 includes deferred tax assets amounting to EUR 4,057 million, of which EUR 3,809 million relate to tax loss and tax credit carryforwards. The Group's estimated income tax expense amounts to EUR 1,220 million. At the end of 2017 the directors made projections in order to assess the recoverability of the deferred tax assets, taking into account new legislative developments and the most recently approved business plans for the various assets and business units.	Our audit procedures included the review of the relevant controls established by management for the process followed by the Group for estimating income tax and for assessing the recoverability of the deferred tax assets. Also, we involved out internal tax experts who assisted us in assessing the reasonableness of the criteria followed by the directors in connection with the recoverability of the deferred tax assets and the income tax estimate, largely in connection with the degree to which the tax treatment of transactions is in accordance with the tax and contractual legislation applicable in each situation and jurisdiction.

Recoverability of deferred tax assets and income tax estimate.

Description

In addition, as a result of the various jurisdictions in which the Group operates, mainly in the Upstream segment, the directors estimate the income tax expense for the year taking into account, where applicable, the existing contractual arrangements for operating in the various blocks and the applicable oil and gas tax legislation.

We identified this matter as key in our audit due to the high level of judgement required for the preparation of these projections, largely in connection with the business plan estimates, the high number of jurisdictions in which the Group operates and the complexity of both the applicable oil and gas tax legislation and the existing contractual agreements.

Procedures applied in the audit

In relation to the recoverability of the deferred tax assets, we obtained and analysed the future projections estimated by management, assessing the key assumptions used, including the analysis of the consistency of the actual results obtained by the various businesses with those projected in the previous year, the obtainment of evidence of the approval of the budgeted results included in the current year's projections, and the reasonableness of the future cash flow projections and the consistency of those projections with those used in other areas of estimation such as those used for assessing the recoverability of assets.

Regarding the appropriateness of the tax treatment applicable in each case and jurisdiction, we reviewed the estimate of the income tax and of the deferred taxes recognised in the year, analysing the differences between amounts recognised for accounting purposes and those treated as taxable or deductible for tax purposes, assessing their classification as temporary or permanent, and the tax rate applicable to each component based on the existing contractual agreements and the oil and gas tax legislation applicable to each component.

Lastly, we reviewed the disclosures included by the Group in the accompanying consolidated financial statements (see Note 23) in relation to these matters to assess whether they are adequate.

Other Information: Consolidated Directors' Report

The other information comprises only the consolidated directors' report for 2017, the preparation of which is the responsibility of the Parent's directors and which does not form part of the consolidated financial statements.

Our audit opinion on the consolidated financial statements does not cover the consolidated directors' report. Our responsibility relating to the consolidated directors' report is defined in the audit regulations in force, which establish two distinct levels:

a) A specific level that applies to the consolidated non-financial information statement, as well as to certain information included in the Annual Corporate Governance Report, as defined in Article 35.2.b) of Spanish Audit Law 22/2015, which consists solely of checking that the aforementioned information has been provided in the consolidated directors' report and, if this is not the case, reporting this fact.

b) A general level applicable to the other information included in the consolidated directors' report, which consists of evaluating and reporting on whether the aforementioned information is consistent with the consolidated financial statements, based on the knowledge of the Group obtained in the audit of those consolidated financial statements and excluding any information other than that obtained as evidence during the audit, as well as evaluating and reporting on whether the content and presentation of this part of the consolidated directors' report are in conformity with the applicable regulations. If, based on the work we have performed, we conclude that there are material misstatements, we are required to report that fact.

Based on the work performed, as described in the preceding paragraphs, we have checked that the information described in section a) above has been provided in the consolidated directors' report and that the other information in the consolidated directors' report is consistent with that contained in the consolidated financial statements for 2017 and its content and presentation are in conformity with the applicable regulations.

Responsibilities of the Directors and Audit and Control Committee of the Parent for the Consolidated Financial Statements

The Parent's directors are responsible for preparing the accompanying consolidated financial statements so that they present fairly the Group's consolidated equity, consolidated financial position and consolidated results in accordance with EU-IFRSs and the other provisions of the regulatory financial reporting framework applicable to the Group in Spain, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

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

The Parent's audit and control committee is responsible for overseeing the process involved in the preparation and presentation of the consolidated financial statements.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the audit regulations in force in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

A further description of our responsibilities for the audit of the consolidated financial statements is included in Appendix 1 to this auditor's report. This description, which is on pages 11 and 12, forms part of our auditor's report.

Report on Other Legal and Regulatory Requirements

Additional Report to the Parent's Audit and Control Committee

The opinion expressed in this report is consistent with the content of our additional report to the Parent's audit and control committee dated 27 February 2018.

Engagement Period

The Annual General Meeting held on 19 May 2017 appointed us as auditors of the Group for a period of one year, for the year ended 31 December 2017.

Previously, we were designated pursuant to a resolution of the General Meeting for the period of one year and have been auditing the consolidated financial statements uninterruptedly since the year ended 31 December 1990.

DELOITTE, S.L.
Registered in ROAC under no. S0692

Javier Ares San Miguel
Registered in ROAC under no. 06176

27 February 2018

Appendix 1 to our auditor's report

Further to the information contained in our auditor's report, in this Appendix we include our responsibilities in relation to the audit of the consolidated financial statements.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

As part of an audit in accordance with the audit regulations in force in Spain, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

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

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

We also provide the Parent's audit and control committee with a statement that we have complied with relevant ethical requirements, including those regarding independence, and we have communicated with it to report on all matters that may reasonably be thought to jeopardise our independence, and where applicable, on the related safeguards.

From the matters communicated with the Parent's audit and control committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

REPSOL Group

2017 Consolidated financial statements

Translation of a report originally issued in Spanish. In the event of a discrepancy, the Spanish language version prevails

REPSOL

REPSOL

Repsol, S.A. and investees comprising the Repsol Group
Balance sheet at December 31, 2017 and 2016

ASSETS	Note	€ Million 12/31/2017	12/31/2016
Intangible assets:	10	4,584	5,109
a) Goodwill		2,764	3,115
b) Other intangible assets		1,820	1,994
Property, plant and equipment	11	24,600	27,297
Investment property		67	66
Investments accounted for using the equity method	12	9,268	10,176
Non-current financial assets	7	2,038	1,204
Deferred tax assets	23	4,057	4,746
Other non-current assets	7	472	323
NON-CURRENT ASSETS		**45,086**	**48,921**
Non-current assets held for sale		22	144
Inventories	17	3,797	3,605
Trade and other receivables:	18	5,912	5,885
a) Trade receivables		3,979	3,111
b) Other receivables		1,242	1,785
c) Current income tax assets		691	989
Other current assets		182	327
Other current financial assets	7	257	1,280
Cash and cash equivalents	7	4,601	4,687
CURRENT ASSETS		**14,771**	**15,928**
TOTAL ASSETS		**59,857**	**64,849**

LIABILITIES AND EQUITY	Note	€ Million 12/31/2017	12/31/2016
Capital		1,556	1,496
Share premium and reserves		25,541	24,232
Treasury shares and own equity investments		(45)	(1)
Net income for the year attributable to the parent		2,121	1,736
Other equity instruments		1,024	1,024
SHAREHOLDERS' EQUITY	6	30,197	28,487
Available-for-sale financial assets		0	6
Hedging instruments		(163)	(171)
Translation differences		(241)	2,545
OTHER ACCUMULATED COMPREHENSIVE INCOME	6	(404)	2,380
NON-CONTROLLING INTERESTS	6	270	244
EQUITY		**30,063**	**31,111**
Grants		4	4
Non-current provisions	13	4,829	6,127
Non-current financial debt	7	10,080	9,482
Deferred tax liabilities	23	1,051	1,379
Other non-current liabilities	14	1,795	2,009
NON-CURRENT LIABILITIES		**17,759**	**19,001**
Liabilities related to non-current assets held for sale		1	146
Current provisions	13	518	872
Current financial liabilities	7	4,206	6,909
Trade and other payables	19	7,310	6,810
a) Trade payables		2,738	2,128
b) Other payables		4,280	4,365
c) Current income tax liabilities		292	317
CURRENT LIABILITIES		**12,035**	**14,737**
TOTAL EQUITY AND LIABILITIES		**59,857**	**64,849**

Notes 1 to 32 are an integral part of the consolidated balance sheet.

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REPSOL

Repsol, S.A. and investees comprising the Repsol Group
Consolidated income statement for the years ending December 31, 2017 and 2016

	Note	€ Million 2017	€ Million 2016
Sales		41,242	34,556
Services rendered and other income		426	133
Changes in inventories of finished goods and work in progress inventories		206	129
Income from reversal of impairment losses and gains on disposal of non-current assets		864	1,625
Other operating income		710	990
OPERATING REVENUE	20	43,448	37,433
Supplies		(30,251)	(23,615)
Personnel expenses		(1,892)	(2,501)
Other operating expenses		(5,195)	(5,930)
Depreciation and amortization of non-current assets		(2,399)	(2,529)
Impairment losses recognized and losses on disposal of non-current assets		(922)	(947)
OPERATING EXPENSES	20	(40,659)	(35,522)
OPERATING INCOME		**2,789**	**1,911**
Finance income		194	176
Finance expenses		(677)	(741)
Change in fair value of financial instruments		34	189
Net exchange gains/(losses)		151	94
Impairment and gains (losses) on disposal of financial instruments		(14)	48
FINANCIAL RESULT	22	(312)	(234)
SHARE OF RESULTS OF COMPANIES ACCOUNTED FOR USING THE EQUITY METHOD AFTER TAXES	12	904	194
NET INCOME BEFORE TAX		**3,381**	**1,871**
Income tax	23	(1,220)	(391)
NET INCOME FROM CONTINUING OPERATIONS		**2,161**	**1,480**
NET INCOME ATTRIBUTED TO NON-CONTROLLING INTERESTS FROM CONTINUING OPERATIONS		(40)	(43)
NET INCOME ATTRIBUTED TO THE PARENT FROM CONTINUING OPERATIONS		**2,121**	**1,437**
NET INCOME ATTRIBUTED TO THE PARENT FROM DISCONTINUED OPERATIONS		-	299
TOTAL NET INCOME ATTRIBUTED TO THE PARENT		**2,121**	**1,736**

EARNINGS PER SHARE ATTRIBUTED TO THE PARENT		**Euros/share**	
Basic	24	1.35	1.11
Diluted	24	1.35	1.11

Notes 1 to 32 are an integral part of the consolidated income statement.

Repsol, S.A. and investees comprising the Repsol Group
Statement of recognized profit or loss corresponding to the years ending December 31, 2017 and 2016

	€ Million 2017	2016
CONSOLIDATED NET INCOME FOR THE YEAR [1]	**2,161**	**1,779**
From actuarial gains and losses	1	(5)
Share of investment in joint arrangements and associates	1	(6)
Tax effect	-	-
OTHER COMPREHENSIVE INCOME (Items not reclassifiable to income)	**2**	**(11)**
Financial assets available for sale:	**6**	**1**
Measurement gains (losses)	6	1
Amounts transfered to the income statement	-	-
Cash flow hedges	**22**	**18**
Measurement gains (losses)	(5)	(16)
Amounts transferred to the income statement	27	34
Translation differences	**(2,660)**	**505**
Measurement gains (losses)	(2,622)	560
Amounts transferred to the income statement	(38)	(55)
Share of investment in joint arrangements and associates:	**(132)**	**152**
Measurement gains (losses)	(175)	99
Amounts transfered to the income statement	43	53
Tax effect	**(30)**	**15**
OTHER COMPREHENSIVE INCOME (Items reclassifiable to income)	**(2,794)**	**691**
TOTAL OTHER COMPREHENSIVE INCOME	**(2,792)**	**680**
TOTAL RECOGNIZED INCOME FOR THE YEAR	**(631)**	**2,459**
a) Attributable to the parent	(662)	2,413
b) Attributable to minority interests	31	46

[1] Constituting the sum of the following consolidated income statement captions: "*Net income from continuing operations*" and "*Net income attributable to the parent from discontinued operations*"

Notes 1 to 32 are an integral part of the consolidated statement of recognized income and expense.

Repsol S.A. and Investees comprising the Repsol Group
Statement of changes in equity corresponding to the years ending December 31, 2017 and 2016

	Total equity attributable to the parent and other holders of equity instruments							
	Capital and reserves							
€ Million	Capital	Share premium and reserves	Treasury shares and own equity investments	Net income for the year attributable to the parent	Other equity instruments	Accumulated other comprehensive income	Non-controlling interests	**Equity**
Closing balance at 12/31/2015	**1,442**	**26,030**	**(248)**	**(1,398)**	**1,017**	**1,691**	**228**	**28,762**
Total recognized income/(expense)	-	(11)	-	1,736		688	46	2,459
Transactions with shareholders or owners								
Increase/(decrease) of share capital	54	(54)	-	-	-	-	-	-
Dividend payments	-	-	-	-	-	-	(9)	(9)
Transactions with treasury shares or own equity instruments (net)	-	(61)	247	-	-	-	-	186
Increases/(decreases) due to changes in the scope of consolidation	-	-	-	-	-	-	(21)	(21)
Other transactions with partners and owners	-	(243)	-	-	-	-	-	(243)
Other changes in equity								
Transfers between equity items	-	(1,398)	-	1,398	-	-	-	-
Issues of perpetual subordinated bonds	-	(29)	-	-	7			(22)
Other changes	-	(2)	-	-	-	1	-	(1)
Closing balance at 12/31/2016	**1,496**	**24,232**	**(1)**	**1,736**	**1,024**	**2,380**	**244**	**31,111**
Total recognized income/(expense)	**-**	**2**	**-**	**2,121**	**-**	**(2,785)**	**31**	**(631)**
Transactions with shareholders or owners	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Increase/(decrease) of share capital	60	(60)	-	-	-	-	-	-
Dividend payments	-	-	-	-	-	-	(5)	(5)
Transactions with treasury shares or own equity instruments (net)	-	-	(44)	-	-	-	-	(44)
Increases/(decreases) due to changes in the scope of consolidation	-	-	-	-	-	-	-	-
Other transactions with partners and owners	-	(342)	-	-	-	-	-	(342)
Other changes in equity	-	-	-	-	-	-	-	-
Transfers between equity accounts	-	1,736	-	(1,736)	-	-	-	-
Issues of perpetual subordinated bonds	-	(29)	-	-	-	-	-	(29)
Other changes	-	2	-	-	-	1	-	3
Closing balance at 12/31/2017	**1,556**	**25,541**	**(45)**	**2,121**	**1,024**	**(404)**	**270**	**30,063**

Notes 1 to 32 are an integral part of the consolidated statement of changes in equity.

Repsol, S.A. and investees comprising the Repsol Group
Statement of cash flows corresponding to the years ending December 31, 2017 and 2016

	Note	Million euros 2017	2016
Net income before tax		**3,381**	**1,871**
Adjustments to net income:		**1,872**	**2,547**
Depreciation and amortization of non-current assets	10 and 11	2,399	2,529
Other adjustments to income (net)		(527)	18
Changes in working capital		**(110)**	**(517)**
Other cash flows from/(used in) operating activities:		**(30)**	**(11)**
Dividends received	12	511	920
Income tax payments/(receipts)		(320)	(264)
Other payments/(receipts) on operating activities		(221)	(667)
CASH FLOW FROM OPERATING ACTIVITIES	25	**5,113**	**3,890**
Payments for investing activities:	1.4, 10 and 11	**(3,094)**	**(3,649)**
Group companies and associates		(327)	(842)
Property, plant and equipment, intangible assets and investment property		(2,300)	(2,003)
Other financial assets		(467)	(804)
Proceeds from divestments:	1.4	**254**	**4,056**
Group companies and associates		16	3,090
Property, plant and equipment, intangible assets and investment property		78	813
Other financial assets		160	153
Other cash flows		**51**	**(16)**
CASH FLOW FROM INVESTING ACTIVITIES	25	**(2,789)**	**391**
Proceeds from/(payments for) equity instruments:	6	**(293)**	**(92)**
Issues		-	23
Depreciation		-	(23)
Acquisition		(304)	(103)
Disposal		11	11
Receipts/(payments) on financial liabilities	7	**(1,163)**	**(910)**
Issues		10,285	12,712
Return and redemption		(11,448)	(13,622)
Shareholder remuneration payments and other equity instruments	6	**(332)**	**(420)**
Other cash flows from financing activities:		**(573)**	**(631)**
Interest payments		(537)	(591)
Other proceeds from/(payments for) financing activities		(36)	(40)
CASH FLOWS FROM FINANCING ACTIVITIES	25	**(2,361)**	**(2,053)**
EFFECT OF CHANGES IN EXCHANGE RATES		**(49)**	**11**
NET INCREASE / (DECREASE) IN CASH AND CASH EQUIVALENTS		**(86)**	**2,239**
CASH AND EQUIVALENTS AT THE BEGINNING OF THE YEAR		**4,687**	**2,448**
CASH AND EQUIVALENTS AT THE END OF THE YEAR	7	**4,601**	**4,687**
Cash at banks and in hand		3,753	3,207
Other financial assets		848	1,480

Notes 1 to 32 are an integral part of the consolidated cash flow statement.

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(1) GENERAL INFORMATION

1.1) About the Repsol Group

Repsol constitutes an integrated group of oil and gas (hereinafter *"Repsol"*, "*Repsol Group*" or "*Group*").

The Repsol Group is engaged in all the activities relating to the oil and gas industry, including exploration, development and production of crude oil and natural gas, transportation of oil products, liquefied petroleum gas (LPG) and natural gas, refining, the production of a wide range of oil products and the marketing of oil products, oil derivatives, petrochemicals products, LPG, natural gas and liquefied natural gas (LNG).

1.2) About the parent company

The corporate name of the parent company of the Repsol Group that prepares and files these Financial Statements is Repsol, S.A. It is registered at the Madrid Commercial Registry in sheet no. M-65289; its tax ID number (C.I.F.) is A-78/374725 and its C.N.A.E. no. is 70.10.

Its registered office is in Madrid, 44 calle Méndez Álvaro, where the Shareholder Information Office is also located, the telephone number of which is 900 100 100.

Repsol S.A. is a private-law entity incorporated in accordance with Spanish legislation, which is subject to the Companies Act (Ley de Sociedades de Capital) approved by Legislative Royal Decree 1/2010 of July 2nd, and all other legislation related to listed companies.

The shares of Repsol, S.A. are represented by book entries and listed on the continuous market of the Spanish stock exchanges (Madrid, Barcelona, Bilbao and Valencia) and of Buenos Aires (Bolsa de Comercio de Buenos Aires). On March 9, 2011, the ADS (American Depositary Shares) Program began to trade on the OTCQX market, a platform within the OTC market (*over-the-counter*) in the United States which distinguishes issuers with improved market information and solid business activities.

1.3) About the consolidated Financial Statements and supplementary information

The accompanying Consolidated Financial Statements of Repsol, S.A. and its investees, comprising the Repsol Group, present fairly the Group's equity and financial position at December 31, 2017, as well as the Group's consolidated earnings performance, the changes in the consolidated equity and the consolidated cash flows for the year then ended.

These consolidated financial statements were approved by the Board of Directors of Repsol S.A.[1] at a meeting held on February 27, 2018 and, as well as the financial statements of the investees, will be submitted for approval by their respective Annual General Meetings, with no modifications expected[2].

The Group's Management Report is published jointly with the consolidated financial statements. In addition, Repsol has published "*Information on Oil and Gas Exploration and Production Activities*" and the "*Report on Payments to Governments on Oil and Gas Exploration and Production Activities*" as supplementary, information not reviewed by the external auditor.

All these reports are available at www.repsol.com.

[1] The preparation of the consolidated financial statements, which is the responsibility of the Board of Directors of the Group's parent company, makes it necessary to use accounting estimates and judgments when applying the accounting standards. The areas in which most significant judgments and estimates have to be made are detailed in Note 3.

[2] The 2016 Consolidated Financial Statements were approved at Repsol's Annual Shareholders' Meeting held on May 19, 2017.

1.4) Composition of the Group and main changes in consolidation scope

The Repsol Group contains more than 300 companies incorporated in more than 40 countries (mainly in Spain, Netherlands, Canada and the United States) that, from time to time, carry out activities abroad through branches, permanent establishments and so on.

The Repsol Group comprises subsidiaries, joint arrangements and associates. Appendices I and II detail the main companies, subsidiaries, joint arrangements and associates that form part of the Repsol Group included in the scope of consolidation.

In the Oil&Gas industry, exploration and production activities are usually carried out through partnerships or associations between companies they classify as joint arrangements, which are implemented through joint operation agreements that are included in partners' financial statements in accordance with the share of the assets, liabilities, income and expenses arising from the agreement, or as joint ventures that are included in partners' financial statements using the equity method.

There were no significant changes in the Group's scope of consolidation in 2017. For further information on changes in the Group's composition, see Appendix Ib "Main changes in the consolidation scope".

In 2016, in contrast, significant changes were made in the Group's composition as a result of a number of divestments[1] (sale of 10% in Gas Natural SDG, sale of LPG piped gas facilities in Spain, sale of LPG business in Peru and in Ecuador, sale of wind business in the United Kingdom, sale of Repsol E&P T&T Limited, sale of stake in Tangguh LNG in West Papua, Indonesia. In addition, 2016 saw the end of the business combination begun on May 8, 2015 by which Repsol acquired 100% of the shares of Talisman Energy, Inc. (hereinafter "ROGCI").

[1] For further information, see the 2016 consolidated financial statements.

(2) BASIS OF PRESENTATION

The accompanying consolidated financial statements are presented in millions of euros and were prepared based on the accounting records of Repsol, S.A. and its investees. They are presented in accordance with the International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB) as well as the IFRS endorsed by the European Union (EU) as of December 31, 2017[1] and other provisions of the regulatory framework[2]. The changes in accounting standards that have been applied by the Group as of January 1, 2017 have not had an impact in in the financial statements[3] except for certain additional disclosures (see Note 25.3)

Repsol's consolidated financial statements include investments in all their subsidiaries, associates and joint arrangements[4].

The accounting policies used by the Group's subsidiaries, joint arrangements and associates have been adjusted so that they are consistent with those applied by the parent and so that the consolidated financial statements are presented using uniform accounting policies for like transactions.

The Consolidated Financial Statements are presented in millions of euros, which is the functional currency of the parent company and presentation currency of consolidated financial statements. The items included in these consolidated financial statements relating to the Group companies are measured using their functional currency, which is the currency in the main economic environment in which they operate; when this differs from the presentation currency, the conversation is carried out as stated below: i) the assets and liabilities in each of the balance sheets presented are translated applying the closing exchange rate on the balance sheet date, ii) income and expense are translated applying the average exchange rate for the period in which the transactions were performed (however, the transaction-date exchange rate is used to translate significant transactions or when exchange rates have fluctuated significantly during the reporting period), and iii) any exchange gains/(losses) arising as a result of the foregoing are recognized as "Translation differences" under the equity heading.

Transactions in currencies other than the functional currency of an entity are deemed to be 'foreign currency transactions' and are translated to the functional currency by applying the exchange rates prevailing at the date of the transaction. At each year end, the foreign currency monetary items on the balance sheet are measured applying the exchange rate prevailing at that date and the exchange rate differences arising from such measurement are recorded as "Net exchange gains/(losses)" under Financial result.

The exchange rates against the euro of the main currencies used by the Group companies at December 31, 2017 and 2016 were as follows:

	12/31/2017		12/31/2016	
	Closing rate	Average accumulated rate	Closing rate	Average accumulated rate
US dollar	1.20	1.13	1.05	1.11
Brazilian real	3.97	3.61	3.43	3.86

[1] The IFRSs adopted and in effect in the EU differ in some respects from the IFRSs issued by the IASB; however these differences do not have a material impact on the Group's consolidated financial statements in the years presented.

[2] The policies considered significant based on the nature of the Group's activities are described at the end of this Note and other significant policies and those considered an accounting policy option are shown in the corresponding Notes.

[3] The following standards are applicable from January 1, 2017: i) Amendments to IAS 12 *Recognition of deferred tax assets for unrealised losses*; ii) Amendments to IAS 7 *Disclosure initiative; and iii) Annual improvements, 2014-2016 Cycle (including Amendments to IFRS 12 Disclosure of Interests in Other Entities*).

[4] According to the control exercised over them, Group companies are classified as follows: i) subsidiaries: companies over which Repsol directly or indirectly exercises control and which are fully consolidated, ii) joint arrangements: companies in which strategic operating and financial decisions require the unanimous consent of the parties sharing control (joint control and are classified as i) joint operations organized through joint operating agreements (JOAs), or a similar vehicle and whose stakeholdings are held by the Group through the interest in subsidiaries that are fully consolidated, or ii) joint ventures are recognized using the equity method; and iii) associates: stakeholdings over whichthere is significant influence, where Repsol's consent is not required in strategic operational and financial decision-making, but over which it has power to intervene and that are accounted for using the equity method.

2.1) Comparative information

Earnings per share at December 31, 2016 have been restated with respect to that recognized in the 2016 consolidated financial statements in accordance with accounting standards, as the average number of outstanding sharesconsidered in the calculation should be based on the new number of shares issued after the capital increase carried out as part of the compensation scheme to shareholders known as "*Repsol Flexible Dividend*" described in Note 6.

2.2) New standards issued for mandatory application in future years

The standards and amendments to standards issued by the IASB that will be mandatory in future reporting periods are listed below:

Standards and amendments to standards	Date of 1st application
Adopted by the European Union	
IFRS 9 *Financial instruments*	January 1, 2018
IFRS 15 *Revenue from contracts with customers*	January 1, 2018
Clarifications to IFRS 15 *Revenue from contracts with customers*	January 1, 2018
Amendments to IFRS 4 Application of IFRS 9 *Financial Instruments* in conjunction with IFRS 4 *Insurance contracts* (1)	January 1, 2018
Annual Improvements to IFRSs, *2014-2016 Cycle* (1), (3)	January 1, 2018
IFRS 16 *Leases*	January 1, 2019
Pending Adoption by the European Union[2]	
Amendments to IFRS 2 *Classification and measurement of share-based payment transactions*	January 1, 2018
Amendments to IAS 40 *Transfers of investment property*	January 1, 2018
Interpretation IFRIC 22 *Foreign currency transactions and advance consideration*	January 1, 2018
Interpretation IFRIC 23 *Uncertainty over income tax treatment*	January 1, 2019
Amendments to IFRS 9 *Prepayment features with negative compensation*	January 1, 2019
Amendments to IAS 28 *Long-term interests in associates and joint ventures*	January 1, 2019
Annual Improvements to IFRSs, 2015-2017 Cycle (4)	January 1, 2019
Amendments to IAS 19 *Employee benefits: plan amendment, curtailment or settlement*	January 1, 2019
IFRS 17 *Insurance contracts*	January 1, 2021
Amendments to IFRS 10 and IAS 28 *Sale or contribution of assets between an investor and its associate or joint venture* (5)	Undefined

[1] No significant impacts have been identified resulting from its application.
[2] With regard to these standards and amendments, the Group is currently assessing the impact their application may have on the consdidated financial statements, without any significant impacts having been identified to date.
[3] Includes Amendments to IFRS 1 *First-time adoption of IFRS* and Amendments to IAS 28 *Investments in associates and joint ventures* applicable from January 1, 2018.
[4] Includes Amendments to IAS 12 *Income tax*, to IAS 23 *Borrowing costs* and IFRS 3 *Business combinations* and IFRS 11 *Joint arrangements*.
[5] The application of these amendments to IFRS 10 and IAS 28, which were originally issued in September 2014, was deferred indefnitely in December 2015, until such time as the IASB completes the project relating to the equity method, which, in turn, has been delayed until the post-implementation phase of IFRS 10, IFRS 11 and IFRS 12.

IFRS 9 *Financial instruments*

IFRS 9 will replace IAS 39 from the tax year starting January 1, 2018. It contains significant differences with the current financial instrument recognition and measurement standard. The Group will apply IFRS 9 without restating comparative information, meaning that the impact of its initial application on financial assets and liabilities will be recognized in reserves on January 1, 2018.

Based on an analysis of the Group's financial assets and liabilities at December 31, 2017, employing the facts and circumstances at the time, the estimated impact of the initial application of IFRS 9 is as follows:

a) Classification and measurement of financial assets[1]:

IFRS 9 establishes new categories for the measurement of financial assets.

The Group does not believe there will be a significant change or impact on its balance sheet as a result of the new classification and measurement criteria.

b) Impairment of financial assets:

IFRS 9 requires the application of an expected loss model, whereas IAS 39 required the use of a model structured around losses incurred. Under this model, the institution will recognize expected loss and changes thereto at each reporting date to reflect the changes to credit risk from the date of initial recognition. In other words, it is no longer necessary for impairment to occur before recognizing credit loss.

Financial assets measured at amortized cost, customer receivables and financial guarantee contracts are subject to the provisions of IFRS 9 in terms of impairment loss. The Group assumes the simplified approach to recognize credit loss expected during the lifetime of its trade receivables accounts. The Group has its own risk measurement models that it applies to its customers and expected loss estimation models based on the likelihood of default, the exposed balance and its estimated severity, considering the information available on each customer (sector of activity, payment performance, financial information, etc.).

Repsol is finalizing its complete expected loss model under IFRS 9. The estimated impact of the adoption of IFRS 9 on January 1, 2018 comes to €-350 million, approximately, on "Equity", fundamentally on account of assets linked to Venezuela[2]. The risk of a worsening of the exceptional situation in Venezuela, in accordance with the methodology laid down by IFRS 9, has led to the use of different severity scenarios to quantify potential losses in addition to those recognized at year-end 2017 (see Note 21).

c) Hedge accounting:

IFRS 9 has provided more flexibility in terms of types of activity to which hedge accounting can be applied, specifically by expanding the types of instruments that satisfy the criteria to be considered as hedge instruments and in terms of the types of risk components in non-financial items that are eligible for hedge accounting. Furthermore, the efficiency test has been overhauled and replaced by the principle of "economic connection". The retroactive assessment of the efficiency of the hedge is no longer necessary.

Given that the new hedge accounting requirements will be closer to the Group's risk management policies, after the assessment undertaken of existing hedges (see Note 8), they meet the continuity requirements for hedges under IFRS 9. In addition, the Group will continue to include the forward element of exchange rate forward contracts in its hedging relationships.

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[1] Investments in debt held within a business model whose objective is to obtain contractual cash flows consisting exclusively of the principal and interest are generally measured at amortized cost. When these debt instruments are held within a business model whose objective is achieved by obtaining contractual cash flows of the principal and interest and the sale of financial assets, generally speaking, they are measured at fair value with changes through profit or loss with changes to other comprehensive income. All other investments in debt and equity will be measured at fair value with changes through profit or loss. However, it is possible to irreversibly decide to include subsequent changes in the fair value of certain equity instruments in "Other comprehensive income" and, in general, in this case only dividends will be recognized afterwards in income.

[2] To quantify this impact, the criteria set out in "Amendments to IAS 28 *Long-term interests in associates and joint ventures*" on the net investment in Cardón IV have been taken into consideration.

IFRS 15 *Revenue from contracts with customers*

IFRS 15 is a comprehensive standard on the recognition of customer income that will replace several standards currently in force[1]. The new requirements may give rise to changes in the Group's current income profile, as they must be recognized in such a way that the transfer of goods or services promised to customers is shown for a sum that reflects the consideration to which the Group expects to be entitled in exchange for said goods or services. The Group has revised the type of customer contracts (mainly for the sale of crude oil, gas, naphtha, oil products, chemicals and petrochemicals) and has not identified any significant impact on its financial statements in terms of: (i) the identification of "*performance obligations*" (obligations to transfer goods or services in contracts with customers) other than those already identified that might lead to their separation for the purposes of income recognition and measurement; (ii) accrual for accounting purposes or temporary attribution of income. The Group will apply the initial application option provided for in IFRS 15 and will not restate comparative financial statements.

IFRS 16 *Leases*

To date, the impact estimated by the Group of applying IFRS 16 Leases are associated with the leases under which the Group is a lessee and which in accordance with IAS 17 *Leases*, currently in effect, are classified as operating leases (see Note 20) and following the application of IFRS 16, will be recognized on the balance sheet on a basis resembling the one now applicable to finance leases. As a result, all leases would increase the Group's recognized assets and liabilities. Additionally, it would change the basis of recognition of lease expenses, to the extent that it would be recorded as an expense for amortization of the leased asset and as an interest expense by discounting the lease liability to present value. The Group continues to evaluate the impacts resulting from its application. The Group has no intention of applying this standard in advance and, at this date, different options for initial application are being evaluated.

[1] IAS 18 *Revenue*, IAS 11 *Construction Contracts*, IFRIC 13 *Customer Loyalty Programmes*, IFRIC 15 *Agreements for the Construction of Real Estate*, IFRIC 18 *Transfers of Assets from Customers* and SIC 31 *Barter Transactions Involving Advertising Services.*

ACTIVITY-SPECIFIC ACCOUNTING POLICIES

Recognition of hydrocarbon exploration and production transactions:

Repsol recognizes oil and gas exploration and production operations using accounting policies mostly based on the "*successful efforts*" method. Under this method, the various costs incurred are treated as follows for accounting purposes:

i. The costs of acquiring rights to explore and the costs incurred in conducting geological and geophysical (G&G) studies during the exploration phase are capitalized under the "*Exploration rights*" item of intangible assets. During the exploration and evaluation phase they are not amortized, although they are tested for impairment at least once a year and whenever indications of impairment are detected, in accordance with the guidelines set forth in IFRS 6. Once the exploration and evaluation phase is completed, if no reserves are found, the amounts previously capitalized are recognized as an expense in the consolidated income statement.

ii. The costs of acquiring new interests in areas with proved and unproved reserves (including bonds, resource-related costs, legal costs, etc.) are capitalized as incurred under the *"Investments in areas with reserves"* item of property, plant and equipment.

iii. Exploratory drilling costs, including those relating to stratigraphic exploration wells, are recognized as assets under the *"Other exploration costs"* item until it is determined whether reserves justifying their commercial development have been found. If no reserves are found, the capitalized drilling costs are registered in the statement of profit or loss. In the event that reserves are found but remain under evaluation for classification as proven, their recognition depends on the following:

- If additional investments are required prior to the start of production, they continue to be capitalized whilst the following conditions are met: (i) the amount of proved reserves found justifies the completion of a productive well if the required investment is carried out; and (ii) satisfactory progress has been made in the evaluation of reserves and the operational viability of the project. If any of these conditions fails to be satisfied, they treated as impaired, and are expensed in the statement of profit or loss.

- - In all other cases, if there is no commitment to carry out significant activities to evaluate reserves or develop the project within a reasonable period after well drilling has been completed, or if activities have been halted, they must be recorded as an expense in the statement of profit or loss.

- Costs incurred in exploratory drilling work that has yielded a commercially exploitable reserve finding are reclassified to *"Investments in areas with reserves"* under property, plant and equipment at their carrying amount.

iv. Exploration costs other than G&G costs ("*Exploration rights and geology and geophysical costs*"), excluding the costs of drilling exploration wells and exploration licenses, are recognized as an expense in the statement of profit or loss when incurred.

v. Development expenditure incurred in lifting proven reserves and in processing and storing oil and gas (including costs incurred in drilling relating to productive wells and dry wells under development, oil rigs, recovery improvement systems, etc.) are recognized as assets under the *"Investments in areas with reserves"* item of property, plant and equipment.

vi. Future field abandonment and dismantling costs (environmental, safety, etc.) are estimated, on a field-by-field basis, and are capitalized at their present value when they are initially recognized under *"Investments in areas with reserves"* against the dismantling provision item (see Note 13).

The investments capitalized as described above are depreciated as follows:

i. Investments in the acquisition of proven reserves and common facilities are depreciated over the estimated commercial life of the field on the basis of the production for the period as a proportion of the proven reserves of the field field at the beginning of the depreciation period.

ii. The costs incurred in surveys for the development and extraction of hydrocarbon reserves are amortized over the estimated commercial life of the field on the basis of the relationship between the production of the period and proved developed reserves of the field at the beginning of period amortization.

iii. Investments relating to non-proven reserves or fields under evaluation are not depreciated. These investments are tested for impairment at least once a year and whenever indications of impairment are detected.

The changes in estimated reserves are considered on a prospective basis in calculating depreciation.

Service/Gas station association rights and other rights:

Primarily corresponds the costs of agreements linked to gas station association rights, reflagging rights and image rights of publicity and exclusive supply to gas stations recognized under intangible assets. They are amortized on a straight-line basis over the period of the contract (between 25 and 30 years for the former and 1 year, which may be extended to a maximum of 3 years at the request of the counterparty for the others).

Carbon emission allowances:

Emission allowances are recognized as an intangible asset and are initially recognized at acquisition cost. Those received free of charge under the emissions trading system for the period 2013-2020, are initially recognized at the market price prevailing at the beginning of the year in which they are issued, against deferred income as a grant. As the corresponding tons of CO_2 are issued, the deferred income is reclassified to profit or loss.

They are not amortized as their carrying amount matches their residual value and are subject to an impairment test based on their recoverable amount, (measured with reference to the price of the benchmark contract in the futures market provided by the ECX-European Climate Exchange).

The Group records an expense under "Other operating expenses" in the income statement for the CO_2 emissions released during the year, recognizing a provision calculated based on the tons of CO_2 emitted, measured at: (i) their carrying amount in the case of the allowances of which the Group is in possession at year end; and (ii) the closing list price in the case of allowances of which it is not in possession at year end.

When the emissions allowances for the CO_2 tons emitted are delivered to the authorities, the intangible assets as well as their corresponding provision are derecognized from the balance sheet without any effect on the income statement.

When carbon emission allowances are actively managed to take advantage of market trading opportunities (see Note 29), the trading allowances portfolio is classified as trading inventories.

(3) ACCOUNTING ESTIMATES AND JUDGMENTS

The preparation of financial statements in accordance with generally accepted accounting principles makes it necessary to make assumptions and estimates that affect the valuation of the amounts of the assets and liabilities recognized, the presentation of contingent assets and liabilities at year end and the income and expenses recognized during the year. The actual results could differ depending on the estimates made.

The accounting policies and areas which require the highest degree of judgment and estimates in the preparation of the consolidated financial statements are: (i) crude oil and natural gas reserves; (ii) calculation of the recoverable value of assets (see Notes 10, 11 and 21); (iii) measurement of investments in Venezuela (see Notes 12 and 21); (iv) provisions for litigation, dismantling and other contingencies (see Note 13); (v) the calculation of income tax, tax credits and deferred tax assets (see Note 23); and (vi) the value of derivative financial instruments (see Note 8).

Crude oil and gas reserves

The process of estimating oil and gas reserves[1] is a key component of the Company's decision-making process. Oil and gas reserve estimates are used to calculate depreciation and amortization charges applying the unit-of-production ratio method and to test these Upstream assets for impairment (see *"Testing assets for impairment and calculating their recoverable amounts"* further on in this Note). Changes in reserve volumes could have a significant impact on the Group's results.

To estimate proved and unproved reserves and oil and gas resources, Repsol uses the criteria established by the SPE/WPC/AAPG/SPEE Petroleum Resources Management System, commonly referred to by its acronym SPE-PRMS (SPE standing for Society of Petroleum Engineers).

Calculating the recoverable amount of assets

In order to ascertain whether its assets have become impaired, the Group compares their carrying amount with their recoverable amount at least annually and whenever there are indications that an asset might have become impaired ("*impairment test*"). If the recoverable amount of an asset is estimated to be less than its net book value, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized in the consolidated income statement.

After an impairment loss has been recognized, amortization charges are calculated prospectively on the basis of the reduced carrying amount of the impaired asset.

On the occurrence of new events, or changes in existing circumstances, which prove that an impairment loss recognized on a prior date could have disappeared or decreased, a new estimate of the recoverable value of the corresponding asset is developed, to determine whether it is applicable to reverse the impairment losses recognized in previous periods. An impairment loss of goodwill cannot be reversed in the following years.

In the event of a reversal of an impairment previously recorded, the carrying amount of the asset is increased to the revised estimate of its recoverable value, so that the increased carrying amount does not exceed the carrying amount that would have been determined in case no impairment loss had been recognized for the asset in prior years.

For the "*impairment test*", assets are grouped into cash-generating units (CGUs), to the extent that such assets, when individually considered, do not generate cash inflows that are independent of the cash inflows from other assets or CGUs. The grouping of assets into the various CGUs implies the use of professional judgments and the determination, among other criteria, of the business segments and geographic areas in which the Company operates. Against this backdrop, in the *Upstream* segment, each CGU corresponds to one of the various contractual exploration areas widely known as *'blocks'*; exceptionally, if the cash flows generated by more than one block are mutually interdependent, these blocks will be grouped into a single CGU. In the *Downstream* segment, the CGUs are defined as a function of business activities (mainly Refining, Chemicals, commercial businesses and LPG) and geographic areas. With respect to the North America Trading & Gas business, the Group includes a single CGU that essentially encompasses the North American assets.

[1] Registered volumes are periodically audited by independent engineering firms (at least 95% of the reserves are audited externally in a three-year cycle).

Goodwill acquired on a business combination is allocated among the CGUs or groups of cash-generating units (CGUs) that benefit from the synergies of the business combination and the recoverable amount thereof is estimated, generally, by discounting the estimated future cash flows of each unit, up to the limit of the business segment.

The recoverable amount is the higher of fair value less costs of sale and value in use.

The methodology used by the Group to estimate the recoverable amount of assets is, in general, the value in use calculated by discounting to present value the future cash flows expected to derive from the operation of these assets.

The cash flow projections are based on the best available estimates of the CGUs' income and expenses using sector forecasts, prior results and the outlook for the business's performance and market's development:

- The Group's annual budget and the business plan set macroeconomic forecasts for each of the countries where it has business operations, which include variables such as inflation, GDP growth, exchange rates, etc. that are used to quantify the abovementioned income and expense estimates. The aforementioned macroeconomic forecasts are prepared on the basis of the content of internal reports that use in-house estimates, based on updated external information of relevance (forecasts prepared by consultants and specialized entities).

- The oil and natural gas price trend estimates used by the Group are based on analysis of available market information, internal reports on the global energy landscape, including our own forecasts of the balance of supply and demand, and consideration of other factors (macroeconomic, financial, etc) and opinions expressed by outside sources:

  i. To estimate near-term (2-3 years) price trends we use reports produced by a selection of analysts, investment banks and benchmark agencies[1].

  ii. For long-term estimates, the only sources that produce sufficiently detailed analysis and forecasts are the benchmark agencies (IEA and EIA), so only these views are considered. These agencies engage in detailed research on supply, demand and prices under various scenarios (see Note 21.1).

  The resulting prices are consistent with the annual budget and the updated strategic plan.

Valuations of Exploration & Production assets (*Upstream*) use cash flow projections for a period that covers the economically productive useful lives of the oil and gas fields, limited by the contractual expiration of the operating permits, agreements or contracts. The key valuation assumptions used to determine the variables that most affect this business´ cash flows are summarized below:

- Oil and gas sales prices. The international benchmark prices used by the Group are: Brent, WTI (West Texas Intermediate) and HH (Henry Hub). In countries where international list prices do not reflect local market circumstances, the prices modeled factor in local market prices.

- Reserves and production profiles. Production profiles are estimated on the basis of output levels at existing wells and the development plans in place for each productive field. As a consequence, these profiles are then used to estimate proved and unproved reserves and resources. To estimate proved and unproved reserves and oil and gas resources, Repsol uses the criteria established by the SPE-PRMS (Society of Petroleum Engineers - Petroleum Resources Management System).

- Operating expenses and capital expenditure. These are calculated in year one on the basis of the Group's annual budget and thereafter in keeping with the asset development programs until 2020. These costs were extrapolated at a growth rate of 2% for impairment testing purposes in 2021 and subsequent years.

[1] The analysts engaging in macroeconomic and energy analysis are PIRA, IHS and Wood Mackenzie. The benchmark agencies are the International Energy Agency (IEA) and the US Energy Information Administration (EIA).

In the *Downstream* segment, the various businesses' cash flows are estimated on the basis of the outlook for its key variables (unit contribution margins, fixed costs and required maintenance capital expenditure), in keeping with the expectations reflected in the annual budget and the individual business-specific strategic plans. Cash inflows and outflows corresponding to future restructuring exercises or initiatives to enhance the assets' performance are not considered. The cash flow projection period considered to this end is generally five years; cash flows after year five are extrapolated without factoring in any further growth. Specifically:

- In the Refining business, and given the impact of the refinery expansion work and upgrades, long-term projections span a long-term period (specifically, more than 20 years)[1]. For the purpose of calculating residual values, the only investment considered is maintenance capital expenditure and any investment needed for renovation purposes in order to maintain the CGU's productive capacity.
- The key assumptions the for the North America Trading & Gas cash flow estimates businesses are as follows:
    i. LNG and gas prices The international benchmark prices used by the Group are: Brent, HH, Algonquin and NBP (National Balancing Point), adjusted as required for local market considerations in the event that these international benchmarks do not fully reflect local market circumstances. The price trend used is consistent with the one used for the annual budget and the updated strategic plan (see Note 21).
    ii. Gas and LNG marketing volumes and margins. The volumes used for cash flow forecasting purposes are estimated on the basis of the contracts in force at year-end and activity estimates, all of which in keeping with the annual budget and strategic plan. Margins factor in historical data, the price forecasts detailed in i. above and the outlook for margins going forward.

These estimated after-tax cash flows are discounted to present value using CGU-specific discount rates determined as a function of the currency in which their respective cash flows are denominated and the risks associated with these cash flows, including country risk. Repsol discounts projected cash flows using post-tax weighted average costs of capital for each country and business. These rates are reviewed at least once a year[2]. The discount rates are intended to reflect current market assessments of the time value of money and the risks specific to the asset. Accordingly, the various discount rates used factor in the risk-free rate, country risk, the currency in which the cash flows are generated, as are the business and market and credit risk factors. To ensure that the calculations are consistent, the cash flow projections do not factor in risks that have already been built into the discount rates used, and vice versa. The discount rates used factor in average sector leverage as a reasonable proxy for the optimal capital structure, to which end management monitors leverage rates at comparable oil and gas companies during the last five years.

Furthermore, to determine whether it is necessary to recognize any impairment losses on investments in associates and joint ventures, the entire carrying amount of the investment is tested for impairment in accordance with IAS 36 *Impairment of assets* as a single asset, including any goodwill that may be implicit within the investment, by comparing its recoverable amount with its carrying amount. The recoverable amount of an investment in an associate or a joint venture is evaluated individually, unless it does not generate cash inflows from continuing use that are largely independent of those generated by other Group assets or cash-generating units.

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[1] The use of the period of more than 5 years began in 2011 after the coming into operation of the refinery expansion and improvement projects. To keep the amortization rate in step with the pace of investment, we extended the timeline of cash flow projection, so that, from the fifth year onwards, EBITDA is projected, continuing at a similar level of activity and in a similar business environment.

[2] The main components of the discount rate are as follows:

- The risk-free interest rate for dollar flows matches that for 10-year U.S. Treasury; for euro flows, the risk-free interest rate matches the 10-year German sovereign bond;
- For country risk, Repsol uses the country risk information by three external providers -Country Risk Rating (IHS Global Insight), International Country Risk Guide (PRS Group) and Business Monitor (Fitch Group), the spread of sovereign bonds in euros or US dollars against the debt issued by Germany (euros) or the US (USD) respectively, and the *Emerging Markets Bond Index* (EMBI) published by JP Morgan, all adjusted for the specific risks of the business;
- We use a single market risk premium for all countries. βetas or business risk premiums are calculated specifically for each business, *Upstream*, Refining, Marketing, Chemicals, North America Trading & Gas and LPG – based on five-year historic series for comparable companies obtained from Bloomberg.

Provisions for litigation, dismantling and other contingencies

The final cost of settling claims, grievances and lawsuits could vary due to estimates based on differing interpretations of the technical rules, opinions and final assessments of the amount of the damages.

Repsol uses judgments and estimates to recognize provisions for the cost of dismantling its oil and gas production operations. These calculations are complex on account of the need to recognize the present value of the estimated future costs and to adjust this figure in subsequent years in order to reflect the passage of time and changes in the estimates due to changes in the underlying assumptions on account of technological advances and regulatory, economic, political and environmental developments, as well as changes in the initially-established schedules or other terms. The dismantling provisions are updated regularly to reflect trends in estimated costs and the discount rates. These discount rates take into account the risk-free rate, by term and currency, country risk and a spread according to debt structure and the cash flow projection period. Specifically, the weighted average rate set by the Group was 3.62%.

Additionally, Repsol makes judgments and estimates in recording costs and establishing provisions for environmental clean-up and remediation costs which are based on current information regarding costs and expected plans for remediation. For environmental provisions, costs can differ from estimates because of changes in laws and regulations, discovery and analysis of site conditions and changes in clean-up technology.

Therefore, any change in the factors or circumstances related to provisions of this nature, as well as changes in laws and regulations could, as a consequence, have a significant effect on the provisions recognized for these costs (see Notes 13, 16, and 23).

Evaluation of investments in Venezuela

Repsol has a presence in Venezuela through its shareholdings in mixed oil companies and gas licensees. The current situation in Venezuela and concerning PDVSA, in which there has been an increase in economic, political and regulatory instability, has made it necessary to assess the recoverability of investments in the country. Certain hypotheses and assumptions, such as asset development plans, compliance with payment mechanisms set out in agreements entered into, in addition to guarantees established and the development of a highly uncertain environment, involves judgments and estimates that may vary over time (see Notes 12 and 21).

Calculation of income tax, tax credits and deferred tax assets

The appropriate assessment of the income tax expense is dependent on several factors, including estimates of the timing and realization of deferred tax assets and the timing of income tax payments. Actual collections and payments may differ materially from these estimates as a result of changes in tax laws as well as unanticipated future transactions impacting the Company's tax balances (see Note 23).

(4) SEGMENT REPORTING[1]

4.1) Definition of segments and presentation model of the results for the period by segments

The segment reporting disclosed by the Group in this section is presented in accordance with the disclosure requirements of IFRS 8 *Operating segments*.

The definition of the Repsol Group´s business segments is based on the delimitation of the different activities performed and from which the Group earns revenue or incurs expenses, as well as on the organizational structure approved by the Board of Directors for business management. Using these segments as a reference point, Repsol's management team (the Corporate Executive, E&P and Downstream Committees) analyzes the main operating and financial indicators in order to make decisions about segment resource allocation and to assess how the Company is performing.

At December 31, 2017, the operating segments of the Group are:

- *Upstream*, corresponding to exploration and development of crude oil and natural gas reserves.
- *Downstream*, corresponding, mainly, to the following activities: (i) refining and petrochemistry, (ii) trading and transportation of crude oil and oil products, (iii) commercialization of oil products, petrochemical and LPG, (iv) the commercialization, transport and regasification of natural gas and liquefied natural gas (LNG).

Lastly, *Corporate and other* includes activities not attributable to the aforementioned businesses, and specifically, corporate expenses, financial result, the earnings and other metrics related to the remaining interest in Gas Natural SDG,S.A.[2] and inter-segment consolidation adjustments.

The Group has not aggregated any operating segments for presentation purposes.

In presenting the results of its operating segments Repsol includes the results of its joint ventures[3] and other managed companies operated as such[4], in accordance with the Group's ownership interest, considering its operational and economic metrics in the same manner and with the same detail as for fully consolidated companies. Thus, the Group considers that the nature of its businesses and the way in which results are analyzed for decision-making purposes is adequately reflected.

In addition, the Group, considering its business reality and in order to make its disclosures more comparable with those in the sector, utilizes as a measure of segment profit the so-called Adjusted Net Income, which corresponds to net income from continuing operations at (*"Current cost of supply*" or CCS) after taxes and non-controlling interests and not including certain items of income and expense (*"Special Items"*). Net finance cost is allocated to the *Corporation and others* segment's Adjusted Net Income/Loss.

The current cost of supply (CCS) is commonly used in this industry to present the results of *Downstream* businesses which must work with huge inventories subject to continual price fluctuations. It is not a commonly-accepted European accounting regulation, yet it does enable comparability with other sector companies as well as monitoring of businesses independently of the impact of price variations on their inventories. Using the CCS method, the cost of volumes sold during the reporting period is calculated using the costs of procurement and production incurred during that same period. Due to the above, adjusted net income does not include the inventory effect. This inventory effect is presented separately, net of tax and non-controlling interests, and corresponds to the difference between income at CCS and that arrived at using the Weighted Average Cost approach, which is the method used by the Company to determine its earnings in accordance with European accounting regulations.

Furthermore, Adjusted Net Income does not include the so-called Special Items, i.e. certain material items whose

[1] Some of metrics presented in this Note are classified as Alternative Performance Metrics (APMs) in accordance with ESMA guidelines (for further information, see Appendix I of the Consolidated Management Report or www.repsol.com . All of the figures shown throughout this Note have been reconciled with IFRS-EU financial statements in Appendix III.

[2] Includes net income of the company according to the equity method. The other measures (EBITDA, free cash flow, etc.) only refect the cash flows affecting the Group in its capacity as shareholder in Gas Natural SDG, S.A. (dividends, etc.).

[3] In the segment reporting model, joint ventures are consolidated proportionally in accordance with the Group's percent holding See Note 12 and Appendix I, where the Group's main joint ventures are identified.

[4] Corresponds to Petrocarabobo, S.A., (Venezuela), an associated entity of the Group.

separate presentation is considered appropriate in order to facilitate analysis of the ordinary business performance. It includes gains/losses on disposals, personnel restructuring charges, asset impairment losses and provisions for contingencies and other significant charges. Special items are presented separately, net of the tax effect and non-controlling interests.

4.2) Results for the period by segments

	€ Million	
SEGMENTS	2017	2016
Upstream	632	52
Downstream	1,877	1,883
Corporate and other	(104)	(13)
ADJUSTED NET INCOME	**2,405**	**1,922**
Inventory effect	104	133
Special items	(388)	(319)
NET INCOME	**2,121**	**1,736**

For further information on Group performance, see section 4 of the consolidated Management Report (www.repsol.com).

4.3) Disclosures by geography and segment

The breakdown by geography and segment of the year-end 2017 and 2016 metrics for which geographic segmentation is material is provided below:

€ Million	Operating income		Adjusted net income		Net operating investments [1]		Non-current assets [2]		Capital employed	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Upstream	**1,009**	**(87)**	**632**	**52**	**2,072**	**1,889**	**25,636**	**29,186**	**21,612**	**23,853**
Europe, Africa and Brazil	726	224	355	167	427	594	4,182	3,517	-	-
Latin America - Caribbean	594	238	386	234	494	578	4,940	6,498	-	-
North America	(58)	(189)	(43)	9	553	383	8,555	9,666	-	-
Asia and Russia	251	127	161	(4)	235	(117)	2,750	3,719	-	-
Exploration and other	(504)	(487)	(227)	(354)	363	451	5,209	5,786	-	-
Downstream	**2,467**	**2,467**	**1,877**	**1,883**	**757**	**(496)**	**10,312**	**10,444**	**9,749**	**9,469**
Europe	2,420	2,480	1,852	1,895	584	(442)	8,933	9,012	-	-
Rest of the world	47	(13)	25	(12)	173	(54)	1,379	1,432	-	-
Corporate and other	**(262)**	**(313)**	**(104)**	**(13)**	**27**	**(1,893)**	**3,968**	**4,042**	**4,969**	**5,933**
TOTAL	**3,214**	**2,067**	**2,405**	**1,922**	**2,856**	**(500)**	**39,916**	**43,672**	**36,330**	**39,255**

(1) Includes investments accrued during the period net of divestments but does not include investments in *"Other financial assets."*
(2) Excludes *"Non-current financial investments"*, *"Deferred tax assets"* and *"Other non-current assets"*.

For more segment reporting and the reconciliation of these figures with the IFRS-EU Financial Statements, see Appendix III.

(5) CAPITAL STRUCTURE

Repsol, as an essential part of its strategy, has committed to a policy of financial prudence. The financial structure targeted is defined by this commitment of solvency and the aim to maximize shareholder returns, by optimizing the cost of capital.

Determination of the Group's target capital structure takes into consideration the leverage ratio defined as the ratio between net financial debt and capital employed:

$$\text{Leverage ratio} = \frac{\text{Net financial debt}^{(1)}}{\text{Capital employed}^{(2)}}$$

(1) The formula considers net and not gross debt to factor in the effect of financial investments. In keeping with its conservative financial policy, Repsol holds cash and cash equivalents and undrawn credit lines. As a result, the net debt leverage ratio provides a more accurate picture of the Group's financial solvency.
(2) Corresponds to the sum of net financial debt and equity.

The trend and analysis of this ratio is monitored systematically. Moreover, leverage projections are performed as a key and restrictive input into Group investment decision-making and dividend policy.

The calculations of these ratios, based on the following consolidated balance sheet headings at December 31, 2017 and 2016, is as follows:

	€ Million	
	2017	2016
Shareholders' equity	30,197	28,487
Other accumulated comprehensive profit/(loss)	(404)	2,380
Minority interests	270	244
Equity	**30,063**	**31,111**
Non-current financial liabilities	10,080	9,482
Current financial liabilities	4,206	6,909
Non-current financial assets [1]	(1,920)	(1,081)
Other current financial assets	(257)	(1,280)
Cash and cash equivalents	(4,601)	(4,687)
Financial instruments from interest rate derivatives and others (see Note 8)	(70)	(87)
Net debt from joint ventures	(1,171)	(1,112)
Net financial debt [2] [3]	**6,267**	**8,144**
Capital employed [2][4]	**36,330**	**39,255**
Leverage ratio	**17.3%**	**20.7%**

(1) Does not include assets available for sale.
(2) Figures calculated according to the Group's reporting model described in Note 4. For further information, see Appendices III and I of the consolidated Management Report.
(3) Does not include €1,541 million and €1,758 million, relating to debts for current and non-current financial leases in 2017 and 2016, respectively (see Note 14).
(4) Net Capital employed in 2016 includes that corresponding to discontinued operations.

(6) EQUITY

	€ Million	
	2017	2016
Net equity	**30,197**	**28,487**
Capital	1,556	1,496
Share premium and reserves:	25,694	24,331
Share premium [(1)]	6,428	6,428
Legal reserve [(2)]	299	275
Prior year income/(losses) and other reserves [(3)]	18,967	17,628
Treasury shares and own equity investments	(45)	(1)
Net income for the year attributable to the parent	2,121	1,736
Dividends and remuneration	(153)	(99)
Other equity instruments	1,024	1,024
Other accumulated comprehensive income	**(404)**	**2,380**
Minority interests	**270**	**244**
TOTAL EQUITY	**30,063**	**31,111**

(1) The Spanish Companies Act expressly permits the use of the share premium account balance to increase capital and establishes no specific restrictions as to its use.
(2) Under the Spanish Companies Act, 10% of profit for each year must be transferred to the legal reserve until the balance of this reserve reaches at least 20% of share capital. The legal reserve can be used to increase capital provided that the remaining reserve balance does not fall below 10% of the increased share capital amount. Otherwise, until the legal reserve exceeds 20% of share capital, it can only be used to offset losses, provided that sufficient other reserves are not available for this purpose.
(3) This includes the adjustments related to the differences between the previous accounting principles and the IFRS, from events and transactions before the transition date to IFRS (January 1, 2004).

6.1) Share capital

The share capital at December 31, 2017 and 2016, registered within the Companies Register, consisted of 1,527,396,053 and 1,465,644,100 fully subscribed and paid up shares of €1 par value each, in book entry form, and all listed on the Spanish stock exchanges and the Buenos Aires Stock Exchange. The Company *American Depositary Shares* (ADSs) are traded on the OTCQX in the US.

Following the most recent bonus share issue, closed in January 2018, outlined below, the share capital of Repsol, S.A. is currently represented by 1,556,464,965 shares, each with a par value of €1. Under accounting regulations, because the abovementioned capital increase had been registered within the Companies Register before the Board of Directors authorized the consolidated financial statements for issue, this bonus share issue has been recognized in the Group's financial statements as of December 31, 2017.

At the Annual General Meeting held on May 19, 2017, the Company's shareholders approved two bonus share issues to execute the shareholder remuneration scheme *"Repsol Flexible Dividend"*[1], in substitution of what would have been the traditional final dividend from 2016 profits and the interim dividend from 2017 earnings, under which shareholders can instead choose between receiving their remuneration in cash (by selling their bonus share rights in the market or back to the Company) or in Company shares.

[1] Repsol executed its "Repsol Flexible Dividend" scheme for the first time in 2012, having been approved by the shareholders at the Annual General Meeting of May 31, 2012. This system of shareholder remuneration is implemented through capital increases against voluntary reserves derived from retained earnings, with the Repsol's purchase commitment of free-of-charge allocation rights at a guaranteed fixed price.

The first of these two bonus share issues took place between June and July 2017 and the second, between December 2017 and January 2018: The main characteristics of these issues are detailed below:

		June/July 2017	Dec. 2017/January 2018
REMUNERATION IN CASH	Shareholders that accepted the irrevocable purchase commitment [1]	29.58% rights	25.78% rights
	Deadline for requesting sale of rights to Repsol at guaranteed price	June 23	December 29
	Fixed price guaranteed by right	€0.426 gross/right	€ 0.388 gross/right
	Gross value of rights acquired by Repsol	€189 million	€153 million
REMUNERATION IN REPSOL SHARES	Shareholders that chose to receive new Repsol shares	70.42% rights	74.22% rights
	Number of rights required to allocate new share	34	39
	New shares issued	30,991,202	29,068,912
	Approximate increase in share capital	2.07%	1.90%
	End of capital increase	July 4	January 9

[1] Repsol has renounced the bonus share rights acquired by virtue of the above-mentioned purchase commitment and, by extension, the shares corresponding to those rights. The consolidated balance sheet as of December 31, 2017 recognizes the obligation to pay the shareholders that had accepted the irrevocable purchase commitment in the bonus issue completed in January 2018, corresponding to the sale or rights to Repsol for €153 million, as a reduction in equity under *"Dividends and remuneration"*.

According to the latest information available at the date of authorization of the accompanying Consolidated Financial Statements for issue, the significant shareholders are:

Significant shareholders	total % of share capital
CaixaBank, S.A.	9.5
Sacyr, S.A.[1]	7.9
Temasek Holdings (Private) Limited [2]	4.0
Blackrock, Inc. [3]	4.3

[1] Sacyr, S.A. retains its shareholding via Sacyr Securities, S.A.U, Sacyr Investments S.A.U. and Sacyr Investments II, S.A.U.
[2] Temasek holds its investment through its subsidiary, Chembra Investment PTE, Ltd.
[3] Blackrock, Inc. holds its investment through a number of controlled entities.

At December 31, 2017, the following Group companies' shares were publicly listed:

Company	Number of shares traded	% share capital listed	Stock exchanges [1]	Value at closing	Medium last quarter	Currency
Repsol, S.A.	1,527,396,053	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	14.75	15.38	Euros
			Buenos Aires	300.00	307.49	Argentine pesos
			OTCQX [2]	17.72	18.14	Dollars
Gas Natural SDG, S.A.	1,000,689,341	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	19.25	18.61	Euros
Refinería La Pampilla, S.A.	3,534,890,000	100%	Lima stock exchange	0.31	0.30	Peruvian soles

[1] Exchanges or markets for which the Group has specifically applied for admission to trading. Other exchanges, markets or multilateral trading platforms on which the shares may be traded without having been specifically requested by the Group are not included.
[2] Since March 9, 2011, Repsol's American Depositary Shares (ADSs) are traded on the OTCQX, an OTC (over-the-counter) US trading platform.

6.2) Treasury shares and own equity investments

The main transactions undertaken by the Repsol Group involving treasury shares[1] were as follows:

	2017			2016		
€ Million	No. of shares	Amount	% capital	No. of shares	Amount	% capital
Balance at January 1	**94,185**	**1**	**0.01%**	**18,047,406**	**248**	**1.25%**
Market purchases [(1)]	23,630,054	339	1.52%	21,693,728	254	1.45%
Market sales [(1)]	(20,716,006)	(295)	1.33%	(39,740,591)	(501)	2.66%
Repsol Flexible Dividend [(2)]	20,691	-	0.00%	93,642	-	0.01%
Balance at December 31 [(3)]	**3,028,924**	**45**	**0.19%**	**94,185**	**1**	**0.01%**

(1) Includes any shares acquired under the scope of the Share Acquisition Plan and the share purchase programs aimed at beneficiaries of the multi-year variable remuneration programs. In 2017, 561,006 shares were delivered in accordance with the terms and conditions of each of the plans (see Note 28.4).

(2) New shares received under the *"Repsol Flexible Dividend"* scheme's bonus share issues corresponding to treasury shares.

(3) The balance at December 31, 2017, includes equity swaps for a notional total of 3 million shares in Repsol, S.A. taken out byRepsol Tesorería y Gestión Financiera, S.A. and Repsol, S.A. with financial institutions, under which voting rights and economic risk intrinsic to the underlying were transferred to the Group.

6.3) Dividends and shareholder remuneration

During 2017 and 2016 the Company's shareholders were also remunerated by means of the program denominated "*Repsol Flexible Dividend*" whose main characteristics are described in section 1. *Share capital* of this Note and whose figures are compiled in the following chart:

	No. free allocation rights sold to Repsol	Price of purchase commitment (€/right)	Amount paid out in cash (€ Million)	New shares issued	Remuneration in shares (€ Million)
December 2015/January 2016	489,071,582	0.466	228	41,422,248	425
June/July 2016	511,212,326	0.292	149	23,860,793	272
December 2016/January 2017	296,735,539	0.335	99	30,760,751	392
June/July 2017	442,703,938	0.426	189	30,991,202	449

In addition, in January 2018, under the *"Repsol Flexible Dividend"* program, replacing what would have been the interim dividend from 2017 profits, Repsol paid out €153 million (€0.388 per right before withholdings) to those shareholders opting to sell their bonus share rights back to the Company and delivered 29,068,912 shares, worth €440 million, to those opting to take their dividend in the form of new Company shares.

At the date of the authorization for issue of these Consolidated Financial Statements, the Company's Board of Directors is expected to submit a proposal to shareholders at the next Shareholder Annual Meeting to continue the *"Repsol Flexible Dividend"* program, through the implementation of a capital increase charged to voluntary reserves from retained earnings, on the same dates as those on which the company has traditionally paid the final dividend.

[1] Transactions carried out exercising the powers delegated by the Company's shareholders at the Annual General Meeting of March 28, 2014, authorizing the Board of Directors, for a five-year period, to carry out the derivative acquisition of Repsol shares, directly or through subsidiaries, up to a maximum number of shares such that the sum of those acquired plus treasury shares already held by Repsol and any of its subsidiaries does not exceed 10% of the Company's capital, insofar as the price or value of the consideration delivered is not less than the par value of the shares or more than their quoted price on the stock exchange. The authorization was granted for five years running from the date of the Annual General Meeting, and nullified the equivalent resolution ratified at the ordinary Annual General Meeting held on April 30, 2010, in relation to any part thereof that had not been used.

6.4) Other equity instruments

On March 25, 2015, Repsol International Finance, B.V. ("*RIF*") issued perpetual subordinated bonds guaranteed by Repsol, S.A., with a nominal value of €1,000 million (redeemable at the request of the issuer from year six or under certain circumstances stipulated in the bond terms and conditions)[1].

This bond was placed with qualified investors and trades on the Luxembourg Stock Market, accruing a fixed annual coupon of 3.875% from the issue date until March 25, 2021, payable to the bondholders annually from March 25, 2016 and a fixed annual coupon equal to the 6-year swap rate applicable plus a spread from March 25, 2021.

The issuer can defer the coupon payments without triggering an event of default. Coupons so deferred will be cumulative and will be mandatorily settled following certain events described in the related terms and conditions of the issue.

This bond was recognized under "*Other equity instruments*", included under equity in the consolidated balance sheet, considering that they do not meet the accounting conditions required to be treated as a Group´s financial liability[2]. Net finance expense associated with the coupon on the subordinated bond has been recorded under "*Retained earnings and other reserves*" amounting to €29 million.

6.5) Non-controlling interests

The equity attributable to non-controlling interests at December 31, 2017 and 2016 relates basically to the following companies:

	€ Million	
	2017	2016
Petronor, S.A.	153	133
Refinería La Pampilla, S.A.	72	67
Repsol Comercial de Productos Petrolíferos, S.A.	32	31
Other companies	13	13
TOTAL	**270**	**244**

(7) FINANCIAL INSTRUMENTS

7.1) Financial assets

Below, the breakdown of financial assets included in the balance sheet line-items can be found:

	€ Million	
	2017	2016
Non-current financial liabilities	2,038	1,204
Derivatives relating to non-current trade transactions (1)	2	-
Other current financial assets	257	1,280
Derivatives relating to current trade transactions (2)	60	64
Cash and Cash equivalents	4,601	4,687
TOTAL	**6,958**	**7,235**

(1) Recognized in *"Other non-current assets"* of the consolidated balance sheet.
(2) Recognized in *"Other receivables"* of the consolidated balance sheet.

[1] On March 16, 2016, RIF and Repsol, S.A. undertook not to trigger early redemption if a credit rating agency were to assign to the bond a lower equity content than that assigned at the issue date as a result of applying a different valuation approach owing to changes in the credit rating accorded to the issuer and/or the guarantor (one of the early redemption triggers – "Capital Events" – available to the issuer, as set out in the terms and conditions of the issue). This bond was placed with qualified investors and is traded on the Luxembourg stock exchange.

[2] This bond does not involve a contractual obligation to make a payment in cash or ohe financial assets or an obligation to exchange financial assets or liabilities.

The detail, by type of assets, of the Group's financial assets at December 31, 2017 and 2016, is as follows:

	December 31, 2017 and 2016											
	Financial assets held for trading [2]		Other financial assets at fair value with changes through profit or loss [3]		Financial assets available for sale [4]		Loans and receivables [5]		Held to maturity investments		Total	
€ Million	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Equity instruments	-	-	-	-	118	123	-	-	-	-	118	123
Derivatives	2	-	-	-	-	-	-	-	-	-	2	-
Other financial assets	-	-	52	56	-	-	1,868	1,025	-	-	1,920	1,081
Non current	**2**	**-**	**52**	**56**	**118**	**123**	**1,868**	**1,025**	**-**	**-**	**2,040**	**1,204**
Derivatives	77	95	-	-	-	-	-	-	-	-	77	95
Other financial assets	-	-	10	10	-	-	238	1,247	4,593	4,679	4,841	5,936
Current	**77**	**95**	**10**	**10**	**-**	**-**	**238**	**1,247**	**4,593**	**4,679**	**4,918**	**6,031**
TOTAL [1]	**79**	**95**	**62**	**66**	**118**	**123**	**2,106**	**2,272**	**4,593**	**4,679**	**6,958**	**7,235**

(1) Headings "*Other non-current assets*" and "*Trade and other receivables*" of the consolidated balance sheet include €470 million classified under long-term and €5,161 million classified under short-term in 2017 (2016: €323 million classified under long-term and €4,832 million classified under short-term), corresponding to commercial receivables not included in the breakdown of the financial assets in the previous table net of the corresponding impairment provisions.

(2) Derivatives not designated as hedging instruments are included (see Note 8).

(3) Including, among others, interests in investment funds.

(4) This heading includes minority financial investments in certain companies over which the Group does not have management influence.

(5) Accounts receivables which do not bear explicit interest are recognized at their face value whenever the effect of not discounting the related cash flows is not significant.

Loans and receivables

In 2017 and 2016, current and non-current "*Loans and receivables*" include loans granted to Group companies that are not eliminated upon consolidation. They relate primarily to balances arising from transactions entered into with companies accounted for using the equity method in the amount of €1,871 and €2,231 million (among these, financing of joint ventures in Venezuela, with balances at year-end 2017 totaling €1,296 million, see Notes 12 and 21).

The return accrued on "*Loans and receivables*" was equivalent to an average interest rate of 6.51% in 2017 and of 6.92% in 2016. The maturity of non-current loans and receivables is the following:

	€ Million	
	2017	2016
2019	4	289
2020	504	180
2021	181	36
Subsequent years	1,179	520
TOTAL	**1,868**	**1,025**

Held to maturity investments

The corresponding carrying amount at December 31, 2017 and 2016 can be seen below:

	€ Million	
	2017	2016
Temporary financial investments [1]	1	2
Cash equivalents [2]	839	1,470
Cash at banks and in hand	3,753	3,207
TOTAL	**4,593**	**4,679**

(1) These mainly consist to bank placements and collateral deposits, and have accrued an average interest of 0.05% and 0.09% in 2017 and 2016, respectively.

(2) They primarily correspond to liquid financial assets, deposits or liquid investments needed to meet payment obligations in the short term that can be converted into a known amount of cash within a period usually shorter than three months and that are subject to an insignificant risk of changes in value.

7.2) Financial liabilities

Below, the breakdown of financial liabilities included in the consolidated balance sheet line-items can be found:

	€ Million	
	2017	2016
Non-current financial debt	10,080	9,482
Current financial liabilities	4,206	6,909
Current trade operation derivatives (1)	215	282
TOTAL	**14,501**	**16,673**

(1) Recorded in *"Other payables"* on the consolidated balance sheet.

The breakdown of these financial liabilities at December 31, 2017 and 2016 is provided below:

	December 31									
	Financial liabilities held for trading		Loans and payables		Hedging derivatives		Total		Fair value	
€ Million	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Bank borrowings	-	-	1,064	1,491	-	-	1,064	1,491	1,043	1,496
Bonds and other securities	-	-	6,323	7,905	-	-	6,323	7,905	6,812	8,328
Derivatives	-	-	-	-	68	86	68	86	68	86
Other financial liabilities	-	-	2,625	-	-	-	2,625	-	2,625	-
Non current	**-**	**-**	**10,012**	**9,396**	**68**	**86**	**10,080**	**9,482**	**10,548**	**9,910**
Bank borrowings	-	-	539	837	-	-	539	837	539	837
Bonds and other securities	-	-	3,406	2,855	-	-	3,406	2,855	3,419	2,875
Derivatives	241	303	-	-	2	3	243	306	243	306
Other financial liabilities	-	-	233	3,193	-	-	233	3,193	233	3,193
Current	**241**	**303**	**4,178**	**6,885**	**2**	**3**	**4,421**	**7,191**	**4,434**	**7,211**
TOTAL (1) (2)	**241**	**303**	**14,190**	**16,281**	**70**	**89**	**14,501**	**16,673**	**14,982**	**17,121**

(1) At December 31, 2017 this heading includes €1,347 million corresponding to *"Other non-current liabilities"* (year-end 2016: €1,550 million) and €195 and €208 million corresponding to *"Other payables"* related to finance leases carried at amortized cost that are not included in the table above.
(2) In relation to liquidity risk, the distribution of funding by maturity at December 31, 2017 and 2016 is provided in Note 9.

The breakdown of average financial balances outstanding and cost by instrument is as follows:

	2017		2016	
€ Million	Average volume	Average cost	Average volume	Average cost
Bank borrowings	1,815	2.72%	3,562	1.81%
Bonds and other securities	10,318	2.76%	10,152	3.33%
Other financial liabilities	2,939	2.48%	2,984	1.83%
TOTAL	**15,072**	**2.70%**	**16,698**	**2.74%**

Bank borrowings

This heading reflects the loans granted to the Group companies, mainly in Spain and Peru, by several banks in order to fund their projects and operations. It also includes drawdowns under short-term credit facilities extended by banks.

Bonds and other securities

Key issues, repurchases and redemptions carried out in 2017[1]

- In February 2017, a €886 million 4.75% fixed annual bond issued by Repsol International Finance, B.V. under the EMTN Program was canceled at maturity.
- In May 2017, Repsol International Finance, B.V. issued a €500 million 0.50% fixed annual bond[2] maturing in 2022 and underwritten by Repsol, S.A. as part of the EMTN Program.
- On June 9, ROGCI announced the launch of a Consent solicitation targeted at holders of its bonds in US dollars primarily (i) to replace ROGCI's reporting obligations with the periodic financial information that Repsol publishes in compliance with its transparency obligations; and (ii) to remove the merger covenant with a view to optimizing the Group's operational and financial flexibility.

  ROGCI also offered these investors the opportunity to tender their bonds for repurchase.

  Prior to the announcement of the transaction, Repsol, S.A. granted a guarantee of ROGCI's payment obligations under these bonds; this guarantee shall remain in effect throughout the lifetime of the bonds.

  ROGCI obtained the necessary consents from its bondholders to amend the terms and conditions of the issues as proposed and repurchased the bonds in US dollars for a total of $87 million.
- On September 14, 2017, ROGCI repurchased a bond maturing in December 2017 and carrying a fixed annual coupon of 6.625% for a total of £266 million.
- On November 30, 2017, ROGCI repurchased a fixed-annual 7.75% bond maturing in June 2019 for a total of $403 million.

The outstanding balance of the obligations and marketable securities at December 31, 2017:

ISIN	Issuer	Issue date	Currency	Face value (million)	Average rate %	Maturity	Listed (5)
US87425EAE32 (3)	Repsol Oil & Gas Canada Inc.	oct-97	Dollar	50	7.250%	oct-27	-
US87425EAH62 (3)	Repsol Oil & Gas Canada Inc.	may-05	Dollar	88	5.750%	may-35	-
US87425EAJ29 (3)	Repsol Oil & Gas Canada Inc.	jan-06	Dollar	102	5.850%	feb-37	-
US87425EAK91 (3)	Repsol Oil & Gas Canada Inc.	nov-06	Dollar	115	6.250%	feb-38	-
US87425EAM57 (3) (6)	Repsol Oil & Gas Canada Inc.	nov-10	Dollar	237	3.750%	feb-21	-
XS0733696495 (1)	Repsol International Finance, B.V.	jan-12	Euros	1,000	4.875%	feb-19	LuxSE
US87425EAN31 (3)	Repsol Oil & Gas Canada Inc.	may-12	Dollar	57	5.500%	may-42	-
XS0831370613 (1)	Repsol International Finance, B.V.	sep-12	Euros	750	4.375%	feb-18	LuxSE
XS0933604943 (1)	Repsol International Finance, B.V.	may-13	Euros	1,200	2.625%	may-20	LuxSE
XS0975256685 (1)	Repsol International Finance, B.V.	oct-13	Euros	1,000	3.625%	oct-21	LuxSE
XS1148073205 (1)	Repsol International Finance, B.V.	dec-14	Euros	500	2.250%	dec-26	LuxSE
XS1207058733 (2)	Repsol International Finance, B.V.	mar-15	Euros	1,000	4.500% (4)	mar-75	LuxSE
XS1334225361 (1)	Repsol International Finance, B.V.	dec-15	Euros	600	2.125%	dec-20	LuxSE
XS1352121724 (1)	Repsol International Finance, B.V.	jan-16	Euros	100	5.375%	jan-31	LuxSE
XS1442286008 (1)	Repsol International Finance, B.V.	jul-16	Euros	600	Eur. 3M + 70 b.p.	jul-18	LuxSE
XS1451452954 (1)	Repsol International Finance, B.V.	jul-16	Euros	100	0.125%	jul-19	LuxSE
XS1613140489 (1)	Repsol International Finance, B.V.	may-17	Euros	500	0.500%	may-22	LuxSE

(1) Issues made under EMTN Program, which is guaranteed by Repsol, S.A., as renewed in May 2017.

[1] Key issues, repurchases or redemptions of 2016: i) In January, RIF issued a senior bond secured by Repsol, S.A. (nominal amount of €100 million, maturing in 2031 and a fixed annual coupon of 5.375%), ii) in February, the bond issued by RIF in December 2011 was canceled at maturity (nominal amount of €850 million and a fixed annual coupon of 4.25%), iii) in March, the bond issued by ROGCI in March 2009 was canceled at maturity (nominal amount of €150 million and a coupon of 8.5%) and iv) in July, RIF issued two senior bonds secured by Repsol, S.A., one of them maturing at two years (nominal amount of €600 million and a quarterly coupon of 3-month Euribor + 70 basis points), and the other maturing at three years (nominal amount of €100 million and a fixed annual coupon of 0.125%). Furthermore, ROGCI repurchased bonds issued maturing in 2019, 2021, 2027, 2035, 2037, 2038 and 2042 for the nominal value of $631 million recognizing income of €49 million before tax under "Impairment and gains/ (losses) on disposal of financial instruments".

[2] This represents the first issue of a "green bond" by the Repsol Group, the funds of which are dedicated to financing and refinancing projects that seek to prevent greenhouse gas emissions as part of refining and chemical activities in Spain and Portugal. For further information, consult the Green Bond Framework published at www.repsol.com.

(2) Subordinated bond issued by Repsol International Finance, B.V. and guaranteed by Repsol, S.A. This issue does not correspond to any open-ended or shelf program.
(3) Issues placed by Repsol Oil & Gas Canada, Inc., guaranteed by Repsol, S.A., undertaken under the scope of the "*Universal Shelf Prospectus*" programs.
(4) Coupon scheduled for reset on March 25, 2025 and March 25, 2045.
(5) LuxSE (Luxembourg Stock Exchange). Multilateral trading systems or other trading centers or non-official over-the-counter markets are not considered.
(6) Issue subject to repurchase in January 2018 (see Note 31).

RIF also runs a Euro Commercial Paper (ECP) Program, arranged on May 16, 2013 and guaranteed by Repsol, S.A., with a limit up to € 2,000 million. Under this program, several issues and cancellations took place in 2017, with an outstanding balance at December 31, 2017 of €1,710 million (€1,473 million at December 31, 2016).

Financial conditions and debt obligations

In general, the financial debt agreements include the early termination clauses customary in agreements of this nature.

The ordinary bonds issued by RIF and guaranteed by Repsol, S.A. - with an aggregate face value at year-end of €6,350 million - contain early termination events (including cross-acceleration and cross-default clauses - applicable to the issuer and the guarantor) and negative pledge covenants in relation to future bond issues. If an event of default is triggered, the trustee, at their sole discretion or at the behest of the holders of at least one-fifth of the bonds or on the basis of an extraordinary bondholder resolution, is entitled to declare all the obligations under the bonds immediately due and payable. In addition, the holders of the bonds issued in 2012, 2013, 2014, 2015, 2016 and 2017 can elect to have their bonds called in the event of a change of control at Repsol or if, as a result of such change of control, Repsol's credit ratings are downgraded to below investment grade status.

Additionally, the €1,000 million subordinated bond issued on March 25, 2015 by RIF and guaranteed by Repsol, S.A. has no clauses for event of default other than in the event of dissolution or liquidation. The same conditions apply to the subordinated bond of €1,000 million described in Note 6.3.[1]

The ordinary bonds issued by ROGCI and guaranteed by Repsol, with an aggregate nominal value at year-end of €649 million, contain certain termination event clauses (including cross-acceleration or cross-default clauses - applicable to the issuer and its main subsidiaries), and a negative pledge covenant affecting the assets of the issuer and its main subsidiaries, and in relation to other debts and obligations, including future bond issues.

At the date of preparation the accompanying Consolidated Financial Statements, the Repsol Group was not in breach of any of its financial obligations or of any other obligation that could trigger the early repayment of any of its financial commitments.

At December 31, 2017 and 2016 there are no amounts secured by the Group companies in issuances, repurchases or redemptions made by associates, joint arrangements or companies that are not part of the Group.

Other financial liabilities

Includes loans granted to Group companies or entities which are not eliminated in the consolidation process, corresponding mainly to those granted by companies consolidated using the equity method. Worth particular note is the loan granted by Repsol Sinopec Brasil S.A., for the sum of €2,858 million and €3,193 million in 2017 and 2016, respectively, via its subsidiary Repsol Sinopec Brasil B.V. to its shareholders (including the Repsol Group) in proportion to their respective shareholdings (see Note 12), amounting to €2,624 and €2,942 million December 31, 2017 and 2016, respectively. This loan is renewed annually and can be called according to agreed-upon authorization levels.

[1] This bond does not involve a contractual obligation to make payment in cash or other financial assets or an obligation to exchange financial assets or liabilities.

7.3) Fair value

The classification of the financial assets and liabilities recognized in the financial statements at fair value, by fair value calculation method, is as follows:

€ Million

	Level 1		Level 2		Level 3		Total	
Financial assets	2017	2016	2017	2016	2017	2016	2017	2016
Financial assets held for trading	6	6	73	89	-	-	79	95
Other financial assets at fair value with changes through profit or loss	62	66	-	-	-	-	62	66
Available-for-sale financial assets [(1)]	1	1	-	-	-	-	1	1
Hedging derivatives	-	-	-	-	-	-	-	-
TOTAL	**69**	**73**	**73**	**89**	**-**	**-**	**142**	**162**

	Level 1		Level 2		Level 3		Total	
Financial liabilities	2017	2016	2017	2016	2017	2016	2017	2016
Financial liabilities held for trading	139	215	102	88	-	-	241	303
Hedging derivatives	-	-	70	89	-	-	70	89
TOTAL	**139**	**215**	**172**	**177**	**-**	**-**	**311**	**392**

Level 1: Valuations based on a quoted price in an active market for an identical instrument and relate mainly to derivatives held for trading and investments funds.
Level 2: Valuations based on a quoted price in an active market for similar financial assets or based on other valuation techniques that rely on observable market inputs.
Level 3: Valuations based on inputs that are not directly observable in the market.
(1) Does not include €117 million and €122 million in 2017 and 2016, respectively, related to investments in shares of companies that are recorded at acquisition cost in accordance with IAS 39.

The valuation techniques used for instruments classified under level 2, in accordance with accounting regulations, are based on the income approach, which entail the discounting to present value of future cash flows, either known or estimated, using discount curves from the market reference interest rates (in the case of derivative instruments, estimated using implicit forward curves offered in the market), including adjustments for credit risk based on the life of the instruments. In the case of options, price-setting models based on the Black & Scholes formula are used.

The most significant variables for valuing financial assets vary depending on the type of instrument, but fundamentally include: exchange rates (spot and forward), interest rate curves, counterparty risk curves, prices of equities and the volatilities of all the aforementioned factors. In all cases, market data is obtained from reputed information agencies or correspond to quotes issued by official bodies.

(8) DERIVATIVE AND OTHER TRANSACTIONS

The breakdown of derivative instruments on the consolidated balance sheet at December 31, 2017 and 2016, is as follows:

	Non-Current Assets		Current Assets		Non-Current Liabilities		Current Liabilities		Fair Value [(4)]	
€ Million	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Cash Flow Hedges [(1)]	**-**	**-**	**-**	**-**	**(68)**	**(86)**	**(2)**	**(3)**	**(70)**	**(89)**
Interest rate	-	-	-	-	(68)	(86)	(2)	(2)	(70)	(88)
Exchange rate	-	-	-	-	-	-	-	-	-	-
Product price	-	-	-	-	-	-	-	(1)	-	(1)
Net Investment Hedges [(2)]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Exchange rate	-	-	-	-	-	-	-	-	-	-
Other derivative transactions	**2**	**-**	**77**	**95**	**-**	**-**	**(241)**	**(303)**	**(162)**	**(208)**
Exchange rate	-	-	17	31	-	-	(26)	(22)	(9)	9
Commodity price	2	-	60	64	-	-	(215)	(281)	(153)	(217)
TOTAL [(3)]	**2**	**-**	**77**	**95**	**(68)**	**(86)**	**(243)**	**(306)**	**(232)**	**(297)**

(1) These are hedges of the exposure to changes in cash flows that: (i) are attributed to a particular risk associated with a recognized asset or liability, a highly probable forecasted transaction or a firm commitment, if the risk hedged is foreign currency related; and (ii) could affect profit or loss for the period.
(2) These are hedges of the exposure to foreign exchange rate changes in relation to investments in the net assets of foreign operations.

(3) In 2017 and 2016, this heading includes derivatives with a negative measurement in respect of interest rates of -€70 million and -€87 million, respectively.
(4) The fair value valuation methods are set out in Notes 7.3.

The breakdown of the impact of the fair value restatement of financial instruments on consolidated profit before tax and on consolidated equity is as follows:

	Operating income		Financial result [3]		Equity	
€ Million	2017	2016	2017	2016	2017	2016
Cash flow hedges [1]	(1)	(4)	(26)	(30)	22	18
Net investments hedges [2]	-	(12)	-	-	354	(168)
Other transactions	(61)	(226)	34	189	-	-
TOTAL	**(62)**	**(242)**	**8**	**159**	**376**	**(150)**

(1) The portion of the changes in the fair value that is determined to be an effective hedge is recognized in equity under "Hedging transactions" and the ineffective portion of the gain or loss on the hedging instrument (excess, in absolute terms, between the cumulative change in the fair value of the hedging instrument with respect to the change in the fair value of the hedged item) is recognized in the income statement. The gains or losses accumulated in equity are transferred to the income statement in the periods in which the hedged items affect income or, when the transaction hedge results in the recognition of a non-financial asset or liability, are included in the cost of the related asset or liability.
(2) Cash flow hedges are accounted for in a similar way, although any changes in valuation as part of these transactions are recognized in "Translation differences" within equity until the foreign operation subject to the hedge is sold or disposed of in any other way, at which time it is transferred to the income statement.
(3) In 2017 and 2016, short-term forward contracts and currency swaps were arranged that generated a pre-tax gain of €34 million and €189 million, which is recognized under "*Change in fair value of financial instruments*".

There follows a detailed disclosure of the Group's most significant transactions related to derivative financial instruments at December 31, 2017 and 2016.

8.1) Accounting hedges

The most significant transactions correspond to:

- Financial instruments designated as net investment hedge in certain dollar-denominated assets in the *Upstream* segment and whose notional as of this date is $3,080 million (€2,742 million). At December 31, 2016 the notional of net investment hedges amounted to $3,058 million (€2,722 million).

- The hedges arranged in 2016 over product prices corresponded mainly to hedges of dollar-denominated cash flows; the aim was to hedge gas price variability. These instruments matured within less than one year. As of December 31, 2016, the notional amount stood at €28 million and fair value at -€1 million.

- Cash flow hedges in the form of interest rate swaps arranged in 2014 for a notional amount of €1,500 million to hedge future bond issues in late 2014 and early 2015 (see Note 7.2). Under these arrangements, the Group paid a weighted average interest rate of 1.762% and received 6-month EURIBOR. In 2017, these hedges generated a €12 million gain in profit and loss (€15 million in 2016). The fair value changes recognized in equity and pending to be reclassified to profit and loss stood at a loss of €-83 million (after tax) at December 31, 2017 (-€92 million after tax at December 31, 2016).

- A cash flow hedge in dollars in the form of interest rate swaps associated with the facility funding the investment in the Canaport LNG project (Canada), written over a notional amount of €297 million, maturing after 2019 and with a negative fair value at year-end of €70 million. At December 31, 2016, the notional amount stood at €352 million and negative fair value at €88 million.

8.2) Other derivative transactions

Repsol has arranged a series of derivatives to manage its exposure to foreign exchange rate and price risk that do not qualify as accounting hedges under IAS 39. These derivatives include currency forward contracts which mature in less than a year, as part of the global strategy to manage the exposure to exchange-rate risk. Additionally, for the coverage of the product risk that derives from future physical transactions such as the selling and/or purchase of oil and other petroleum products, the Group has entered into futures and swap contracts.

The breakdown of these derivatives at December 31, 2017 and 2016 is provided below:

	Fair value maturity											
€ Million	2017						2016					
Classification	2018	2019	2020	2021	Seq.	Total	2017	2018	2019	2020	Seq.	Total
Exchange rate	**(9)**	**-**	**-**	**-**	**-**	**(9)**	**9**	-	-	-	-	**9**
Product price	**(155)**	**2**	**-**	**-**	**-**	**(153)**	**(217)**	**-**	**-**	**-**	**-**	**(217)**
Purchase agreements	400	-	(2)	(1)	-	397	620	-	-	-	-	620
Sale agreements	(409)	2	2	1	-	(404)	(676)	-	-	-	-	(676)
Options	1	-	-	-	-	1	-	-	-	-	-	-
Forwards	13	-	-	-	-	13	-	-	-	-	-	-
Swaps	(156)	-	-	-	-	(156)	(171)	-	-	-	-	(171)
Others [1]	(4)	-	-	-	-	(4)	10	-	-	-	-	10
TOTAL	**(164)**	**2**	**-**	**-**	**-**	**(162)**	**(208)**	**-**	**-**	**-**	**-**	**(208)**

[1] Long-term oil and gas sale and purchase firm commitments are analyzed with the aim to determine whether they correspond to the supply or marketing needs of the normal business activities of the Group or whether, on the contrary, these should be considered as a derivative instrument and be recognized in accordance with the criteria set forth in IAS 39.

The physical units and the fair value of the product price derivatives are itemized below:

	12/31/2017		12/31/2016	
	Physical Units	Fair Value (€ Million)	Physical Units	Fair Value (€ Million)
Purchase agreements		**397**		**620**
IPE GO (Thousand Tons)	-	-	201	14
BRENT (Thousand barrels)	38,097	260	5,809	164
NYMEX HHO (Thousand gallons)	-	-	239	203
RBOB (Thousand gallons)	150,704	38	205	191
WTI (Thousand barrels)	7,488	38	797	39
NAT GAS (Thousand gallons)	101,745,517	(5)	-	-
GO (Thousand tons)	909	49	-	-
HO (Thousand gallons)	85,093	18	-	-
Other	-	(1)	-	9
Sale agreements		**(404)**		**(676)**
IPE GO (Thousand Tons)	-	-	419	(20)
BRENT (Thousand barrels)	41,569	(247)	6,586	(174)
NYMEX HHO (Thousand gallons)	-	-	294	(207)
RBOB (Thousand gallons)	225,339	(35)	203	(192)
WTI (Thousand barrels)	6,712	(32)	255	(44)
Physical SoNAt (Thousand gallons)	-	-	110,771	37
Physical Tenn 800 Leg (Thousand gallons)	-	-	243,962	(25)
Physical Tenn 500 Leg (Thousand gallons)	313,973	-	686,134	(17)
GO (Thousand tons)	1,166	(54)	417	(14)
Physical Dom South (Thousand gallons)	(86,679)	-	70,992	(14)
NAT GAS (Thousand gallons)	109,830,739	(16)	-	-
HO (Thousand gallons)	105,378	(18)	-	-
Other	-	(2)	-	(6)
Swaps		**(156)**		**(171)**
NAT GAS (Thousand gallons)	1,075,772	(10)	6,654,023	(36)
Fuel Oil (Thousand Tons)	4,355	(73)	5,154	(57)
Crude oil (Thousands of barrels)	22,123	(73)	19,829	(54)
NAPHTHA (Thousand tons)	1,489	(2)	1,566	3
Jet (Thousand Tons)	-	-	338	(1)
Other	-	2	-	(26)
Forwards		**13**		-
NAT GAS (Thousand gallons)	4,913,064	13	-	-
Options		**1**	-	-
Other	-	1	-	-
Other	-	**(4)**	-	**10**
TOTAL		**(153)**		**(217)**

(9) FINANCIAL RISKS[1]

9.1) Financial risk management

Group business is exposed to different kinds of financial risk, including: market risk, liquidity risk and credit risk. Repsol has a risk management structure and systems that enable it to identify, measure and control the risks to which the Group is exposed.

9.1.1) Market risk

Market risk is the potential loss faced due to adverse movements in market variables. The Group is exposed to various types of market risk: exchange rate risk, interest rate risk and commodity price risk.

The Company monitors exposure to market risk through ongoing sensitivity analysis. These strategies are complemented with other risk management measures when required by the nature of the risk exposure. For example, commodity risk, exchange rate and interest rate risk that affect the income statement are subject to maximum risk levels, measured in terms of Value at Risk (VaR), defined by the Corporate Executive Committee in line with the different authorization levels and supervised on a daily basis by a separate area to the area responsible for management.

For each of the market risk factors detailed below, there is a table depicting the sensitivity of Group profit and equity (within the headings comprising "*Other comprehensive income*") to the main risks to which its financial instruments are exposed, in accordance with the requirements stipulated in IFRS 7 *Financial instruments: data to be disclosed*.

This sensitivity analysis uses changes to representative variables based on historical performance. The estimates made depict the impact of both favorable and adverse scenarios. The impact on profit and/or equity is estimated as a function of the financial instruments held by the Group at each year end.

a) <u>Exchange rate risk</u>

The Group's profit and equity are exposed to fluctuations in the exchange rates of the currencies in which it transacts, with the US dollar generating the greatest level of exposure.

Exposure to exchange-rate risk can be traced, on the one hand, to financial assets and investments and monetary flows and liabilities in currencies other than the functional currency of the Group's parent company (in this connection, Repsol hedges assets in foreign currency, often regarding decisions to proceed with divestments or the sale of assets, which are normally designated as net investment hedges, structured through derivative instruments or loans in the corresponding currencies, primarily US dollars) and, on the other hand, exchange-rate risk extends to Group companies whose assets, liabilities and monetary flows are denominated in a currency other than the functional currency of said companies, with the following of particular importance in this connection: (i) cash flows from international trade operations involving crude oil, natural gas and refined products are usually carried out in US dollars; and (ii) local operations carried out in the countries in which Repsol operates are exposed to fluctuations in the exchange rates of the corresponding local currencies compared to currencies in which commodities are traded.

Repsol permanently monitors the Company's exposure to fluctuations in the exchange rate of currencies in which it undertakes significant operations and actively manages exchange-rate risk positions that affect the Group's income statement. To this end, it contracts derivative financial instruments that seek to provide a consolidated economic hedge of currencies for which there is a liquid market.

Furthermore, cash flows are subject to accounting hedges with a view to protecting the economic value of the flows corresponding to investment and divestment operations, corporate operations or project execution or one-off contracts for which the monetary flow is distributed over a period of time.

[1] Repsol has an integrated risk management model designed to anticipate, manage, and control risks from a global perspective. For further information on the integrated risk management model and the risk factors to which the Group is exposed, see section 2.4 "Risk Management" of the Management Report (www.repsol.com).

In terms of the financing obtained in dollars, see Note 7, and concerning the information on exchange rate derivatives, see Note 8.

The sensitivity of net income and equity to exchange rate risk, as a result of the appreciation or depreciation of the euro against the dollar, on the financial instruments held by the Group at December 31, is illustrated below:

	Appreciation (+) / depreciation (-) in exchange rates	€ Million	
		2017	2016
Effect on earnings after tax	5%	6	(27)
	-5%	(6)	30
Effect on equity	5%	(28)	202
	-5%	31	(223)

b) Interest rate risk

Fluctuations in interest rates can affect interest income and expense of financial assets and liabilities with variable interest rates; which may also impact the fair value of financial assets and liabilities with a fixed interest rate. Furthermore, these variations can affect the carrying value of assets and liabilities due to variations in the discount rates of applicable cash flows, the profitability of investments and the future cost of raising financial resources.

Repsol's debt is linked to the most competitive financial instruments at the time, both in terms of the capitals market and banking market and based on the market conditions considered most ideal accordingly. Furthermore, Repsol contracts interest rate derivatives to reduce the risk of variations in financial burdens and in the fair value of its debt, and to mitigate the interest-rate risk on future fixed-time debt issues, which are designated in general as hedging instruments (see Note 8).

At year end 2017 and 2016, the net debt balance at fixed rates was €8,094 million and €9,302 million respectively. This is equivalent to 108% and 100%, respectively, of total net debt including interest rate derivatives.

The sensitivity of net income and equity, as a result of the effect of fluctuations in interest rates on the financial instruments held by the Group at December 31 is illustrated in the following table:

	Increase (+) / decrease (-) in interest rates (basic points)	€ Million	
		2017	2016
Effect on earnings after tax	50 b.p.	2	-
	-50 b.p.	(2)	-
Effect on equity	50 b.p.	13	14
	-50 b.p.	(13)	(14)

c) Commodity price risk

As a result of its trade operations and activities, the Group's results are exposed to volatility in the prices of oil, natural gas and their derivative products.

Repsol enters into derivative transactions to mitigate its exposure to price risk. These derivatives provide an economic hedge of the Group's results, although they are not always designated as hedging instruments for accounting purposes (see Note 8).

The approximate impact of a 10% increase or decrease in crude and oil product prices in the net income, as a result of its effects on the financial instruments held by the Group at year end 2017 and 2016, is illustrated in the following table.

	Increase (+) / decrease (-) in crude oil and byproducts prices	€ Million	
		2017	2016
Effect on earnings after tax	+10%	(4)	(33)
	-10%	4	33

9.1.2) Liquidity risk

The liquidity policy applied by Repsol is structured around guaranteeing the availability of the necessary funds to ensure compliance with obligations assumed and the evolution of the Group's business plans, whilst retaining the ideal amount of liquid resources and seeking the highest level of efficiency in the management of financial resources at all times. In line with this prudent financial policy, Repsol maintains cash resources and other liquid financial instruments[1] and undrawn credit lines sufficient to cover current debt maturities 1.8 times.

Repsol controls and monitors its financial needs ranging from the production of daily cash flow forecasts to the financial planning involved in the annual budgets and its strategic plan; it maintains diversified and stable sources of financing that facilitate efficient access to financial markets, all within the framework of a financing structure that is compatible with the corresponding credit rating in the investment grade category.

The Group had undrawn credit facilities amounting to €2,503 million and €4,429 million at December 31, 2017 and 2016, respectively.

The tables below contain an analysis on the maturities of the financial liabilities existing at December 31, 2017 and 2016:

	Maturities (€ Million)							Maturities (€ Million)						
	2017							2016						
December 31, 2017	2018	2019	2020	2021	2022	Seq.	Total	2017	2018	2019	2020	2021	Seq.	Total
Loans and other financial debts (1)	4,313	1,523	2,177	1,249	695	7,925	17,882	7,068	1,918	1,961	2,155	1,529	5,810	20,441
Derivatives (2)	34	9	8	7	6	30	93	130	12	10	9	8	35	204
Suppliers	2,738	-	-	-	-	-	2,738	2,128	-	-	-	-	-	2,128
Other receivables	4,280	-	-	-	-	-	4,280	4,365	-	-	-	-	-	4,365

NOTE: The amounts shown are the contractual undiscounted cash flows; therefore, they differ from the amounts included on the consolidated balance sheet. Obligations under finance leases are not included (See Note 14)

(1) Corresponds to future maturities of amounts registered under the *"Non-current financial liabilities"* and *"Current financial liabilities"* items, including interests or future dividends related to those financial liabilities. It does not include financial derivatives.

(2) The contractual maturities of the derivatives included under this heading are outlined in Note 8. It does not include trade derivatives recognized in "Other non-current liabilities" and "Other payables" in the consolidated balance sheet.

9.1.3) Credit risk[2]

Credit risk is defined as the possibility of a third party not complying with his contractual obligations, thus creating losses for the Group and is measured and controlled per individual customer or third-party. The Group has its own systems for the permanent credit evaluation of all its debtors and the determination of risk limits with respect to third parties, in line with best practices.

The Group periodically assesses the existence of objective evidence of impairment after a financial asset has been initially recognized; if it is determined that there is credit loss, the respective provisions are assigned. The criteria for allocating these provisions include the following: i) the age of the debt; ii) the existence of insolvency proceedings; and iii) an analysis of the customer's capacity to return the credit granted.

The maximum exposure (prior to impairment remeasurements) to credit risk of the Group, according to the type of financial instruments and without excluding the amounts covered by guarantees and other arrangements mentioned further on this note, is detailed below:

		€ Million	
Maximum exposure	Note	2017	2016
Trade receivables (1)	18	5,565	4,960
Non-current financial assets (2)	7	3,712	3,174
Other current financial assets	7	240	1,249
Cash and cash equivalents	7	4,601	4,687
Derivatives	7	79	95

(1) Accounts receivable have a credit quality assigned according to the valuations of the Group, based on the solvency analysis and the payment

1 Includes time deposits with immediate availability recognized in "Other current financial assets" in the amount of €231 million.
2 The credit risk information set out in this section does not include credit risk of associates or joint ventures.

habits of each customer.

(2) Not including derivatives. At December 31, 2017 and 2016 this item includes the loans granted to the Petersen group to fund the acquisition of its interest in YPF S.A.; these loans have been fully written down for impairment.

The trade debts are shown on the consolidated balance sheet at December 31, 2017 and 2016 net of allowances for impairment provisions for an amount of €5,392 million and €4,829 million, respectively. Note 18 includes impairment losses at December 31, 2017 and 2016. These provisions represent the Group's best estimate of the losses on the receivables. The following table shows the age of trade receivables:

	€ Million	
Maturities	2017	2016
Unmatured debt	4,819	4,486
Unmatured debt 0-30 days	240	192
Unmatured debt 31-180 days	94	67
Unmatured debt over 180 days	239	84
TOTAL	**5,392**	**4,829**

The Group's credit risk on trade receivables is not significantly concentrated as it is spread out among a large number of customers and other counterparties. The maximum net exposure to a third party, including official bodies and public sector entities, does not exceed 3.5%, and no single private client accumulates risk exposure of more than 2%.

As a general rule, the Group establishes a bank guarantee issued by the financial entities as the most suitable instrument of protection from credit risk. In some cases, the Group has contracted insurance credit policies whereby this transfers partially to third parties the credit risk related to the business activity of some of their businesses.

As part of its business activities, the Group has guarantees provided by third parties in an aggregate amount of €3,402 million at December 31, 2017 (€3,992 million in 2016). Of this amount, trade payables covered by guarantees at December 31, 2017 and 2016 amount to €537 and €801 million, respectively. During 2017 and 2016, the Group executed guarantees received for an amount of €3 and €6 million, respectively.

The Group's exposure to credit risk also derives from debts with a financial nature which are carried on the consolidated balance sheet net of the corresponding impairment provisions. The breakdown of impaired financial assets and the impact on the consolidated income statement are provided in Note 7.

The credit risk affecting liquid funds, derivatives and other financial instruments is generally more limited than the accounts trade receivables because the counterparties are banks or insurance entities that meet the standards of solvency in accordance with the internal valuation models and market conventions regulating these kinds of financial transactions.

(10) INTANGIBLE ASSETS

The breakdown of the intangible assets and of the related accumulated depreciation and impairment losses at December 31, 2017 and 2016 is as follows:

	Intangible Assets									
		Upstream			Downstream				Corporate	
GROSS COST	Goodwill	Exploration permits	Computer software	Other assets	Service station association rights and other rights [2]	Computer software	Carbon emission allowances [3]	Concessions and other [4]	Computer software and other	**Total**
Balance at January 1, 2016	3,268	1,740	169	77	783	233	82	289	278	**6,919**
Investments [1]	(1)	176	12	-	10	33	-	4	13	247
Retirements or removals	-	(42)	(4)	1	(33)	-	-	(2)	-	(80)
Translation differences	87	94	5	2	4	1	-	(4)	-	189
Change in scope of consolidation	(67)	1	(4)	-	(1)	(3)	-	(98)	-	(172)
Reclassifications and other movements	8	360	8	30	5	2	2	9	-	424
Balance at December 31, 2016	**3,295**	**2,329**	**186**	**110**	**768**	**266**	**84**	**198**	**291**	**7,527**
Balance at January 1, 2017	**3,295**	**2,329**	**186**	**110**	**768**	**266**	**84**	**198**	**291**	**7,527**
Investments [1]	-	170	16	-	17	41	19	1	21	285
Retirements or removals	-	(16)	(11)	-	(58)	-	-	(8)	2	(91)
Translation differences	(330)	(266)	(18)	(2)	(12)	(5)	-	(2)	-	(635)
Change in scope of consolidation	(9)	(44)	-	-	-	-	-	-	-	(53)
Reclassifications and other movements	(9)	48	3	(28)	31	(2)	(34)	(7)	(7)	(5)
Balance at December 31, 2017	**2,947**	**2,221**	**176**	**80**	**746**	**300**	**69**	**182**	**307**	**7,028**
ACCUMULATED AMORTIZATION AND IMPAIRMENT LOSSES										
Balance at January 1, 2016	(169)	(859)	(59)	(69)	(484)	(140)	-	(160)	(197)	**(2,137)**
Depreciation	-	(139)	(34)	(1)	(41)	(17)	-	-	(23)	(255)
Retirements or removals	-	35	2	-	32	-	-	2	-	71
Impairment losses recognized/(reversed)	(20)	(67)	-	66	-	-	(12)	(2)	-	(35)
Translation differences	-	(37)	(3)	(2)	(2)	(1)	-	(1)	-	(46)
Change in scope of consolidation	9	(2)	1	-	1	2	-	-	-	11
Reclassifications and other movements	-	8	(3)	(30)	3	-	(1)	(4)	-	(27)
Balance at December 31, 2016	**(180)**	**(1,061)**	**(96)**	**(36)**	**(491)**	**(156)**	**(13)**	**(165)**	**(220)**	**(2,418)**
Balance at January 1, 2017	**(180)**	**(1,061)**	**(96)**	**(36)**	**(491)**	**(156)**	**(13)**	**(165)**	**(220)**	**(2,418)**
Depreciation	-	(48)	(26)	(1)	(40)	(20)	-	(1)	(24)	(160)
Retirements or removals	-	9	10	-	57	-	-	1	(2)	75
Impairment losses recognized/(reversed)	(4)	(70)	-	(66)	(1)	-	-	(2)	-	(143)
Translation differences	-	115	10	-	9	1	-	1	2	138
Change in scope of consolidation	-	20	-	-	-	-	-	-	-	20
Reclassifications and other movements	-	(17)	-	36	(2)	-	13	7	6	44
Balance at December 31, 2017	**(184)**	**(1,052)**	**(102)**	**(67)**	**(468)**	**(175)**	**-**	**(159)**	**(238)**	**(2,444)**
Net balance at December 31, 2016 [5]	**3,115**	**1,268**	**90**	**74**	**277**	**110**	**71**	**33**	**71**	**5,109**
Net balance at December 31, 2017 [5]	**2,763**	**1,169**	**74**	**13**	**278**	**125**	**69**	**23**	**69**	**4,584**

[1] The additions recognized in 2017 and 2016 derive from direct asset acquisitions. Investments in "*Exploration permits*" mainly refer to activating geology and geophysics costs in the amount of €170 million and €175 million in 2017 and 2016 respectively.

[2] Service station association rights and other rights are legal rights, title to which is conditional upon the terms of the underlying contracts.

[3] In 2017, this includes €51 million corresponding to CO_2 free-allocated allowances in 2017 under Spain's National Allocation Plan and the derecognition corresponding to allowances consumed as a result of emissions made during 2016 in the amount of €72 million. In 2016, it mainly includes €68 million corresponding to CO_2 free-allocated allowances in 2016 under Spain's National Allocation Plan and the derecognition corresponding to allowances consumed as a result of emissions made during 2015 in the amount of €83 million. For further information about CO_2 allowances, see Note 29.4.

[4] Primarily includes the concession in the port of A Coruña.

[5] In 2017 and 2016, this includes €165 million and €158 million of assets acquired under finance leases, respectively, mainly corresponding to gas station association rights. Additionally, it includes €7 million and €6 million of intangible assets with indefinite useful lives (these assets are not amortized but they are tested at least on an annual basis for impairment) in 2017 and 2016, respectively.

Goodwill

The breakdown of goodwill, by segment and company, at December 31, 2017 and 2016 is as folows:

Goodwill	€ Million 2017	2016
Upstream (1)		
Repsol Oil & Gas Canada, Inc.	2,333	2,666
Other companies	14	14
Downstream (2)		
Repsol Portuguesa, S.A.	154	154
Repsol Gas Portugal, S.A.	106	118
Repsol Comercial de Productos Petrolíferos, S.A.	104	102
Other companies	53	61
TOTAL (3)	**2,764**	**3,115**

(1) Almost the entirety of this item reflects the goodwill arising from the acquisition of ROGCI in 2015 and allocated for the purpose of evaluating its recoverability in the *Upstream* segment (see Note 1.4).
(2) Corresponds to 9 CGU being the most significant individual amount not exceeding to 32% of the total of segment. Of the total, €389 million and €401 million in 2017 and 2016, respectively, correspond to companies whose main activities are undertaken in Europe.
(3) Includes €184 million and €180 million of impairment losses in 2017 and 2016 respectively.

For CGUs with goodwill and/or assets with indefinite useful lives allocated, the Group performs sensitivity analysis in order to quantify if changes in the recoverable amounts, calculated according to the method described in Note 3, of these CGUs would have a significant impact in the financial statements. Specifically, in performing the most significant sensitivity analysis, the following inputs have been taken into consideration.

Sensitivity analysis	
Decrease in the price of hydrocarbons (Brent and HH)	10%
Decrease in sales volume	5%
Increase in operating and investment costs	5%
Decrease in the unit contribution margin	5%
Increases in the discount rate	100 b.p.

Repsol considers, based on its current knowledge, that the reasonably predictable changes in the key inputs for determining the fair value of CGUs to which goodwill has been allocated would not have a material impact on the Group’s financial statements at December 31, 2017 as a result of the recoverable value of its goodwill.

(11) PROPERTY, PLANT AND EQUIPMENT

The breakdown of *"Property, plant and equipment"* and of the related accumulated depreciation and impairment losses at December 31, 2017 and 2016 is as follows:

	Property, plant and equipment								
	Upstream			Downstream				Corporate	
GROSS COST (1)	Investments in areas with oil reserves	Investment in exploration	Other fixed assets	Land, buildings and other structures	Machinery and plant	Other fixed assets	Assets under construction	Land, buildings and other (5)	**Total**
Balance at January 1, 2016	**24,797**	**4,765**	**531**	**2,006**	**18,535**	**1,145**	**934**	**1,057**	**53,770**
Investments	710	252	82	-	8	36	649	18	1,755
Retirements or removals	(24)	(285)	(26)	(7)	(89)	(13)	(1)	(5)	(450)
Translation differences	856	130	15	17	93	10	(1)	-	1,120
Changes in scope of consolidation (2)	(1,012)	(71)	(39)	(24)	(134)	(123)	(6)	-	(1,409)
Reclassifications and other movements (2) (3)	671	(512)	(83)	10	712	159	(886)	(47)	24
Balance at December 31, 2016	**25,998**	**4,279**	**480**	**2,002**	**19,125**	**1,214**	**689**	**1,023**	**54,810**
Balance at January 1, 2017	**25,998**	**4,279**	**480**	**2,002**	**19,125**	**1,214**	**689**	**1,023**	**54,810**
Investments	922	274	33	1	11	27	670	14	1,952
Retirements or removals	(157)	(19)	(20)	(22)	(171)	(7)	(3)	(1)	(400)
Translation differences	(3,208)	(456)	(55)	(66)	(350)	(39)	(21)	-	(4,195)
Changes in scope of consolidation (2)	(5)	(116)	(2)	-	-	-	-	-	(123)
Reclassifications and other movements (3)	558	(427)	1	26	419	23	(491)	1	110
Balance at December 31, 2017	**24,108**	**3,535**	**437**	**1,941**	**19,034**	**1,218**	**844**	**1,037**	**52,154**
ACCUMULATED AMORTIZATION AND IMPAIRMENT LOSSES (1)									
Balance at January 1, 2016	**(9,495)**	**(2,455)**	**(166)**	**(1,005)**	**(11,157)**	**(903)**	**-**	**(387)**	**(25,568)**
Depreciation	(1,415)	(117)	(46)	(35)	(586)	(34)	-	(41)	(2,274)
Retirements or removals	6	271	11	4	73	15	-	3	383
Impairment losses recognized/(reversed)	(30)	(11)	(11)	1	(207)	21	-	-	(237)
Translation differences	(354)	(67)	(6)	(13)	(64)	(3)	-	-	(507)
Change in scope of consolidation	488	45	8	7	63	50	-	-	661
Reclassifications and other movements (3)	57	(47)	16	24	(22)	1	-	-	29
Balance at December 31, 2016	**(10,743)**	**(2,381)**	**(194)**	**(1,017)**	**(11,900)**	**(853)**	**-**	**(425)**	**(27,513)**
Balance at January 1, 2017	**(10,743)**	**(2,381)**	**(194)**	**(1,017)**	**(11,900)**	**(853)**	**-**	**(425)**	**(27,513)**
Depreciation	(1,371)	(135)	(21)	(35)	(602)	(38)	-	(37)	(2,239)
Retirements or removals	121	8	11	21	168	6	-	-	335
Impairment losses recognized/(reversed)	170	(247)	-	4	5	(1)	-	-	(69)
Translation differences	1,351	270	21	51	241	15	-	-	1,949
Change in scope of consolidation	10	10	1	-	-	-	-	-	21
Reclassifications and other movements (3)	(14)	(23)	(6)	(6)	(33)	44	-	-	(38)
Balance at December 31, 2017	**(10,476)**	**(2,498)**	**(188)**	**(982)**	**(12,121)**	**(827)**	**-**	**(462)**	**(27,554)**
Net balance at December 31, 2016 (4)	**15,255**	**1,898**	**286**	**985**	**7,225**	**361**	**689**	**598**	**27,297**
Net balance at December 31, 2017 (4)	**13,632**	**1,037**	**249**	**959**	**6,913**	**391**	**844**	**575**	**24,600**

(1) The Repsol Group uses the cost model by which items of property, plant and equipment are measured initially at acquisition cost. With the exception of exploration and production activities (see Note 2), amortization is carried out on a straight-line basis, in line with its estimated useful life, once in ideal conditions of use. Below is the estimated useful life of the main assets:

	Estimated useful life (years)
Buildings and other constructions	20-50
Machinery and facilities:	
Machinery, fixtures and tools	8-25
Specialized complex facilities:	
Units	8-25
Storage tanks	20-40
Pipelines and networks	12-25
Gas and electricity infrastructure and distribution facilities	12-40
Transport equipment	5-20
Other PP&E:	
Furniture and fixtures	9-15

(2) See Note 1.4.
(3) In 2017 and 2016, this item includes reclassifications from *"Assets under construction"*, mainly to *"Machinery and plant"*, as a result of several upgrade, repair and remodeling projects at the Group's refineries.
(4) At December 31, 2017 and 2016, the value of accumulated inventory impairment came to €4,023 and €4,732 million, respectively.
(5) Mainly includes *"Land and buildings"* for the sum of €468 million and €476 million and *"Machinery and plant"* and *"Other property"* for the sum of €106 and €122 million in 2017 and 2016, respectively.

The breakdown by geography of the Group's most significant investments is detailed in Note 5.2 *"Disclosures by geography and segment"*, which is presented using the Group's reporting model.

"Property, plant and equipment" includes €517 million and €640 million in 2017 and 2016, respectively, corresponding to the carrying value of assets acquired under finance leases. Worth particular mention among the assets acquired under finance leases at year-end 2017, are the gas pipelines and other assets for the transportation of gas in the USA and Canada, in the carrying amount of €489 million and €587 million at December 31, 2017 and 2016, respectively (see Note 14).

This heading also includes investments made by the Group in service concession arrangements in the amount of €269 million and €246 million at December 31, 2017 and 2016, respectively. These concessions revert to the State over a period of time ranging from 2018 to 2054.

Repsol capitalizes qualifying borrowing costs In 2017 and 2016, the average capitalization cost was 2.77% and 2.97%, and the costs capitalized in this respect came to €98 and €109 million, respectively, recognized in "Financial result" in the income statement.

The figures corresponding to non-depreciable assets, that is, land and assets under construction, amount, respectively, to €577 million and €929 million at December 31, 2017, respectively and €583 million and €766 million at December 31, 2016, respectively.

"Property, plant and equipment" includes fully depreciated items with an original carrying amount of €8,898 million and €9,109 million at December 31, 2017 and 2016, respectively.

In accordance with industry practices, Repsol insures its assets and operations worldwide. Among the risks insured are damage to property, plant and equipment, together with the subsequent interruptions in its business that such damage may cause. The Group believes that the current coverage level is, in general, appropriate for the risks inherent to its business.

(12) INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

Movement in this consolidated balance sheet heading during 2017 and 2016 was as follows:

	€ Million	
	2017	2016
Balance at January 1	**10,176**	**11,797**
Net investments [(1)]	313	(1,193)
Changes in scope of consolidation	81	1
Share of results from investments accounted for using the equity method	904	194
Dividends distributed	(676)	(729)
Translation differences	(913)	312
Reclassifications and other movements	(617)	(206)
Balance at December 31	**9,268**	**10,176**

[(1)] In 2017, mainly consists of capital contributions in BPRY Caribbean Ventures, LLC. and Repsol Sinopec Resources UK Ltd. In 2016, mainly included the sale of its 10% interest in Gas Natural SDG, S.A. (see Note 1.4) and the capital contributions to BPRY Caribbean Ventures, LLC. and Repsol Sinopec Resources UK Ltd.

The breakdown of the investments accounted for using the equity method and the Group's share of their results using this method is provided in the table below:

	€ Million			
	Carrying value of investment [(3)]		Share of results [(4)]	
	2017	2016	2017	2016
Joint ventures	5,969	6,713	693	(168)
Associates [(1)]	3,299	3,463	211	362
TOTAL [(2)]	**9,268**	**10,176**	**904**	**194**

(1) This mainly includes interests in Gas Natural SDG, S.A. and Petrocarabobo, S.A.
(2) Includes reversal of provision for obligations arising from the stake in Repsol Sinopec Resources UK Ltd. (see Note 13).
(3) In 2017, €5,714 million correspond to the *Upstream* segment (€6,593 million in 2016), mainly relating to joint ventures.
(4) Corresponds to the net income for the period from continuing and discontinued operations. Does not include "Other comprehensive income" of -€944 million (€-753 million corresponding to joint ventures and -€191 million to associates) and €355 million (€244 million corresponding to joint ventures and €109 million corresponding to associates) in 2017 and 2016, respectively, mainly due to translation differences.

Joint ventures take place when the Repsol Group, based on shareholder agreements signed with each of the partners in each company, makes strategic operational and financial decisions in consensus with the controlling parties. The most significant joint ventures are:

Joint ventures

Repsol Sinopec Brasil (RSB)

Repsol, S.A. holds a 60% interest in the Repsol Sinopec Brasil (RSB) group, which comprises Repsol Sinopec Brasil, S.A. and its subsidiaries (see Appendix I). Repsol's stake is implemented by holding 60% interest in Sinopec Brasil, S.A.

This entity´s main businesses are oil and gas exploration and production, the import and export of crude oil and gas and derivative products, the storage, distribution and sale of crude oil, oil derivatives and natural gas, as well as the provision of services related to these activities. It operates mainly in Brazil.

Regarding the loans granted to the Repsol Group by RSB, see Note 7.2.

YPFB Andina, S.A.

Repsol holds 48.33% of YPFB Andina, S.A., through Repsol Bolivia, S.A., which chiefly engages in oil and gas exploration, operation and marketing. It operates mainly in Bolivia.

BPRY Caribbean Ventures, LLC. (BPRY)

Repsol holds a 30% interest in BPRY Caribbean Ventures LLC (through Repsol Exploración, S.A.), which, together with its subsidiaries, engages in oil and gas exploration, operation and marketing and related activities, such as construction and operation of oil rigs, pipelines and other facilities in Trinidad and Tobago.

Petroquiriquire, S.A.

Repsol has a 40% stake in Petroquiriquire, S.A. through Repsol Exploración, S.A. Petroquiriquire is a public-private venture, partly held by Corporación Venezolana de Petróleo, S.A., (CPV) with 56% and PDVSA Social, S.A. with 4%. Its core activity is the production and sale of oil and gas in Venezuela. For information on the Group's risks and exposure in Venezuela, see Note 21.

Cardón IV, S.A.

Repsol has a 50% stake in Cardón IV, S.A. through Repsol Exploración, S.A. The other 50% is owned by the ENI group. Cardón IV is a gas licensee whose core activity is the production and sale of gas in Venezuela. For information on the Group's risks and exposure in Venezuela, see Note 21.

Equion Energía Ltd.

Equion is a company held 51% and 49% by Ecopetrol, S.A. and Talisman Colombia Holdco, Ltd, respectively. Equion mainly explores for, researches, exploits, develops and sells oil and gas and derivative products in Colombia. Based on a shareholder agreement with Ecopetrol, S.A., Repsol treats Energía Ltd. as one of its joint ventures.

Repsol Sinopec Resources UK Ltd. (RSRUK)

RSRUK is held by Talisman Colombia Holdco, Ltd, and Addax Petroleum UK Limited ("Addax"), a subsidiary of the Sinopec Group, with a 51% and 49% stake, respectively, and whose core business is the exploration and exploitation of oil and gas in the North Sea. This joint venture is governed by a shareholder agreement that requires the unanimous consent of both shareholders for all significant financial and operating decisions. The amount of this investment in the Group's financial statements is nil and in 2017, the provision to cover its obligations deriving from its investment was reversed in full, see Note 13. For information on the arbitration procedure concerning the purchase by Addax of its 49% stake in RSRUK, see Note 16.

The tables below provide summarized financial information for these investments, prepared in keeping with IFRS-EU accounting policies, as detailed in Note 2 and reconcile these disclosures with the amounts at which these investments are carried in the Group's consolidated financial statements:

Income from joint ventures:

	RSB		YPFB Andina		BPRY		Petroquiriquire		Cardón IV		Equion	
€Million	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Operating revenue	1,490	957	254	266	1,516	939	342	294	734	697	437	393
Amortization and impairment provisions[(1)]	(399)	(323)	(151)	(157)	(739)	(638)	(427)	(40)	(731)	(614)	(142)	(232)
Other operating expenses[(2)]	(769)	(508)	(108)	(110)	(964)	(719)	(771)	(452)	(240)	(217)	(83)	(148)
Operating income	**322**	**126**	**(5)**	**(1)**	**(187)**	**(418)**	**(856)**	**(198)**	**(237)**	**(134)**	**212**	**13**
Finance income	104	70	153	159	(10)	1	83	371	58	54	-	14
Finance costs[(3)]	(22)	22	(158)	(165)	(111)	(55)	(108)	108	(314)	(321)	(6)	(1)
Share of results from investments accounted for using the equity method - net of taxes	19	11	12	(12)	-	-	-	-	-	-	-	-
Income before tax	**423**	**229**	**2**	**(19)**	**(308)**	**(472)**	**(881)**	**281**	**(493)**	**(401)**	**206**	**26**
Income tax	(80)	90	7	8	(24)	215	338	(587)	51	(99)	32	64
Net income for the period from continuing operations	343	319	9	(11)	(332)	(257)	(543)	(306)	(442)	(500)	238	90
Net income for the period from discontinued operations	-	-	-	-	-	-	-	-	-	-	-	-
Net income for the period attributable to the parent	**343**	**319**	**9**	**(11)**	**(332)**	**(257)**	**(543)**	**(306)**	**(442)**	**(500)**	**238**	**90**
Repsol stakeholding	60%	60%	48%	48%	30%	30%	40%	40%	50%	50%	49%	49%
Consolidation income	**206**	**191**	**4**	**(5)**	**(100)**	**(77)**	**(217)**	**(122)**	**(221)**	**(250)**	**117**	**44**
Dividends	**132**	**121**	**-**	**5**	**5**	**-**	**140**	**164**	**-**	**-**	**64**	**104**
Other comprehensive income [(4)]	**(574)**	**178**	**(61)**	**24**	**(75)**	**19**	**(5)**	**(1)**	**14**	**4**	**(23)**	**4**

Note: The itemized amounts below feature the percentage stake of the Group in each of the companies:

(1) In 2017, Petroquiriquire and Cardón IV include the impairment of property, plant and equipment for the sum of €151 million and €327 million, respectively (€260 million in Cardón IV in 2016). See Note 21.

(2) In 2017 and 2016, RSB includes operating lease expenses of €123 million and €102 million, respectively, mainly under floating production platform (FPSO units) lease commitments that are secured by the Group (see Note 15). In 2017, Petroquiriquire includes the impairment of accounts receivable with PDVSA for the sum of €256 million (see Note 21).

(3) In 2017 and 2016, RSB includes the finance expense associated with the effect of discounting dismantling provisions to present value in the amount of €5 million and €4 million, respectively. In 2017, Petroquiriquire and Cardón IV include financial expenses for the expected delay in receiving accounts receivable from PDVSA for the sum of €11 million and €42 million, respectively.

(4) Relates to *"Income and expenses recognized directly in equity"* and *"Amounts transferred to the consolidated statement of profit or loss"* in the consolidated statement of recognized income and expenses.

Value of interest in joint ventures:

	RSB		YPFB Andina		BPRY		Petroquiriquire		Cardón IV		Equion	
€Million	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Assets												
Non-current assets	7,781	4,042	876	1,023	8,055	8,548	491	1,048	1,409	3,107	537	541
Current assets	402	5,227	324	346	865	551	3,417	4,387	899	295	88	171
Cash and cash equivalents	46	71	124	120	73	63	12	1	60	24	48	95
Other current assets	356	5,156	200	226	792	488	3,405	4,386	839	271	40	76
Total Assets	**8,183**	**9,269**	**1,200**	**1,369**	**8,920**	**9,099**	**3,908**	**5,435**	**2,308**	**3,402**	**625**	**712**
Liabilities												
Non-current liabilities	662	582	205	248	6,051	5,920	789	1,325	2,112	926	145	257
Financial liabilities	229	95	-	-	1,839	1,561	482	517	2,057	-	-	-
Other non-current liabilities [(1)]	433	487	205	248	4,212	4,359	307	808	55	926	145	257
Current liabilities	609	943	77	91	702	1,144	3,635	3,722	623	2,490	89	108
Financial liabilities	229	478	-	-	-	587	-	-	-	2,099	-	-
Other current liabilities	380	465	77	91	702	557	3,635	3,722	623	391	89	108
Total Liabilities	**1,271**	**1,525**	**282**	**339**	**6,753**	**7,064**	**4,424**	**5,047**	**2,735**	**3,416**	**234**	**365**
NET ASSETS	**6,912**	**7,744**	**918**	**1,030**	**2,167**	**2,035**	**(517)**	**388**	**(427)**	**(14)**	**391**	**347**
Repsol stakeholding	60%	60%	48%	48%	30%	30%	40%	40%	50%	50%	49%	49%
Stake in net assets[(2)]	4,147	4,646	441	494	650	611	(207)	155	(214)	(7)	192	170
Capital gains/(losses)	-	-	-	-	-	-	-	-	-	-	-	-
Carrying value of investment	**4,147**	**4,646**	**441**	**494**	**650**	**611**	**-**	**155**	**-**	**-**	**192**	**170**

Note: The itemized amounts below feature the percentage stake of the Group in each of the companies:

(1) In 2017 and 2016, RSB includes non-current provisions for dismantling obligations in the amount of €102 million and €99 million.

(2) Petroquiriquire: In 2017, a provision for risk and expenses for the sum of €207 million was registered, corresponding to the negative value of Petroquiriquire's equity (see Notes 12 and 13).

Cardón IV: The value of the investment is made equal to zero by deducting the carrying amount from the loan granted to Cardón IV which is considered a net investment (see Note 7.1).

Associates

Gas Natural Fenosa (GNF)

Repsol has an interest in the GNF Group by means of a 20% stake in Gas Natural SDG, S.A., through which it exerts significant influence. The shares of Gas Natural SDG, S.A. are admitted to trading on Spain's four stock exchanges, are traded on the continuous market, and are also part of the Ibex-35 (see Note 6).

GNF's main businesses are the supply, liquefaction, regasification, transport, storage, distribution and commercialization of gas, as well as the generation, transmission, distribution and commercialization of electricity. It mainly operates in Spain, and abroad, primarily in Latin America, the rest of Europe and Africa.

On February 22, 2018, Repsol, S.A. has reached an agreement for the sale of its stake in this company. For further information, see Note 31.

The tables below provide summarized financial information for GNF, prepared in keeping with IFRS-EU accounting policies, as detailed in Note 2 and reconcile these disclosures with the amounts at which these investments are carried in the Group's consolidated financial statements:

	GNF	
€ Million	2017	2016
Operating revenue	23,609	23,665
Amortization and impairment provisions	(1,643)	(1,759)
Other operating expenses	(19,849)	(18,900)
Operating income	**2,117**	**3,006**
Finance income	111	130
Finance costs	(810)	(955)
Share of results from companies accounted for using the equity method, net of taxes	14	(98)
Income before tax	**1,432**	**2,083**
Income tax	(191)	(416)
Net income for the period from continuing operations	1,241	1,667
Net income for the period from interrupted operations	460	44
Net income attributable to non-controlling interests	(337)	(364)
Net income for the period attributable to the parent	**1,364**	**1,347**
Repsol stakeholding	20%	20%
Consolidation income	**274**	**362**
Dividends	**201**	**278**
Other comprehensive income [(1)]	**(175)**	**160**

	GNF	
€ Million	2017	2016
Assets		
Non-current assets	35,946	38,596
Current assets	11,083	8,213
Cash and cash equivalents	3,225	2,067
Other current assets	7,858	6,146
Total Assets	**47,029**	**46,809**
Liabilities		
Non-current liabilities	24,980	24,713
Financial liabilities [(2)]	15,916	9,480
Other non-current liabilities	9,064	15,233
Current liabilities	7,608	7,176
Financial liabilities [(2)]	2,543	2,599
Other current liabilities	5,065	4,577
Total Liabilities	**32,588**	**31,889**
NET ASSETS	**14,441**	**14,920**
Repsol stakeholding	20%	20%
Stake in net assets	2,899	2,995
Capital gains/(losses) [(3)]	325	327
Carrying value of investment	**3,224**	**3,322**

(1) Corresponds to items reclassifiable and not reclassifiable under the *"Other comprehensive income"* item of the Statement of recognized income and expenses.
(2) Excludes trade and other accounts payable; and provisions.
(3) The gain corresponds to goodwill.

Lastly, and regarding joint arrangements and associates that are material or of significant relative importance: (i) there are no legal restrictions on the capacity to transfer funds; (ii) the financial statements that have been used refer to the same date as the financial statements of Repsol, S.A.; and (iii) there are no unrecognized losses.

(13) CURRENT AND NON-CURRENT PROVISIONS

At December 31, 2017 and 2016, the balance and changes in these items during 2017 and 2016 are as follows:

€ Million					
	Provisions for risks and current/non-current expenses				
	Decommissioning of fields	Onerous contracts	Legal and tax contingencies (5)	Other provisions	Total
Balance at January 1, 2016	**2,230**	**1,194**	**1,717**	**2,063**	**7,204**
Allowances charged to income (1) (2)	103	209	168	648	1,128
Use of provisions credited to income (3)	(36)	(3)	(342)	(175)	(556)
Provisions released due to payment (4)	(57)	(220)	(44)	(541)	(862)
Changes in scope of consolidation	(80)	-	16	(15)	(79)
Translation differences	99	32	37	57	225
Reclassifications and other	76	(53)	(51)	(33)	(61)
Balance at December 31, 2016	**2,335**	**1,159**	**1,501**	**2,004**	**6,999**
Allowances charged to results (1)	91	60	340	220	711
Use of provisions credited to income (3)	(85)	(128)	(144)	(86)	(443)
Provisions released due to payment (4)	(89)	(105)	(43)	(144)	(381)
Changes in scope of consolidation	(1)	-	-	-	(1)
Translation differences	(242)	(112)	(149)	(119)	(622)
Reclassifications and other	166	(62)	8	(1,028)	(916)
Balance at December 31, 2017	**2,175**	**812**	**1,513**	**847**	**5,347**

(1) Includes €155 and €191 million reflecting the discounting to present value of provisions in 2017 and 2016. In 2017, a change in the discount rate of +/-50bp would have the effect of decreasing/increasing provisions for dismantling costs by €-147 million and €118 million, respectively.
(2) In 2016, it mainly included the workforce restructuring provision in the amount of €479 million.
(3) In 2017, it included the reversal of the Ship or Pay provision in Ecuador. In 2016, this item mainly reflected the impact associated with the divestment in YPF as recognized in heading *"Net income attributed to the parent from discontinued operations"* in an amount of €299 million.
(4) In 2017 and 2016, this heading mainly reflects, under *"Onerous contracts"*, payments for drilling platform leases and other long-term onerous contracts, and, under *"Other provisions"*, personnel restructuring payments.
(5) See Notes 16 and 23.

"Other provisions" includes mainly the provisions recognized to cover obligations deriving from environmental risks (see Note 29.2), pension commitments (see Note 28.2), consumption of CO_2 allowances (Note 29.4), employee incentive schemes (Notes 28.3 and 28.4) and other provisions to cover obligations arising from the Group's interests in companies:

- Concerning the latter, in 2017, provisions recognized for obligations arising from the net payouts expected in the stake in RSRUK, mainly relating to the activity and the dismantling of the facilities for oil and gas exploration and production in the North Sea, have been reversed. The reversed amount (€911 million) has been recognized in *"Investments accounted for using the equity method"* (see Note 12). The operating improvements and efficiencies obtained in the operation of this asset since its acquisition in 2015, both in terms of production efficiency and the reduction of OPEX and CAPEX and the recovery of tax credits, has entailed, based on the company's business plan, a significant improvement in the estimated cash flows. Therefore, the Group has decided to reverse the entire provision set aside and to this end has sought the opinion of an independent valuator, whose valuation does not differ significantly from the Group´s.

- Also, 2017 and 2016, provisions include workforce restructuring charges calculated as agreed in as part of the Collective Redundancy Program in Spain[1] in the amount of €111 million and €212 million, respectively, a sum that represents the present value of the estimate of future disbursements to be made to the people affected by the plan who have not yet left the company's employment and Social Security. In 2017 and 2016, payments under this item amounted to €55 and €103 million, respectively. The cash outlays corresponding to this provision are expected to run until 2022.

[1] As recorded in the minutes of proceedings of the Oversight Committee for the Seventh Framework Agreement signed on June 8, 2016 between union representatives and Repsol's management, it was decided that the most suitable mechanism to implement the workforce downsizing in Spain was to set in motion a collective dismissal process.

The next table provides an estimation of maturities of provisioned contingencies and expenses recognized at year-end 2017.

	€ Million			
	Less than one year	From 1 to 5 years	More than 5 years and/or undefined	Total
Provisions for decommissioning fields	99	527	1,549	2,175
Provision for onerous contracts	77	295	440	812
Provision for legal and tax contingencies	81	806	626	1,513
Other provisions	261	570	16	847
TOTAL [1]	**518**	**2,198**	**2,631**	**5,347**

[1] Due to the nature of the risks provisioned, these timing assessments are subject to uncertainty and changes that are beyond the Group's control. As a result, this schedule could change in the future according to the circumstances underpinning the estimates.

(14) OTHER NON-CURRENT LIABILITIES

A breakdown of "*Other non-current liabilities*" can be found below:

	€ Million	
	2017	2016
Obligations under finance leases	1,346	1,550
Guarantees and deposits [1]	120	121
Deferred income [2]	47	39
Other	282	299
TOTAL	**1,795**	**2,009**

[1] This item includes, among others, deposits received by Repsol Butano, S.A. from the users of gas bottles in accordance with applicable legal regulations. These amounts are refundable when the corresponding contracts are cancelled.
[2] Includes the amounts associated to the CO_2 emission allowances granted free of charge (see Note 10).

The breakdown of the amounts payable under finance leases at December 31, 2017 and 2016 is as follows:

	€ Million			
	Lease payments		Value minimum lease payments	
	2017	2016	2017	2016
During following year	202	221	195	208
From 2nd to 5th year, included	732	830	553	633
After 6th year	2,112	2,434	793	917
	3,046	**3,485**	**1,541**	**1,758**
Less:				
Future finance expenses	(1,505)	(1,727)		
Total debt on financial leases	**1,541**	**1,758**		
Non current	1,346	1,550		
Current	195	208		

The effective average interest rate on obligations under finance leases at December 31, 2017 was 8.93% (9.04% at December 31, 2016).

The main liabilities related to finance leases shown in this heading at December 31 are as follows:

- On May 15, 2006 the Group signed an agreement with Emera Brunswick Pipeline Company, Ltd. for the transportation of natural gas through a pipeline that connects the Canaport plant with the US border. The agreement has an initial term of 25 years (renewable for up to an additional 30 years). The contract came into effect in July 2009. At December 2017 and 2016, the amount recognized in this heading was $454 million (€379 million) and $466 million (€442 million), respectively.

- In addition, on April 21, 2006 the Group signed an agreement with Maritimes & North East Pipeline for the transportation of Canadian natural gas from the Canadian border to Dracut for an initial term of 25 years (renewable for up to an additional 30 years). The contract initially came into effect in March 2009. The corresponding liability recognized in this heading at year end 2017 and 2016 amounted to $1,136 million (€947 million) and $1,164 million (€1,104 million), respectively.

(15) COMMITMENTS AND GUARANTEES

15.1) Contractual commitments

At December 31, 2017, the Repsol Group has contractually committed to the following purchases, investment and other expenditures:

€ Million	2018	2019	2020	2021	2022	Subsequent years	Total
Purchase commitments	**3,286**	**753**	**742**	**774**	**777**	**12,250**	**18,582**
Crude oil and others [(1) (3)]	2,396	268	223	228	233	2,833	6,181
Natural gas [(2) (3)]	890	485	519	546	544	9,417	12,401
Investment commitments [(4)]	1,000	553	359	204	80	178	**2,374**
Service provisions [(5)]	490	369	295	246	173	1,067	**2,640**
Transport commitments [(6)]	213	174	168	137	113	389	**1,194**
TOTAL	**4,989**	**1,849**	**1,564**	**1,361**	**1,143**	**13,884**	**24,790**

Note: Commitments consist of future unconditional obligations (non-cancellable, or cancellable only under certain circumstances), as a result of commercial agreements in which fixed total amounts are not stipulated. These commitments were quantified using Repsol's best estimates, and, in case fixed total amounts were not stipulated, price estimates and other variables were used for calculating the recoverable amount of the assets (see Notes 3 and 21). In relation to operating lease commitments, see Note 20.6.

(1) Mainly includes the commitments for the purchase of products needed to operate the Group's refineries in Spain and the commitments assumed under crude oil purchase contracts with the Pemex Group (open-ended), with the Saudi Arabian Oil Company (renewed annually) and with the Repsol Sinopec Brasil Group (expires 2020) and with Overseas Petroleum and Investment Corporation (expires in 2018), committing to the acquisition in 2018 of 166,667, 26,374, 13,288 and 3,945 barrels per day, respectively.

(2) Primarily includes commitments to purchase liquefied natural gas in North America, acquired under two contracts signed in 2013 for a volume of 75.7 TBtu annually, with deliveries from 2017, one of them signed with the group Gas Natural Fenosa. It also included commitments in Spain made with Gas Natural Fenosa for the contract to supply natural gas to Repsol refineries.

(3) Committed crude oil and gas volumes are as follows:

Purchase commitments	Unit of measurement	2018	2019	2020	2021	2022	Subsequent years	Total
Crude oil	Mb	28,676	196	195	194	193	1,117	30,571
Natural Gas								
Natural Gas	Tbtu	109	7	5	5	5	22	153
Liquefied natural gas	Tbtu	64	80	79	82	79	1,160	1,544

(4) Includes mainly investment commitments in Vietnam, Norway, Algeria and Bolivia in the amount of €494 million, €456 million, €396 million and €229 million, respectively.

(5) Primarily includes services for processing gas in *Downstream* Canada amounting to €988 million, and associated with oil and gas exploration and productions activities in the *Upstream* segment totaling €658 million.

(6) It includes, primarily, oil and gas pipeline transportation commitments in North America, Peru and Indonesia amounting to approximately €1,001 million.

15.2) Guarantees

At December 31, 2017, the most significant guarantees to third parties or companies whose assets, liabilities and earnings are not presented in the consolidated financial statements (joint ventures and associates) are as follows:

- For the rental of three floating production platforms for the development of the BMS9 field in Brazil:
  - A guarantee for $593 million corresponding to 100% of RSB's interest (see Note 12) in Guara B.V., for which Repsol holds a counter guarantee from China Petrochemical Corporation in respect of the latter's 40% interest in RSB,
  - and two additional guarantees of $516 million and $486 million, corresponding to the 15% interest held indirectly by the Group in Guará B.V.

  The guaranteed amounts are reduced annually during the contracts' term of 20 years.

- For 51% of the guarantees for the decommissioning of RSRUK in the North Sea, for £523 million.

- To cover the risk of confiscation, expropriation, nationalization, or any measure designed to restrict use of the drilling unit introduced by the Venezuelan government or acts of insurgency or terrorism, for $90 million, granted for the 50% interest in Cardón IV[1].

- To cover the construction, abandonment, environmental and operating risks of a pipeline in Ecuador in the amount of $30 million, granted for the 29.66% interest in Oleoducto de Crudos Pesados de Ecuador, S.A.

In addition, in line with general industry practice, the Group grants guarantees and commitments to compensate for obligations arising in the course of ordinary activities, and for any liabilities of its activities, including environmental liabilities[2] and for the sale of assets[3].

The aforementioned guarantees cannot be considered a definite outflow of resources to third parties, as for the large part, they will mature without any payment obligation arising. At the date of issue of these consolidated financial statements, the probability of a breach that would trigger liability for these commitments to any material extent is remote.

(16) LITIGATION

The Group's general criterion is to recognize provisions (see Note 13) for proceedings that it deems it is likely to lose and does not recognize provisions when the risk of losing the case is considered possible or remote. The amounts to be provisioned are calculated on the basis of the best estimate of the amount needed to settle the lawsuit in question, underpinned, among others, by a case-by-case analysis of the facts, the legal opinions of in-house and external advisors and prior experience in these matters.

As of December 31, 2017, Repsol's consolidated balance sheet includes provisions for proceedings in the ordinary course of its activities totaling €98 million (this figure does not include the provisions for tax contingencies itemized in Note 23).

The most significant legal or arbitration proceedings and their status on the date these Consolidated Financial Statements were drawn up are summarized below.

United Kingdom

Addax arbitration in relation to the purchase of Talisman Energy (UK) Limited (TSEUK)

On July 13, 2015, Addax Petroleum UK Limited ("Addax") and Sinopec International Petroleum Exploration and Production Corporation ("Sinopec") filed a "Notice of Arbitration" against Talisman Energy Inc. (now known as "ROGCI") and Talisman Colombia Holdco Limited ("TCHL") in connection with the purchase of 49% of the shares of TSEUK (now known as "RSRUK", see Note 12). ROGCI and TCHL filed their response to the Notice of Arbitration on October 1. On May 25, 2016, Addax and Sinopec filed the Statement of Claim, in which they seek, in the event that their claims were confirmed in their entirety, repayment of their initial investment in RSRUK, which was executed in 2012 through the purchase of 49% of RSRUK from TCHL, a wholly-owned subsidiary of ROGCI, together with any additional investment, past or future, in such company, and further for any loss of opportunity, and which they estimate in a total approximate amount of $5,500 million. The court of arbitration has decided, among other procedural matters, to split the proceedings into two phases: the hearing on liability issues which took place from January 29 to February 20, 2018, and, if necessary, the hearing on the assessment of any damages will take place later, at an as yet unspecified date – it is estimated that this would be early 2019. Repsol maintains its opinion that the claims included in the Statement of Claim are without merit.

[1] Also in Venezuela, Repsol has issued an indeterminate guarantee in favor of Cardón IV to cover gas supply commitments undertaken with PDVSA through to 2036. In the opposite direction, PDVSA has granted a guarantee to Cardón IV to cover receivables on supply commitments.

[2] Guarantees granted in the ordinary course of business comprise a limited number of guarantees totaling €118 million in value. Environmental guarantees are formalized in the normal course of oil and gas exploration and production activity, where the probability of occurrence of the collateralized contingencies is remote, and the related amounts are unascertainable.

[3] Outstanding guarantees for asset sales, granted in accordance with general industry practice, are immaterial. Of recent note are those granted in the sale of LNG assets to Shell in 2015 (see Notes 4 and 29 of the 2015 consolidated financial statements).

<u>"Galley" pipeline lawsuit</u>

In August 2012, the Galley pipeline, in which RSRUK has a 67.41% interest, suffered an upheaval buckle.

In September 2012, RSRUK filed a claim seeking coverage of the damages and losses sustained as a result of the incident from the insurance company Oleum Insurance Company ("Oleum"), a wholly-owned subsidiary of ROGCI, which in turn owns 51% of RSRUK. In July 2014, RSRUK presented Oleum with a $351 million claim for property damage and business disruption.

To date, the documentation delivered by RSRUK in support of its claim has proven insufficient to conclude on the existence of coverage under the policy.

RSRUK filed a request for arbitration on August 8, 2016, which will take place in London and the law governing the merits of the case will be the law of the State of New York.

On June 2017, the Court, at the parties' proposal, the division of the procedure into two phases (liability and quantum, as applicable) was approved, as was the preliminary hearing for matters to be addressed in the first phase, in two weeks (between February, 19 and March, 2 2018).

United States of America

<u>The Passaic River / Newark Bay lawsuit</u>

The events underlying this litigation related to the sale by Maxus Energy Corporation ("Maxus") of its former chemicals subsidiary, Diamond Shamrock Chemical Company ("Chemicals") to Occidental Chemical Corporation ("OCC"). Maxus agreed to indemnify Occidental for certain environmental contingencies relating to the business and activities of Chemicals prior to September 4, 1986. After that (1995), Maxus was acquired by YPF S.A. ("YPF") and after that (1999), Repsol, S.A. acquired YPF.

In December 2005, the New Jersey Department of Environmental Protection ("DEP") and the New Jersey Spill Compensation Fund (together, the "State of New Jersey") sued Repsol YPF S.A. (today called Repsol, S.A., hereinafter, "Repsol"), YPF, YPF Holdings Inc. ("YPFH"); CLH holdings ("CLHH"); Tierra Solutions, Inc. ("Tierra"), Maxus and OCC for the alleged contamination caused by the old Chemicals plant which allegedly contaminated the Passaic River, Newark Bay and other bodies of water and properties in the vicinity.

On September 26, 2012 OCC lodged a Second Amended Cross Claim (the "Cross Claim") against Repsol, YPF, Maxus, Tierra and CLHH (all of which together "the Defendants"). Between June 2013 and August 2014, the Defendants signed different agreements with the State of New Jersey, in which they do not acknowledge liability and through certain payments in exchange for the withdrawal by the State of New Jersey of its proceedings against them.

On January 29, 2015 the judge ruled on certain Motions to Dismiss submitted by the Defendants against Cross Claim, dismissing, in full or in part, without scope for re-admission, ten of the twelve claims presented by OCC.

On January 14, 2016 the Special Master issued her recommendations on these Motions, allowing the ones submitted by Repsol in relation to its characterization as alter ego to Maxus and rejecting OCC's against Repsol's claim vis-a-vis OCC in respect of the $65 million paid pursuant to the agreement with the State of New Jersey.

On April 5, 2016 the Presiding Judge decided to dismiss OCC's suit against Repsol in full. The decision can be appealed. On June 16, 2016, the Special Master agreed to hear the Motion for Summary Judgment presented by Repsol with regard to its claim against OCC for the $65 million paid as part of the settlement reached with the State of New Jersey. On January 30, 2017, OCC appealed against the recommendation of the Special Master. On June 17, 2016, Maxus filed for bankruptcy protection before the United States Bankruptcy Court for the District of Delaware, also seeking release from its main litigation liability, a petition the Court must rule on. On October 19, 2017, the judge decided to fully uphold the recommendations of the special master and, thus, uphold the motion for summary judgment presented by Repsol in relation to its claim against OCC for $65 million. On November 22, 2017, OCC was formally condemned to pay the $65 million plus interest and expenses. On January 8, 2018, Maxus (assuming right of ownership of the claim on behalf of OCC) and OCC announced the formal submission of an appeal against these rulings.

Spain

Lawsuits in relation to the application of Ministerial Order ITC/2608/2009 of September 28

In February 2017, four decisions were handed down by the Supreme Court upholding the lower court rulings and a prior decision by the Supreme Court itself recognizing the right of Repsol Butano, S.A. to compensation for losses and damages caused by the formula for determining the maximum price of regulated LPG containers set out in the Order ITC/2608/2009 of September 28 that was overturned by the decision by the Supreme Court of June 19, 2012, plus legal interest accrued (see Note 20.3).

(17) INVENTORIES

The breakdown of "Inventories" at December 31, 2017 and 2016 is as follows:

	€ Million	
	2017	2016
Crude oil and natural gas	1,244	1,187
Finished and semi-finished products	2,252	2,110
Materials and other stocks	300	308
TOTAL [(1)]	**3,797**	**3,605**

[(1)] Includes provisions for inventory impairment losses of €32 million and €28 million at December 31, 2017 and 2016, respectively. The impairment provisions recognized and reversed amounted to €-10 million and €6 million, respectively (-€7 million recognized and €69 million reversed in 2016).

At December 31, 2017, the balance of commodity inventories, related to trading activity, at fair value less costs to sell amounted to €183 million, and the effect of their measurement at market value represented income of €9 million. Recoverable amounts are calculated using market information and benchmarks. Specifically, forward price/benchmark price curves provided by the market as well as a benchmark time horizon for pricing purposes. The main variables used were: prices taken from official publications (Platt's, Argus, OPIS, the brokerage community…) and historic or mark-to-market premiums, if available.

In the assessment of refinery products, production costs are allocated in proportion to the selling price of the related products (*isomargin* method) due to the existing difficulty to recognize the conversion costs of every product.

At December 31, 2017 and 2016, the Repsol Group complies with the legal requirements regarding minimum safety stocks established under prevailing legislation (see Appendix IV) through its Spanish Group companies.

(18) TRADE AND OTHER RECEIVABLES

The breakdown of this heading at December 31, 2017 and 2016 is as follows:

	€ Million	
	2017	2016
Trade receivables for sales and services (gross amount)	4,152	3,242
Insolvency provisions	(173)	(131)
Trade receivables	**3,979**	**3,111**
Receivables on traffic activities and other receivables	943	1,395
Receivables from operations with staff	41	42
Public administrations	198	284
Trade operation derivatives (Note 7 and 8)	60	64
Other receivables	**1,242**	**1,785**
Current income tax assets	**691**	**989**
Trade and other receivables	**5,912**	**5,885**

The changes in the provision for doubtful accounts in 2017 and 2016 were as follows:

	€ Million	
	2017	2016
Balance at January 1	**131**	**131**
Provision/(reversal) impairment losses	57	(3)
Changes in scope of consolidation	-	(1)
Translation differences	(9)	2
Reclassifications and other movements	(6)	2
Balance at December 31	**173**	**131**

(19) TRADE PAYABLES AND OTHER PAYABLES

Repsol had the following accounts payable classified under "*Trade payables and other payables*":

	€ Million	
	2017	2016
Suppliers	**2,738**	**2,128**
Obligations under finance leases (Note 14)	195	208
Tax payables	656	535
Derivative financial instruments (Note 8)	215	282
Other	3,214	3,340
Other receivables	**4,280**	**4,365**
Current tax liabilities	**292**	**317**
TOTAL	**7,310**	**6,810**

Information regarding deferrals of payments settled with suppliers in Spain

The disclosures made in respect of the average payment term for trade payables are presented in keeping with the stipulations of additional provision three of Spanish Law 15/2010 of July 5 (as amended by means of final provision two of Law 31/2014, of December 3) and prepared in keeping with the related resolution issued by the ICAC (acronym in Spanish for the Audit and Accounting Institute) in January 2016.

The information regarding the average term of payment to the suppliers of the Group's Spanish companies in 2017 pursuant to the sole additional provision of the above-mentioned resolution is as follows:

	Days	
	2017	2016
Average payment period to suppliers [(1)]	25	27
Ratio of paid operations [(2)]	25	27
Ratio of outstanding payment operations [(3)]	28	22
	€ Million	
Tax payments made	10,995	10,450
Total pending payments	521	219

[(1)] ((Ratio of paid transactions * total amount of payments made) + (Ratio of Outstanding payment transactions * total outstanding payments)) / (Total payments + total outstanding payments).
[(2)] Σ (number of days of payment * amount of the transaction paid) / Total payments.
[(3)] Σ (number of days outstanding payment * amount of the transaction outstanding payment) / Total outstanding payments.

According to the transitional provision of Law 15/2010, the maximum legal payment deadline is 60 days.

(20) OPERATING INCOME

20.1) Sales and services rendered and other income

The distribution by geography of the *"Sales"* and *"Services rendered and other income"* items, depending on the markets to which they correspond, is as follows:

	€ Million	
Geographical areas	2017	2016
Spain	20,727	20,727
European Union	8,624	4,885
OECD countries	4,660	3,190
Rest of the world	7,657	5,887
TOTAL	**41,668**	**34,689**

This heading includes excise tax and similar taxes levied on the production and/or sale of oil and gas products amounting to €6,310 million in 2017 and €6,249 million in 2016.

In sales in which the Group acts as an agent, the Group does not recognize all the income and expenses associated with the transaction, recognizing as revenue only the margin received or pending to receive.

20.2) Income from reversal of impairment provisions and on disposal of assets

These headings include the following items:

	€ Million	
	2017	2016
Income from reversal of impairment provisions (Notes 20.7 and 21)	802	623
Earnings arising from the disposal of assets	62	1,002
TOTAL	**864**	**1,625**

In 2016, the gain recognized on non-current asset disposals corresponded primarily to (see Note 1.4) i) the sale of part of the piped gas business assets in Spain amounting to €464 million; ii) sale of 10% of the stake in Gas Natural SDG, S.A. for €233 million; iii) sale of the wind power business in the United Kingdom for €101 million; iv) sale of the LPG business in Peru and Ecuador for €129 million; v) divestment of Repsol E&P T&T Limited in the amount of €17 million; and vi) divestment of the Tangguh LNG project in the amount of €21 million.

20.3) Other operating income

This item reflects, inter alia, income recognized on the remeasurement of trade derivatives (see Note 8) and the reversal of provisions, taken to the income statement (see Note 13).

In 2016, €80 million was included under this item respectively, resulting from favorable rulings concerning damages caused by the application of the maximum sale prices for regulated bottled LPG formula established in Spanish Ministerial Order ITC/2608/2009, which was subsequently struck down by a Supreme Court decision dated June 19, 2012 (see Note 16 and Appendix IV). In addition, financial income for the sum of €21 million was recognized, corresponding to the statutory interest relating to these claims. The proceeds from these decisions were collected in full in 2017 (see Note 16).

Finally, this heading also includes grants released to income in the amount of €23 and €25 million in 2017 and 2016, respectively.

20.4) Supplies

"*Supplies*" includes the following items:

	€ Million	
	2017	2016
Purchases	30,420	24,325
Variation in the inventories	(169)	(710)
TOTAL	**30,251**	**23,615**

"*Supplies*" includes excise tax and similar taxes levied on the production and/or sale of oil and gas products disclosed in section *"Sales and Services rendered and other income"* of this note.

20.5) Personnel expenses

"*Personnel expenses*" includes the following items:

	€ Million	
	2017	2016
Remuneration and other	1,481	2,045
Social Security costs	411	456
TOTAL	**1,892**	**2,501**

In 2017 and 2016, "*Salaries and others*" includes the workforce restructuring charges deriving mainly from the collective redundancy program in Spain (see Note 13), the adjustments for workforce restructuring in other countries and the changes made to the management team.

20.6) Other operating expenses

"*Other operating expenses*" includes the following items:

	€ Million	
	2017	2016
Transport and freight costs (1)	**1,072**	**1,166**
Taxes	**367**	**320**
External services	**3,461**	**3,551**
Supplies	842	736
Operator expenses (2)	498	533
Freelance Services	448	470
Leases	400	406
Repair and conservation	300	340
Other	973	1,066
Other costs	**295**	**893**
TOTAL	**5,195**	**5,930**

(1) In order to minimize transport costs and optimize the Group's logistics chain, the Group arranges swaps of oil products of similar nature with other companies in a number of geographical locations. These transactions are not recognized in the income statement as separate purchases and sales, being recognized for the net amount.
(2) Includes, among other items, the cost of agency services at the facilities of Compañía logística de Hidrocarburos CLH, S.A., product bottling, storage, loading, transportation and dispatch services.

The costs of operating leases itemized in the above table primarily reflect leases with gas stations. None of these leases particularly stands out from the rest.

The non-cancellable future minimum payments tied to these leases as of December 31, 2017 are specified below:

	€ Million
2018	229
2019	182
2020	195
2021	182
2022	169
Subsequent years	937
TOTAL	**1,894**

In 2017, an operating lease agreement for a floating production platform (FPSO) was signed in Vietnam, whose activity will begin in 2019, amounting to €384 million.

20.7) Exploration expenses

The geographic distribution of costs taken to the income statement in respect of exploration activities (see Note 2) is as follows:

	€ Million	
	2017	2016
Europe	136	133
America	236	173
Africa	54	140
Asia	34	6
Oceania	87	89
TOTAL	**547**	**541**

Exploration costs amounted to €547 million and €541 million in 2017 and 2016, of which €177 million and €241 million, respectively, are recognized under *"Depreciation and amortization of non-current assets"* and €478 million and €96 million under "*Impairment losses recognized and losses on disposal of non-current assets*" in 2017 and 2016, respectively. In addition, in 2017 impairment losses were reversed in the amount of €147 million under *"Reversal of impairment losses and gains on disposal of non-current assets"*.

For more information, see the Information on oil and gas exploration and production activities (non-audited information) at (www.repsol.com).

20.8) Impairment losses recognized and losses on disposal of assets

These headings include the following items:

	€ Million	
	2017	2016
Impairment provisions (Notes 20.7 and 21)	901	905
Losses arising from the disposal of assets	21	42
TOTAL	**922**	**947**

(21) ASSET IMPAIRMENT

21.1) Asset impairment test

The Group has assessed the recoverable amount of cash-generating units as per the methodology described in Note 3 and the predictable economic scenarios of its business plans. The main hypotheses are as follows:

a) Price trend:

	2018	2019	2020	2021	2022	2023	2024	2025	2026	Following
Brent ($/barrel)	59.0	64.0	71.6	75.3	80.7	87.2	91.3	95.6	97.5	+2%
WTI	56.0	61.0	68.6	73.3	78.7	85.2	89.3	93.6	95.5	+Brent -$2/bbl
HH ($/ Mbtu)	3.5	3.5	3.8	3.9	4.1	4.3	4.7	4.9	5.1	+2%

b) Discount rates [(1)]:

	2017	2016
UPSTREAM [(2)]		
Latin America-Caribbean	7.8% - 30%	7.7% - 19%
Europe, Africa and Brazil	7.1% - 12%	7.0% - 13%
North America	8.3% - 8.4%	7.9% - 8.1%
Asia and Russia	8.3% - 11.2%	8.3% - 11.8%
DOWNSTREAM [(3)]	4.2% - 9.3%	4.2% - 9.6%

(1) In 2017, in comparison to 2016, there were no material changes in country risk year-on-year nor in inherent business risk, except in the case of Venezuela.
(2) Discount rates in US dollars.
(3) Discount rates in euros and US dollars.

In 2017, provisions have been recognized, net of reversals, for the impairment of value of assets amounting to €-296 million (€-488 million in 2016[1]), which correspond mainly to (i) intangible assets (€-73 million, see Note 10); (ii) items of property, plant and equipment and provisions for onerous contracts (€+134, see Notes 11 and 13), and (iii) impairment losses on investments accounted for using the equity method (€-357 million, see Notes 12 and 13).

Upstream assets

The Group has written its *Upstream* assets down for net impairment by €-293 million. These charges mainly affect:

- North America (+€127 million): reversal of impairment losses in assets in Canada (Chauvin and Duvernay areas) and US (Marcellus) mainly due to higher forecast volumes of production, partially offset by impairment losses in other assets in the US (Midcontinent and Eagle Ford) as a result of the lower expected level of activity in the current price environment.
- Latin America (-€297 million): impairment losses on assets in Venezuela (-€434 million)[2] due to increase in discount rate owing to trends in country risk indicators (30% vs. 19% in 2016), which were partially offset by the reversal of impairment losses on assets of Ecuador and Colombia due to the better volumes and expected performance of business plans.

The recoverable value of the above assets came to €11,035 million.

In 2016, impairment amounted to €-255 million due to the increase in discount rates and the expected evolution of production profiles involving non-conventional assets (North America: €-132 million; Latin America €-85 million and other countries, essentially South-East Asia and North Africa €38 million).

Downstream assets

In the *Downstream* segment, the hypothesis of lower energy and commodity prices involve, in general terms, an increase in value of the businesses, meaning that in 2017, there has been no significant impairment.

In 2016, an impairment loss was recognized on Gas assets in North America (the Canaport regasification plant and associated gas pipeline transport commitments) in the amount of -€175 million as a result of the outlook for gas margins. The discount rate used was 5.5%.

[1] In 2016, €-276 million mainly relate to intangible assets and items of property, plant and equipment (see Notes 10 and 11) and €-187 million relate to impairment losses of investments accounted for using the equity method (see Note 12).
[2] In 2017, includes €-66 million in impairment of intangible assets and €-368 million in "Investments accounted for using the equity method" (property, plant and equipment).

21.2) Sensitivities

A change in the estimated future price curves and used discount rates would affect the amount of the impairment of the Repsol Group assets. The principal sensitivities to these variations without bearing in mind the rebalancing of other related variables or the possible adjustments of the operative plans that would allow mitigating the negative impact of the above-mentioned variations are indicated in the table below:

		€ Million	
	Increase (+) / decrease (-)	Operating income	Net income
Changes in crude oil and gas prices	+10%	614	432
	-10%	(1,751)	(1,305)
Changes in the discount rate	+100 b.p.	(704)	(551)
	-100 b.p.	453	315

21.3) Geopolitical Risks

Repsol is exposed to risks arising in countries that may present specific economic, social and political circumstances that may have a negative impact on its businesses (unexpected regulatory changes; highly volatile exchange rate; high inflation; possibility of economic and financial crises or political instability or social tensions and public unrest, etc.).

When assessing its assets for the impairment test, Repsol considers the geopolitical risks it is exposed to by estimating cash flows or calculating its discount rates.

According to the ratings in the Country Risk Rating of IHS Global Insight and the Country Risk Score of the Economist Group, the Repsol Group is exposed to a particular geopolitical risk in Venezuela, Libya, Algeria and Ecuador.

Venezuela:

Repsol's equity exposure[1] to Venezuela at December 31 amounts to approximately €1,480 million and mainly comprises dollar-denominated financing extended to the Venezuelan subsidiaries[2] [3] (see Note 7). Exposure was significantly lower than at December 31, 2016 (€2,273 million) as a result of impairment charges recognized during the year.

Repsol has had a presence in Venezuela since 1993 and currently has a presence in the country through its stake in the following companies: (i) Mixed crude oil companies (E.M.): 40% in E.M. Petroquiriquire, S.A. (Quiriquire, Menegrande, Barua Motatán blocks, all until 2031) and 11% in E.M. Petrocarabobo, S.A. (Carabobo block, until 2035[4]) and (ii) gas licensees: 60% in Quiriquire Gas (until 2027) and 50% in Cardón IV, S.A. (until 2036). All these investments are accounted for using the equity method (see Note 12). In 2017, Repsol's average production in Venezuela was 77 thousand barrels of oil equivalent/day (similar to 2016) and its proven reserves as of December 31 amounted to 577 million barrels of oil equivalent.

The Oil&Gas industry is very important to the Venezuelan economy, accounting for 25% of GDP and 95% of exports[5].

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[1] Equity exposure relates to net consolidated assets of companies registered in each of the countries reported, plus financing granted, as applicable.

[2] Repsol holds a loan with Cardón IV, which matures annually and can be extended by the shareholders (Repsol and Eni). The shareholders do not intend on liquidating this financing, nor does this seem likely in the near future; it has therefore been considered as part of the net investment in this company (see Note 12).

[3] Petroquiriquire, S.A., Repsol and PDVSA signed on October 6, 2016 a range of agreements to shore up the financial structure of Petroquiriquire, S.A. and enable it to implement its Business Plan. The agreements involved (i) provision by Repsol of a credit facility for up to $1,200 million, backed by a guarantee given by PDVSA, to be used to pay past dividends owed to Repsol and for Petroquiriquire's capital and operating expenditures; and (ii) a commitment given by PDVSA to pay for oil & gas production of the mixed enterprise via transfer to Petroquiriquire, S.A. of payments arising from crude oil sale contracts to offtakers or through outright cash payments in an amount sufficient for the mixed enterprise to meet its capital and operating expenditures to the extent not covered by the financing from Repsol, and to pay Repsol's dividends generated in each fiscal year and its debt service obligations with Repsol. The financing granted by Repsol and the commitments assumed by PDVSA are governed by the Laws of the State of New York, and any disputes that should arise shall be submitted to arbitration in Paris in accordance with the rules of the International Chamber of Commerce. Drawdowns under the credit facility are subject to compliance by Petroquiriquire and PDVSA of certain conditions precedent, and the terms and conditions include the covenants, breach clauses and acceleration or early termination clauses that are customary in such transactions. Breach by PDVSA of its obligations under the guarantee could enable PDVSA's creditors and bondholders to declare default and acceleration of the rest of its financial debt. In addition, the agreement includes other elements such as a mechanism for offsetting of reciprocal debts between Petroquiriquire, S.A. and PDVSA. As at December 31, 2017, drawdowns of this credit facility amounted to $578 million; all payments were met on the agreed dates.

[4] Renewable for additional 15 years.

[5] Source: Organization of the Petroleum Exporting Countries (www.opec.org/opec).

Operations in this sector in Venezuela are undertaken in a framework of collaboration between the public sector and foreign companies, and Repsol is a major partner for PDVSA and holds strategic assets in the country.

Venezuela has a regulated currency exchange system, an economy in recession with high levels of inflation and which has undergone recent devaluations, and an oil sector with a high degree of public sector intervention and participation.

- Political and economic situation: The economic recession (GDP[1] has dropped by 14.7% in 2017), inflation[2] (the International Monetary Fund estimates rates of 2.399% in 2017 and 9.196%[3] for 2018) and the lack of certain basic products have caused difficulties in the country. Oil production has significantly decreased in recent years.

  During this period, the State of Economic Emergency has been extended, political instability persists and the Constituent Assembly, responsible for drafting a new Venezuelan Constitution, has been formally installed and presidential elections have been called for April 22.

  Venezuela has been subjected to a number of international sanctions measures (by the US, European Union, etc.) that may affect the financial and commercial capacities of the public sector.

  Delays and occasional non-compliance has occurred in the servicing of the sovereign debt. In December, as a result of the country's failure to pay the interest on certain sovereign bonds, Standard & Poor's placed Venezuelan and PDVSA bonds in Selective Default. In turn, the International Swaps and Derivatives Association (ISDA) declared in November 2017 that Venezuela was in default, making it possible to file for payment of credit default swaps. The Government of Venezuela has stated its intention of refinancing and restructuring Venezuela's foreign debt in order to honor its payment obligations to creditors.

- Public regulation and stake in the Oil & Gas sector: Repsol operates through mixed companies whose incorporation and conditions for carrying out primary activities need to first be approved by the National Assembly. As for the other companies, such as Cardón IV and Quiriquire Gas, their Licenses are granted by the Ministry of Popular Power over Oil and Mining. See Appendix IV for more information on the legal framework for mixed companies and the regulatory framework in force in Venezuela.

  On December 6, 2017, a Resolution was published by the Ministry of Popular Power over Oil and Mining, establishing a system for revising and validating all national and international agreements entered into and those pending, by PDVSA, its subsidiaries and mixed-ownership companies in which PDSVA holds shares. During the 30 days following the date on which the Resolution was published, the corresponding agreements are subject to revision and validation by the Office of the Chairman at PDVSA, with a view to assessing whether they have satisfied the corresponding legal, financial, budgetary and technical requirements, thus making it possible to consider and form an opinion on their existence, validity and appropriateness for PDVSA. To date, there has been no notification regarding the contracts affecting Repsol’s investments in Venezuela.

  Also in December 2017, the Constitutional Foreign Production Investment Law was published, establishing the principles, policies and procedures that regulate foreign production investments in goods and services. On the reporting date, the special legislation regulating foreign investments in specific sectors of the economy is pending publication, including those addressing oil and gas matters (further details in Appendix IV).

- Exchange system at December 31: Venezuela introduced a currency exchange control regime in February 2003 which is managed by the Central Bank of Venezuela and the Ministry of the Popular Power over the Economy and Finance. These authorities have issued various resolutions governing the ways in which currency can be sold in Venezuela. The operating mechanism of the DICOM floating rate system was established on May 19, 2017 by Foreign Exchange Agreement 38, which provides as follows: (i) Mixed Companies may sell dollars via the DICOM exchange market having obtained authorization from the executive branch; (ii) the DICOM exchange rate will be set by means of currency auctions within the system of fluctuation bands to be announced by the Central Bank of Venezuela[4].

[1] Source: Ecoanalítica Report, Year 13, Number 4, Quarter IV.
[2] The inflation rate published by the Central Bank was 68.5% in 2014 and 180.9% in 2015. The Central Bank of Venezuela has notofficially released a cumulative inflation figure since 2016.
[3] Forecast based on a conservative scenario.
[4] On January 29, 2018, Foreign Exchange Agreement No. 39 was published, revoking No. 35 and No. 38 and establishing the rules that will regulate

In addition, Foreign Exchange Agreement No. 9 has applied to the revenue generated by mixed companies from oil and gas exports since 2004. This revenue can be kept in currency accounts abroad with a view to servicing payments and outlays that have to be made outside of Venezuela. Exchange Rate Agreement No. 37, which took effect on May 27, 2016, allows privately-held companies that hold gas licenses (Cardón IV, S.A.) to hold the dollars generated by their activities outside of Venezuela for the purpose of serving payments and outlays that have to be made outside of Venezuela. The above Agreement further stipulates that these companies may not acquire currency using the official exchange systems.

Venezuelan currency has been sharply devalued during the period. In the last DICOM auction of September 1, 2017, the exchange rate was 3,345 Bs/$. Since then and until the end of the year, the auctions were suspended. The trade price at December 31, 2016 was 674 Bs/$.

Repsol uses the US dollar as the functional currency in the majority of its oil and gas exploration activities in Venezuela (Cardón IV, S.A. E.M. Petroquiriquire, S.A. and E.M. Petrocarabobo, S.A.). However, for tax purposes, the bolivar is the reference currency for taxes. In companies with the bolivar as the functional currency (Quiriquire Gas, S.A), Repsol uses the DICOM exchange rate for bolivar/euro exchange as the reference for the preparation of these financial statements.

The devaluation of the bolivar has had no significant impact on Repsol's financial statements in 2017.

As a result of recent events in Venezuela, the Group has carried out an assessment of the recoverability of its investments in Venezuela, and of credit risk with respect to the accounts receivable with PDVSA. As a result of the analysis, at year-end 2017, impairment losses were recognized on Group assets in Venezuela in the amount of -€716 million (-€627 million for impairment of investees, -€66 million for impairment of intangible assets and -€23 million for impairment of other financial assets, with an impact on yearly income of -€695 million):

- The revision of asset business plans, the delay in collecting on sales, the increase in credit risk and a significant increase in the discount rate (30%, +11% on 2016) have adversely affected the recoverable value of investees and intangible assets, resulting in recognition of impairment charges in the amount of €-693 million (see section 1 of this Note).

- The delay in collection of trade receivables from PDVSA caused losses of -€23 million.

The assessment of impairment due to credit risk in Venezuela requires estimates to be performed in terms of the implications and development of a highly uncertain environment, for which we have sought an opinion from an independent expert to validate the judgments made by management.

In 2016, impairments were recognized for -€284 million before tax (-€195 million after tax).

Libya

Repsol's equity exposure in Libya as of December 31 amounts to about €410 million.

Repsol operates in Libya since the 1970s when it started exploring in the Sirte Basin. As of December 31, 2017, Repsol has acreage on two contractual areas (with exploration, development and production activities) and proven reserves amount to 97 million barrels of oil equivalent.

operations in the DICOM exchange rate system from that date onwards. The most significant aspects for Repsol are as follows: i) DICOM will apply to all foreign currency operations in the public and private sector, in addition to all foreign currency operations not expressly covered therein, ii) the conversion of foreign currency to establish the tax base of tax liabilities shall employ the DICOM exchange rate, iii) each month, legal persons may acquire the equivalent of 30% of their monthly average gross income, included in the Income Tax Return for the preceding year, up to a maximum amount equivalent to €340 thousand or its equivalent in another currency, and iv) legal persons acquiring foreign currency via DICOM shall apply the exchange rate obtained at auction as the basis for calculating their cost structure and for other purposes. The first auction took place on February 5, 2018, resulting in an exchange rate of 30,987.5 Bs/$. Repsol does not expect any significant impact as a result of the new Foreign Exchange Agreement.

Due to the worsening of safety conditions, production was interrupted from November 2014 to the end of 2016. Production in *El Sharara* resumed on December 20, 2016 (fields A, M and H), on January 4, 2017, production resumed in the I/R field (field shared between blocks NC-186 and NC-115) and, on May 9, in NC-186. However, due to external factors, there were intermittent stoppages over the course of the year. Average production in 2017 came to 25 thousand barrels of oil equivalent/day (39 thousand barrels of oil equivalent/day in December).

The Government of National Accord (GNA) of Libya is recognized by the International Community and the United Nations. However, the activity of a number of military militias operating in different regions of the country is generates a high level of insecurity.

Algeria

Equity exposure amounts to about €716 million.

Repsol has two exploration blocks in Algeria (Boughezoul and S.E. Illizi) as well as three production/development blocks (Reggane, Block 405a (with the MLN, EMK and Ourhoud licenses) and Tin Fouyé Tabankort (TFT)).

In 2017, net average production in Algeria came to 12.2 thousand barrels of oil equivalent/day (16.9 kboe in 2016) from blocks 405a and Tin Fouyé Tabankort (TFT).

As of December 31, 2017, net proven reserves amount to 31 million barrels of oil equivalent. Around 57% of the net proven reserves refer to the ongoing gas project in Reggane, which allows for the development of six fields (Reggane, Kahlouche, Kahlouche Sud, Sali, Tiouliline and Azrafil Sudest), located in the Algerian Sahara in the Reggane basin. Repsol holds a 29.25% stake in the consortium that is to develop the project, alongside the Algerian state-owned company Sonatrach (40%), Germany's RWE Dea AG (19.5%), and Edison of Italy (11.25%).

Ecuador

Repsol has exploration and production rights over two blocks (Block 16 and Block 67/Tivacuno) under service provision agreements. Furthermore, it retains a 29.66% shareholding in Oleoductos de Crudos Pesados de Ecuador, S.A. (OCP), which operates a pipeline in the country.

Average production in Ecuador in 2017 was 6.4 thousand barrels of oil equivalent/day and its proven reserves as of December 31 amounted to 6.6 million barrels of oil equivalent.

The investment accounting value in Ecuador is nil.

Brexit

In a referendum held on June 23, 2016, the British people decided to exit the European Union, and the United Kingdom is now in the process of deciding on and negotiating the terms of its departure. The consequences of this process remain uncertain. There may be effects on the value of sterling versus the euro, access to the European Single Market in the movement of goods, services or capital, or on the value of investments made in the United Kingdom. However, as to the extraction, transportation and marketing of oil and gas, no material change is expected, because the UK Government has maintained sovereignty and control over key aspects with an industry-wide impact, such as the process of mining rights licensing and the tax framework within which oil companies do business in the country. In this sense, messages passed on to the sector from the beginning of the process include a commitment to regulatory stability.

After the sale of the offshore wind power business in the United Kingdom (see Note 1.4), the Group's exposure is limited to its stake in Repsol Sinopec Resources UK Limited (RSRUK), which operates a mature business and whose functional currency is the dollar. The value of the investment in RSRUK is nil, for further information see Notes 12 and 16.

(22) FINANCIAL RESULT

The breakdown of finance income and expenses in 2017 and 2016 is as follows:

	€ Million	
	2017	2016
Finance income	159	140
Finance expenses	(447)	(493)
Debt interest	**(288)**	**(353)**
By interest rate	(14)	1
Change in fair value of financial instruments	(14)	1
By exchange rate	181	226
Change in fair value of financial instruments	30	132
Exchange gains/(losses)	151	94
Other positions	18	56
Change in fair value of financial instruments	18	56
Income from positions [1]	**185**	**283**
Financial update of provisions	**(126)**	**(175)**
Capitalized interests [2]	**120**	**133**
Finance leases	(141)	(143)
Impairment and gains (losses) on disposal of financial instruments [3]	(14)	48
Other income	37	36
Other expenses	(85)	(63)
Other finance income and expense	**(203)**	**(122)**
FINANCIAL RESULT	**(312)**	**(234)**

[1] This heading includes exchange gains and losses generated by the measurement and settlement of foreign-currency denominated monetary items as well as the gains and losses recognized as a result of the measurement and settlement of derivatives.
[2] Capitalized interests is recognized in the consolidated income statement under *"Finance expenses"* and capitalized under assets.
[3] In 2017 and 2016, this heading mainly reflects the €-10 million loss and €49 million gain generated by the buyback of Talisman bonds, respectively (see Note 7.2).

(23) TAXES

23.1) Income tax

In the area of taxation and, particularly, of profits taxation, Repsol Group is subject to the legislation of several tax jurisdictions due to the broad geographic mix and the relevant international nature of the business activities carried out by the Group companies it comprises.

For this reason, the Repsol Group's effective tax rate is shaped by the breakdown of earnings obtained in each of the countries where it operates and, on occasion, by the taxation of said profits in more than one country (double taxation).

a) In Spain

Most of the entities resident in Spain for tax purposes are subject to taxation in Spain under Spain's consolidated tax regime. Under this regime, the companies comprising the tax group jointly determine the Group's taxable profit and tax liability, which is then allocated to these companies following the criteria established by the ICAC (acronym in Spanish for the Audit and Accounting Institute) in relation to the recognition and determination of individual corporate tax liabilities.

Repsol, S.A. is the parent of Consolidated Tax Group 6/80, which comprises all of the companies resident in Spain that are at least 75%-owned, directly or indirectly, by the parent and that meet certain prerequisites. The Tax Group contained 54 companies in 2017, the most significant of which were the following: Repsol, S.A., Repsol Petróleo, S.A., Repsol Trading, S.A., Repsol Química, S.A., Repsol Butano, S.A., Repsol Exploración, S.A. and Repsol Comercial de Productos Petrolíferos, S.A.

For its part, Petróleos del Norte, S.A. (Petronor) is the parent of Consolidated Tax Group 02/01/B, which applies regional tax regulations of Vizcaya for corporate income tax purposes.

Finally, the rest of the companies resident in Spain for tax purposes that are not included in either of the above tax groups determine their income tax individually.

The Spanish companies are taxed at the general rate of 25% in 2017, regardless of whether they pay tax as part of a tax group or individually. Exceptionally, Repsol Investigaciones Petrolíferas, S.A., which files its taxes on an individual basis under the Special Hydrocarbon Regime, is taxed at 30%, and the Petronor group, which applies the special regional regime of Vizcaya, is taxed at 28%.

b) Other countries

The rest of the Group companies are subject to taxation in each of the countries in which they do business, applying the prevailing income tax rate under applicable local tax regulations. Group companies in some countries are also subject to a levy on minimum presumptive income in addition to income tax.

In turn, the Group companies resident in Spain that conduct some of their business in other countries are also subject to prevailing income tax in those countries in respect of the profits generated outside Spain. This is the case, for example, of the permanent establishments of the Spanish companies that carry out oil and gas exploration and production activities in other countries (including Libya, Algeria, Peru and Ecuador).

Below is a list of the statutory income tax rates applicable in the Group's main tax jurisdictions:

Country	Tax rate
Algeria (1)	38%
Australia	30%
Bolivia	25%
Canada (2)	27%
Colombia	40%
Ecuador	22%
United States (3)	35%
Indonesia	40% - 48%
Libya	65%
Malaysia	38%
Norway	78%
The Netherlands	25%
Papua New Guinea	30%
Peru	28% - 30%
Portugal	22.5% - 29.5%
United Kingdom	40%
Singapore	17%
Trinidad and Tobago	55% - 57.2%
Venezuela	34% (gas) and 50% (oil)
Vietnam	32% - 50%

(1) Plus tax on exceptional profits (TPE) by its acronym in Spanish.
(2) Federal and provincial rate.
(3) The federal rate applicable for 2017 (does not include state taxes).

In December 2017, a significant income tax reform was approved in the US, and enters into effect on January 1, 2018. Among other changes, the reform reduces the federal income tax rate from 35% to 21%. According to our best estimates, Repsol considers that the reform will have a net positive effect impact for the Company by improving the value of its assets in the country as a result of an increase in their expected future after-tax cash flows. However, the revaluation at year-end 2017 of tax credits and deferred tax assets under the new tax rate had a negative impact of €406 million.

23.2) Accrued income tax expense

The table below shows how the income tax expense accrued for accounting purposes in 2017 and 2016 was calculated:

	€ Million	
	2017	2016
Current income tax for the year	(657)	(469)
Adjustments to current income tax [(1)]	33	(43)
Current Income tax (a)	**(624)**	**(512)**
Deferred income tax for the year	180	6
Adjustments to deferred income tax [(2)]	(776)	115
Deferred income tax (b)	**(596)**	**121**
Expense / (Income) on the income tax (a+b)	**(1.220)**	**(391)**

(1) Corresponds mainly to adjustments from previous years and movements in provisions.
(2) Corresponds mainly to the impact of tax reform in the US as rates have been lowered, resulting in adevaluation of tax credits pending application and net deferred tax assets.

The reconciliation of "*Income tax expense*" registered and the expense that would result from the application of the nominal tax rate existing in the country of the parent company (Spain) to the net profit before taxes and participated entities is as follows:

	€ Million	
	2017	2016
Net income before tax	**3,381**	**1,871**
Results of investments accounted for using the equity method after taxes	904	194
Income before tax and before considering income from entities accounted for using the equity method	**2,477**	**1,677**
General nominal income tax rate in Spain	25%	25%
(Expense)/Income on the nominal income tax rate	**(619)**	**(419)**
Income taxed at different nominal rates than the general Spanish rate	(258)	(56)
Mechanisms to prevent double taxation [(1)]	36	93
Non-deductible costs	(14)	(50)
Tax deductions [(2)]	140	37
Tax losses for which no deferred tax asset for has been recognized	(89)	(143)
Revaluation of deferred tax [(3)]	(129)	214
Tax risk provisions	(276)	(68)
Other items	(11)	1
(Expense)/Income on the income tax rate	**(1,220)**	**(391)**

(1) Includes mechanisms to prevent international and internal double taxation, whether in the form of exemptions, credits or deductions.
(2) Mainly relates to deductions in Spain for capitalization, R&D and other.
(3) Includes revaluation of deferred taxes due to modifications in the tax rate (-€406 million in 2017 and +€17 million in 2016) exchange rate (+€23 million in 2017 and €-6 million in 2016) and new expectations of future use of tax credits, mainly on losses carried over from prior years (+€254 million in 2017 and +€203 million in 2016).

23.3) Deferred taxes

The Group presents deferred tax assets and liabilities on a net basis in the same taxable entity. The breakdown of the deferred tax assets and deferred tax liabilities by underlying concept recognized in the accompanying balance sheet is shown below:

	€ Million	
	2017	2016
For losses, deductions and similar	3,809	4,801
Amortization differences	(2,585)	(3,631)
Provisions for decommissioning fields	836	1,072
Provisions for personnel and other	416	491
Other deferred taxes	530	634
Total deferred tax	**3,006**	**3,367**

Below is a breakdown of changes in deferred tax:

	€ Million	
	2017	2016
Balance at 1 January	**3,367**	**3,143**
Charge (payment) statement of profit or loss	(403)	96
Charge (payment) in equity	(1)	(10)
Translation differences of balances in foreign currency	43	138
Balance at 31 December	**3,006**	**3,367**

The Repsol Group only recognizes deferred tax assets insofar as it is deemed probable that the entities (individually or on a consolidated basis) that have generated them will have sufficient taxable income in the future against which they can be utilized.

At each closing date, the recognized deferred tax assets are reassessed to verify that they still qualify for recognition and they make the appropriate adjustments on the basis of the outcome of the analysis performed. These analysis are based on: (i) the construction of hypotheses to analyze the existence or otherwise of sufficient earnings for tax purposes that might offset such tax losses based on the approach used to ascertain the presence of indications of impairment in its assets (see Note 3); (ii) the assessment of earnings estimates for each entity or tax group in accordance with their individual business plans and the Group's overall strategic plan; and (iii) the statute of limitations period and other utilization limits imposed under prevailing legislation in each country for the recovery of the tax credits.

The deferred tax assets corresponding to offsetable tax losses and tax credits pending application amount to €3,809 million and correspond mainly to:

Country	€ Million	Legal expiration	Estimated recoverability
Spain	1,539	No time limit	In less than 10 years
United States	1,258	20 years	The majority in 10 years
Canada	353	20 years	In less than 10 years
Norway	214	No time limit	The majority in 10 years
RoW	445	-	-
Total	**3,809**		

The Group has deferred tax liabilities not recognized of €3,550 million and €3,821 million at 2017 and 2016 respectively.

The Group has deferred tax liabilities not recognized of €108 million and €93 million at year-end 2017 and 2016 respectively. This mainly relates to taxable temporary differences associated with investments in subsidiaries, associates and permanent establishments that qualify for the exemption provided for under IFRS.

23.4) Government and legal proceedings with tax implications

In accordance with prevailing tax legislation, tax returns cannot be considered final until they have been inspected by the tax authorities or until the inspection period in each tax jurisdiction has prescribed.

The years for which the Group companies have their tax returns open to inspection in respect of the main applicable taxes are as follows:

Country	Years open to inspection
Algeria	2013 — 2017
Australia	2013 — 2017
Bolivia	2012 — 2017
Canada	2010 — 2017
Colombia	2012 — 2017
Ecuador	2014 — 2017
Spain	2014 — 2017
United States	2014 — 2017
Indonesia	2012 — 2017
Libya	2010 — 2017
Malaysia	2013 — 2017
Netherlands	2016 — 2017
Norway	2015 —2017
Papua New Guinea	2014 — 2017
Peru	2013 — 2017
Portugal	2014 — 2017
United Kingdom	2011 — 2017
Singapore	2013 — 2017
Trinidad and Tobago	2013 — 2017
Venezuela	2011 — 2017

Whenever discrepancies arise between Repsol and the tax authorities with respect to the tax treatment applicable to certain operations, the Group acts with the authorities in a transparent and cooperative manner in order to resolve the resulting controversy, using the legal avenues at its disposition with a view to reaching non-litigious solutions. However, in this fiscal year, as in prior years, there are administrative and legal proceedings with tax implications that might be adverse to the Group's interest and that have given rise to litigious situations that could result in contingent tax liabilities. Repsol believes that it has acted lawfully in handling the foregoing matters and that its defense arguments are underpinned by reasonable interpretations of prevailing legislation, to which end it has lodged appeals as necessary to defend the interests of the Group and its shareholders.

It is difficult to predict when these tax proceedings will be resolved due to the extensive appeals process. Based on the advice received from in-house and external tax experts, the Company believes that the tax liabilities that may ultimately derive from these proceedings will not have a significant impact on the accompanying Financial Statements. In the Group's experience, the result of lawsuits claiming sizeable amounts have either tended to result in immaterial settlements or the courts have found in favour of the Group.

The Group's general criterion is to recognize provisions (see Note 13) for tax-related proceedings that it deems it is likely to lose and does not recognize provisions when the risk of losing the case is considered possible[1] or remote. The amounts to be provisioned are calculated on the basis of the best estimate of the amount needed to settle the lawsuit in question, underpinned, among others, by a case-by-case analysis of the facts, the legal opinions of its in-house and external advisors and prior experience in these matters. At December 31, 2017, the Group recognized provisions to cover contingencies associated with lawsuits and other tax matters in the Group's consolidated balance statement for the sum of €1,415 million (€1,376 million at December 31, 2016), which are considered adequate to cover those contingencies.

As for the main tax proceedings affecting the Group at December 31 noted below:

[1] Notwithstanding the above, in respect of the Talisman business combination (Note 1.4), in accordance with IFRS 3 *Business combinations*, the Group has provisioned contingencies whose probability of materialization was considered possible.

Bolivia

Repsol E&P Bolivia, S.A. and YPFB Andina, S.A. are pursuing several lawsuits against administrative resolutions denying the possibility of deducting royalties and hydrocarbon interests for corporate income tax calculation purposes, prior to the nationalization of the oil sector.

The first lawsuits of Repsol E&P Bolivia, S.A. and YPFB Andina, S.A. were resolved unfavorably by the Supreme Court and upheld by the Constitutional Court.

The Company is involved in other lawsuits for the same matters, considering that its position is expressly endorsed by Law 4115 of September 26, 2009.

Brazil

Petrobras, as operator of block BM S 9, in which Repsol has a 25% ownership interest, has been served by the Sao Paulo tax authorities of an infraction notice in relation to purported breaches of formal requirements related to the onshore-offshore movement of materials and equipment from/to the offshore drilling platform. The criterion adopted by Petrobras is in line with widespread industry practice. A court of first instance ruled in favor of the taxpayer, although it is expected that the State of Sao Paulo will lodge an appeal.

Secondly, Petrobras, as operator of the Albacora Leste, BMS-7 and BMS-9 consortia, has received notices with respect to several taxes for the period 2008 to 2012 in relation to payments to foreign companies for the chartering of exploration platforms and related services used at the above-listed blocks. All notices have been appealed and are in administrative tribunals (2009-2012) or are being appealed (2008).

In addition, Repsol Sinopec Brasil (see Note 12) received notices with respect to withholdings (2009 and 2011) in relation to payments to foreign companies for the chartering of exploration vessels and related services used at blocks BMS 48 and BMC 33, which Repsol Sinopec Brasil operates. The administrative federal tribunal of second instance has ruled against the Company; however, it believes its actions are within the law and its behavior is in line with widespread sector practice; therefore, it has launched a new appeal with the administrative tribunals.

In relation to the last two lawsuits, Law 13586/17 was recently approved and published, by virtue of which it is possible to reduce the disputed amount quite substantially, provided that the taxpayer refrains from fighting the lawsuits in question. The Company has requested to take advantage of this new regulation requesting the termination of the processes related to the contractual structure for contracting platforms in the part related to the withholdings.

Canada

The Canada Revenue Agency, or CRA, has disallowed the application of tax incentives related to the assets of the Canaport project. The company filed appeals against the inspection assessments (2005-2008). Canada's Tax Court ruled in favor of Repsol on January 27, 2015. However, this decision was appealed before the Federal Court of Appeal, which, in September 2017, ruled in favor of Repsol. As the decision has not been appealed, it is now final.

Furthermore, the CRA regularly inspects the ROGCI companies (formerly Talisman Group companies, acquired by Repsol in 2015) resident in Canada. In 2017, the audit corresponding to the period from 2006 to 2009 was concluded satisfactorily. Tax years 2010 to 2015 are currently subject to inspection.

Ecuador

The Ecuador Internal Revenue Service (SRI) has disallowed the deduction from income tax (2003 to 2010) of payments for the transportation of crude oil to Ecuador company Oleoducto de Crudos Pesados, S.A. under a "Ship or Pay" arrangement. The National Court of Justice has dismissed the appeals regarding 2003 to 2005 on procedural grounds, without addressing the merits of the case.

The SRI has also called into question, for the years 2004 to 2010, the criteria used to set the benchmark price applicable to sales of production from the Block 16, in which Repsol Ecuador, S.A. holds a 35% interest. The National Court of Justice has dismissed the appeal regarding 2005 on procedural grounds, without addressing the merits of the case. As a result, the government of Ecuador has been notified that an international arbitration action may be lodged.

In addition, Oleoducto de Crudos Pesados, S.A. (OCP), a 29.66% investee of Repsol Ecuador, S.A., is disputing with the government of Ecuador the tax treatment of subordinated debt issued to finance its operations. The National Court handed down a favorable ruling for this company, which the authorities appealed before the Constitutional Court. The Constitutional Court has rendered the ruling null and ordered a new ruling. The government also dismissed the National Court members who ruled in favor of the company. Later, the National Court issued rulings in favor of the interests of SRI in respect of the 2003 to 2006 fiscal years. OCP's appeals to the Constitutional Court were dismissed. The government of Ecuador has been notified that an international arbitration action may be lodged.

Spain

In 2013, the main proceedings over income tax for inspections of the years 1998 to 2001 and 2002 to 2005 came to an end. The corresponding decisions and rulings had the effect of canceling 90% of the tax liability initially assessed by the Spanish tax authorities (AEAT) and that had been appealed by the Company. With regard to the penalties linked to those inspections, they have been canceled by the Courts for the large part.

In addition, with regard to the inspection of the years 2006 to 2009, the principal matters under discussion in terms of the audit are mainly related to transfer pricing, foreign portfolio loss recognition, and investment incentives, and they involve a change in the tax authority's criteria with respect to earlier inspections. Recently, a ruling has been received from the Central Economic Administrative Tribunal (TEAC) that partially upheld the Company's appeal in relation to some income tax issues included in the assessments and in the sanctions decisions of the years 2007-2009. An administrative appeal has been filed before the National High Court on issues that have not been upheld by the TEAC. The assessment for the year 2006 and the assessment that contains adjustment of transfer prices of the 2007-2009 period are suspended, as a conflict was brought before the Arbitration Board of the Basque Economic Agreement.

The Company believes it has acted within the law, based on the reports provided by its internal and external tax advisors and other experts consulted. As a result, no liabilities are expected to arise that might have a significant impact on the Group's income.

In August 2017, the Spanish tax authorities completed the tax audit corresponding to period from 2010 to 2013. These activities have been completed without any sanctions being imposed and, for the large part, in the issuance of declarations of conformity concerning Corporate Income Tax, VAT, personal income tax withholdings and non-resident personal income tax withholdings, for which no significant liabilities have been incurred by the Group. However, in terms of the deductibility of interest for the late payment of taxes and the calculation of losses on overseas business corresponding to Corporate Income Tax, the administrative decision has been subject to appeal, as the Company believes it has acted within the law.

The AEAT also started audit activities on Tax Group 6/80 concerning the 2014 and 2015 tax years in August.

In relation to the sentence issued by the European Union Court of Justice on February 27, 2014, declaring the Tax on the Retail Sale of Certain Hydrocarbons (IVMDH for its acronym in Spanish), levied from 2002 to 2012, contrary to EU law, Repsol has initiated several proceedings against the Spanish tax authorities in order to uphold the interests of its customers and their right to seek the refund of the amounts incorrectly collected in this respect.

Indonesia

Indonesian Corporate Tax Authorities have been questioning various aspects of the taxation of permanent establishments that Talisman Group has in the country. These proceedings are pending a court hearing or administrative appeal.

Malaysia

Repsol Oil & Gas Malaysia Ltd. and Repsol Oil & Gas Malaysia (PM3) Ltd., the Group's operating subsidiaries in Malaysia, have received notifications from the Inland Revenue Board (IRB) in respect of the years 2007, 2008 and 2011 questioning, primarily, the deductibility of certain costs. The aforementioned actions have resulted in a reconciliation agreement currently pending ratification by the tax court, under which Respol subsidiaries will receive a refund of the taxes initially retained by the IRB.

(24) EARNINGS PER SHARE

The earnings per share at December 31, 2017 and 2016 are detailed below:

Earnings per share (EPS)	2017	2016
Net income attributable to the parent (€ million)	2,121	1,736
Adjustment to interest expense on subordinated perpetual bonds (€ million)	(29)	(28)
Weighted average number of shares outstanding (millions of shares) [1]	1,551	1,538
Basic/diluted EPS (€/share)	1.35	1.11

[1] The outstanding share capital at December 31, 2016 came to 1,496,404,851 shares, although the average weighted number of shares outstanding for the purposes of calculating earnings per share on said date included the effect of capital increases undertaken as part of the *"Repsol Flexible Dividend"* shareholder payment system, as per the applicable accounts regulations (see Note 6.3).

(25) CASH FLOWS[1]

25.1) Cash flow from operating activities

During 2017, the net cash flow from operating activities amounted to €5,113 million, which represents an increase of 31% on 2016. The composition of the heading *"Cash flows from operating activities"* of the consolidated cash flow statement is as follows:

	Notes	€ Million 2017	2016
Income before tax		**3,381**	**1,871**
Adjustments to net income:		**1,872**	**2,547**
Depreciation and amortization of non-current assets	10 and 11	2,399	2,529
Net operating provisions	13 and 21	160	1,017
Earnings arising from the disposal of non-commercial assets	1.4 and 20	(41)	(960)
Financial result	22	312	234
Share of results of companies accounted for using the equity method net of taxes	12	(904)	(194)
Other adjustments (net)		(54)	(79)
Changes in working capital		**(110)**	**(517)**
Increase/Decrease Accounts receivable		(665)	(215)
Increase/Decrease Inventories		(332)	(757)
Increase/Decrease Accounts payable		887	455
Other cash flows from operating activities:		**(30)**	**(11)**
Dividends received		511	920
Income tax payments/(receipts)		(320)	(264)
Other payments/(receipts) on operating activities		(221)	(667)
Cash Flows from Operating Activities		**5,113**	**3,890**

25.2) Cash flows from investing activities

During 2017, the net cash flow from investing activities resulted in the net payment of €2,789 million.

The "*payments/receipts on investments in Group companies and associates*" comes to €-311 million and primarily corresponds to capital increases in joint ventures for the sum of €-309 million and net entries in the scope of consolidation for the sum of €-2 million.

"*Payments/receipts on investments in property, plant and equipment, intangible assets and property investments*" came to €-2,222 million and primarily corresponds to investments in the *Upstream* segment in North America, Asia, Algeria and Peru and in the *Downstream* segment in the refinery business.

The "*payments/receipts on investments in other financial assets*", came to €-307 million, corresponding to the constitution of deposits and the variation of loans extended to joint ventures.

25.3) Cash flows from financing activities

During 2017, the net cash flow from financing activities resulted in the net payment of €2,361 million, which represents an increase of 15% on 2016.

[1] In accordance with the presentation options allowed in IAS 7 *Statement of cash flows*, the Group uses the so-called *"indirect method"* to disclose its operating cash flows. Under this method, the statement of cash flows starts with *"Net income before tax"* for the year, as per the income statement; this figure is then adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

A breakdown of the changes to liabilities linked to financing activities can be found below:

	€ Million					
	2016	2017				
			Other flows non cash flow			
	Opening balance (1)	Cash flows	Currency translation differences	Changes in fair value	Other	Closing balance (1)
Bank borrowings	2,328	(358)	(160)	-	(207)	1,603
Bonds and other securities	10,760	(1,153)	(167)	-	289	9,729
Derivatives (liabilities)	110	(504)	(11)	485	16	96
Other financial liabilities (2)	3,193	(32)	(384)	-	81	2,858
Lease agreements liabilities	1,758	(202)	(197)	-	183	1,542
Shareholder remuneration and perpetual bond	1,130	(332)	-	-	385	1,183
Treasury shares and own equity	(1)	(293)	-	-	249	(45)
Total liabilities perpetual activities	**19,278**	**(2,874)**	**(919)**	**485**	**996**	**16,966**
Derivatives (asset)	(32)	542	(1)	(527)	-	(18)
Other payments/receipts of financing activities (3)	n/a	(29)	-	-	-	n/a
Total other assets and liabilities	**(32)**	**513**	**(1)**	**(527)**	**-**	**(18)**
Total	**19,246**	**(2,361)**	**(920)**	**(42)**	**996**	**16,948**

(1) Corresponds to the current and non-current balance of the income statement.
(2) Includes loans to Group companies that have not been eliminated from the consolidation process.
(3) Includes mainly payments/receipts of short-term financing granted in the amount of €-21 million.

(26) INFORMATION ON RELATED PARTY TRANSACTIONS

Repsol carries out transactions with related parties on an arm's length basis. The transactions performed by Repsol, S.A. with its Group companies and those performed by the Group companies among themselves form part of the Company's ordinary course of business in terms of their purpose and conditions.

For the purposes of presenting this information, the following are considered to be related parties:

a. Significant shareholders: the Company's significant shareholders that are deemed related parties at December 31 are:

Significant shareholders	total % of share capital December 31, 2017 [(1)]
CaixaBank, S.A.	9.6
Sacyr, S.A. [(2)]	8.0
Temasek Holdings (Private) Limited [(3)]	4.1

Note: Data for the Company available at December 31, 2017 from the latest information provided by Sociedad de Gestión de los Sistemas de Registro, Compensación y Liquidación de Valores, S.A.U. (Iberclear), and information submitted by shareholders to the Company and to the National Securities Market Commission (CNMV).

(1) Data prior to the close of the scrip issue detailed in section 6.1 Share capital.
(2) Sacyr, S.A. holds its investment through Sacyr Securities, S.A.U, Sacyr Investments S.A.U. and Sacyr Investments II, S.A.U.
(3) Temasek holds its investment through its subsidiary Chembra Investment PTE, Ltd.

b. Directors and executives: includes members of the Board of Directors as well as members of the Corporative Executive Committee whose members are considered as *"executive personnel"* for purposes of this section (see Note 27.4).
c. People, companies or entities within the Group: includes transactions with Group companies or entities for the part not eliminated in the consolidation process, corresponding mainly to transactions undertaken with companies consolidated using the equity method.

Income, expenses and other transactions recorded at December 31 with related party transactions are as follows:

€ Million	2017				2016			
EXPENSES AND REVENUES	Significant shareholders	Directors and executives [(1)]	People, companies or entities within the Group	Total	Significant shareholders	Directors and executives [(1)]	People, companies or entities within the Group	Total
Finance costs	7	-	75	82	7	-	56	63
Management or collaboration agreements	-	-	-	-	-	-	-	-
Leases	1	-	1	2	1	-	2	3
Service receptions	19	-	138	158	18	-	168	186
Purchase of goods (finished or outstanding) [(2)]	-	-	1,902	1,902	-	-	1,433	1,433
Losses arising from the derecognition or disposal of assets	-	-	-		-	-	3	3
Other costs	13	-	-	13	23	-	1	24
TOTAL COSTS	40	-	2,116	2,156	49	-	1,663	1,712
Finance income	8	-	156	164	1	-	134	135
Management or collaboration agreements	-	-	-	-	-	-	-	-
Leases	1	-	8	9	1	-	4	5
Dividends received	-	-	-	-	-	-	-	-
Service provisions	8	-	1	9	7	-	4	11
Sale of goods (finished or outstanding) [(3)]	156	-	685	841	125	-	511	636
Earnings arising from the derecognition or disposal of assets	-	-	2	2	-	-	233	233
Other revenues	0	-	63	64	-	-	68	68
TOTAL REVENUES	173	-	916	1,089	134	-	954	1,088

€ Million	2017				2016			
OTHER TRANSACTIONS	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total
Purchase of property, plant and equipment, intangible assets and others	105	-	-	105	67	-	2	69
Finance agreements: loans and capital contributions (lender) [4]	-	-	2,846	2,846	-	-	4,057	4,057
Finance lease agreements (lessor)	-	-	1	1	-	-	2	2
Sale of property, plant and equipment, intangible assets and others	-	-	-	-	32	-	124	156
Finance agreements: loans and capital contributions (borrower) [5]	289	-	3,807	4,096	454	-	4,229	4,683
Commitments and guarantees extended [6]	283	-	2,053	2,336	308	-	2,182	2,490
Commitments and guarantees received	26	-	4	30	45	-	4	49
Commitments assumed [7]	160	-	8,926	9,086	235	-	10,394	10,629
Commitments and guarantees canceled	-	-	-	-	-	-	-	-
Dividends and other profit distributed [8]	174	-	-	174	266	-	-	266
Other transactions [9]	1,210	-	39	1,249	1,018	-	-	1,018

(1) Includes transactions performed in each reporting period with executives and directors not included in Note 27 on the remuneration received by executives and directors, and would correspond to the outstanding balance at the reporting date of the loans granted to members of senior management and the corresponding accrued interest, as well as dividend and other remuneration received as a result of holding shares of the Company.

(2) As of December 31, the column headed *"People, companies or entities within the Group"* primarily includes goods purchased from Repsol Sinopec Brasil (RSB) and Gas Natural Fenosa (GNF), BPRY Caribbean Ventures LLC (BPRY) in the amounts €822 million, €811 million and €166 million in 2017, respectively, and €478 million, €687 million and €184 million in 2016 (See Note 12).

(3) Includes mainly product sales to the Gas Natural Fenosa Group (GNF), Iberian Lube Base Oil, S.A. (ILBOC) and the Dynasol Group for €338, 187 and €148 million in 2017, and for €176, €143 and €69 million in 2016.

(4) Includes loans extended to Group companies with entities consolidated using the equity method and these entities' undrawn credit lines (see Notes 7 and 12).

(5) At December 31, "Significant shareholders" includes credit lines with La Caixa for the maximum amount granted of €208 and 358 million in 2017 and 2016. "*People, companies or entities within the Group*" mainly includes the loan extended by Repsol Sinopec Brasil S.A. to its shareholders (see Note 6.2 "*Financial liabilities*") as well as undrawn credit lines with investees accounted for using the equity method.

(6) In 2017 and 2016, this includes €1,132 million and €1,365 million, respectively, corresponding to 3 guarantees provided by Repsol S.A. in relation to the lease agreements on three floating platforms entered into by its subsidiary Guará B.V. In addition, as of December 31, 2017 and 2016, it includes €590 million and €586 million, respectively, corresponding to the counter guarantees issued by the Group associated with bank guarantees issued on behalf of its subsidiary Repsol Sinopec Resources UK Ltd (RSRUK) covering decommissioning obligations arising from their exploration activity in the North Sea (see Note 16).

(7) Corresponds to purchase commitments outstanding at December 31 (see Note 15).

(8) Inlcudes amounts corresponding to the sale to Repsol, at the guaranteed fixed price, of free-of-charge allocation rights as part of the paid-up capital increases closed in January and July 2017 (and in the 2016 table: January and July 2016) in the framework of the shareholder remuneration program "Repsol Flexible Dividend" (see Note 6.3). In contrast, for 2017 and 2016, this heading does not include the amounts corresponding to the sale to Repsol, at the guaranteed fixed price, of bonus share rights as part of the bonus share issue closed in January 2018 and 2017, which in the case of the significant shareholders amounted to €82 million (€67 million in 2016). These rights are recognized as an account payable at December 31. Nor does it include the Repsol shares subscribed as a result of the aforementioned bonus share issues.

(9) In 2017 and 2016, this heading primarily includes remunerated accounts and deposits in the amount of €852 million and €678 million respectively and interest rate hedges in the amount of €67 million arranged with La Caixa Group in both periods.

(27) REMUNERATION OF THE MEMBERS OF THE BOARD OF DIRECTORS AND EXECUTIVES

27.1) Remuneration of the members of the Board of Directors

a) Due to membership of the Board of Directors

In accordance with Article 45 of the Articles of Association, the Directors, in their capacity as members of the Board and in exchange for discharging the supervisory and decision-making duties intrinsic to Board membership, are entitled to receive a fixed annual payment that may not exceed the ceiling established to this end at the Annual General Meeting or on the Director Remuneration Policy; it is up to the Board of Directors to determine the precise amount payable within that limit and its distribution among the various Directors, factoring in the positions and duties performed by each within the Board and its Committees, the membership of the Committees, the positions held by each one of them on the Board and any other objective circumstance considered as relevant.

The upper limit established in the Director Remuneration Policy approved at the Annual General Meeting held on April 30, 2015, under item nineteen of the corresponding agenda, is €8.5 million.

The amount of remuneration accrued in 2017 by the members of the Board of Directors in their capacity as Board members against the aforesaid assignment amounted to €7,345 million, the detail being as follows:

	Remuneration for membership of Governing Bodies *(euros)*						
Board of Directors	Board	Delegate Com.	Audit Com.	Appoints. Com.	Renum. Com.	Sustain. Com.	**Total**
Antonio Brufau Niubó	(1)	(1)	-	-	-	-	2,500,000
Gonzalo Gortázar Rotaeche	176,594	176,594	-	-	22,074	-	375,263
Manuel Manrique Cecilia	176,594	176,594	-	-	-	-	353,188
Josu Jon Imaz San Miguel	176,594	176,594	-	-	-	-	353,188
María Teresa Ballester Fornés (2)	117,729	-	58,865	-	-	-	176,594
Artur Carulla Font	176,594	176,594	-	22,074	22,074	-	397,337
Luis Carlos Croissier Batista	176,594	-	88,297	-	-	44,148	309,039
Rene Dahan	176,594	176,594	-	-	-	-	353,188
Ángel Durández Adeva (3)	176,594	-	88,297	-	14,716	-	279,608
Javier Echenique Landiribar (4)	73,581	-	36,790	-	-	18,395	128,767
Mario Fernández Pelaz (5)	176,594	-	88,297	22,074	22,074	-	309,040
Mª Isabel Gabarró Miquel (6)	73,581	-	-	9,198	9,198	18,395	110,371
Jordi Gual Solé (7)	-	-	-	-	-	-	-
José Manuel Loureda Mantiñán	176,594	-	-	22,074	22,074	44,148	264,891
Antonio Massanell Lavilla (8)	176,594	-	-	22,074		44,148	242,816
Mariano Marzo Carpio (9)	117,729	-	-	14,716	-	29,432	161,878
Isabel Torremocha Ferrezuelo (10)	117,729	-	58,865	-	-	-	176,594
Henri Philippe Reichstul (11)	73,581	73,581	-	-	-	-	147,162
J. Robinson West	176,594	176,594	-	-	-	-	353,188
Luis Suárez de Lezo Mantilla	176,594	176,594	-	-	-	-	353,188

Note: In accordance with the scheme adopted by the Board of Directors, and at the proposal of the Remuneration Committee, the amount due annually in 2017 came to: (i) €176,594 for membership of the Board of Directors; (ii) €176,594 for membership of the Delegate Committee; (iii) €88,297 for membership of the Audit and Control Committee; (iv) €44,148 for membership of the Sustainability Committee; (v) €22,074 for Membership of the Nomination Committee; and (vi) €22,074 for Membership of the Remuneration Committee.

(1) Mr. Brufau stepped down from his executive duties on April 30, 2015; on that same date the Annual General Meeting voted in favor of his re-election as non-executive Chairman of the Board of Directors, similarly approving his new remuneration terms and conditions, applicable from May 1, 2015 and comprising fixed annual remuneration (before tax) of €2,500. Also, in-kind remuneration and payments on account/withholdings related to in-kind remuneration totaled €0.589 million.

(2) Ms. Ballester was appointed Director and member of the Audit and Control Committee on May 19, 2017.

(3) Ms. Durández was appointed member of the Remuneration Committee on May 19, 2017.

(4) Mr. Echenique resigned from his position as Director and Chairman of the Audit and Control Committee and member of the Sustainability Committee on May 19, 2017

(5) See Note 31.

(6) Ms. Gabarró resigned from her position as Director and Chairwoman of the Sustainability and member of the Appointments and Remuneration Committee on May 19, 2017

(7) Mr. Gual was appointed Director and member of the Appointments and Sustainability Committees on December 20, 2017.

(8) Mr. Massanell resigned from his position as Director and member of the Appointments and Sustainability Committees on December20, 2017.

(9) Mr. Marzo was appointed Director and Chairman of the Sustainability Committee and member of the Appointments Committee on May 19, 2017.

(10) Ms. Torremocha was appointed Director and member of the Audit and Control Committee on May 19, 2017.

(11) Mr. Reichstul resigned from his position as Director and member of the Delegate Committee on May 19, 2017.

Additionally, it should also be noted that:

- The members of the Board of Directors of the parent company have not been granted any loans or advances by any Group company, joint arrangement or associate.
- The non-executive Directors only receive the fixed remuneration indicated in the table above and are excluded from the schemes financed by the Company to provide coverage in the event of termination, death or other developments and from the Company's short and long term performance-based bonus schemes. As regards the Chairman of the Board of Directors, see Note 1 of the table of remuneration for being part of the Administration Bodies, in this section.
- No Group company, joint arrangement or associated company has pension or life insurance obligations to any former or current member of the Board of Directors of the parent company, except in the case of the Chairman of the Board, the Chief Executive Officer and the General Counsel Secretary, whose remuneration are subject to the commitments set forth in their respective contracts for services, as described further on.

b) Due to the holding of executive positions and performing executive duties

In 2017, compensation to Directors for the performance of executive duties was as follows:

€ Million	Josu Jon Imaz San Miguel	Luis Suárez de Lezo Mantilla
Fixed monetary remuneration	1.200	0.983
Variable and in-kind remuneration [(1)]	2.479	1.862

[(1)] Includes, among other items, life and disability insurance and health insurance, as well as variable annual and multi-annual remuneration, as well as additional shares corresponding to the settlement of the fourth cycle of the Share Acquisition Plan by the beneficiaries of the long-term incentive programs, as detailed in section 27.1) e).

The above amounts do not include the amounts detailed in section c) and d) below.

c) Due to membership of the Boards of Directors of subsidiaries

The remuneration earned in 2017 by the members of the parent's Board of Directors in their capacity as directors of other Group companies, joint arrangements and associates amounted to €0.420 million, according to the following detail:

€ Million	Gas Natural
Josu Jon Imaz San Miguel	0.253
Luis Suárez de Lezo Mantilla	0.167

d) Due to contributions to pension plans, long-service bonuses and welfare plans

The cost in 2017 of the contributions made to pension plans, long-service bonuses and welfare plans for the members of the Executive Directors discharging executive duties in the Group amounted to:

	€ Million
Josu Jon Imaz San Miguel	0.254
Luis Suárez de Lezo Mantilla	0.197

e) Share Purchase Plan for beneficiaries of the multi-year variable remuneration programs

On May 31, 2017, the vesting period concluded for the fourth cycle of the share purchase program for beneficiaries of long-term incentive programs (see Note 28.4.i). Upon vesting, Josu Jon Imaz became entitled to the receipt of 1,707 (before withholdings), valued at a unit price of €14.82 per share. Luis Suárez de Lezo Mantilla became entitled to receive 1,126 shares at the same valuation.

27.2) Indemnity payments to Board Members

None of the Directors received any indemnity payment from Repsol in 2017.

27.3) Other transactions with directors

During 2017, Repsol's Directors did not conclude any material transaction with the Company or any of the Group companies outside the ordinary course of business or on terms other than those afforded to customers or other than on an arm's length basis.

The Chief Executive Officer signed up for the 2015-2018, 2016-2019 and 2017-2020 cycles of the Share Purchase Plan for beneficiaries of the long-term incentive programs, as detailed in Note 28. The General Counsel Secretary has signed up for the 2015-2018 and 2017-2020 cycles of this Plan.

In 2017, the Board of Directors has not been made aware of any situation of direct or indirect conflict of interest. Nevertheless, in accordance with article 229 of the Companies Act, in that fiscal year resolutions of the Board and of the Nomination Committee regarding related-party transactions, ratification, re-election and continuity of Directors and on appointment to positions within the Board were adopted in the absence of the Director and its committees affected by the relevant proposed resolution.

In addition, the Executive Directors did not participate in the approval of the Board of Directors resolutions regarding their compensation for the performance of executive duties at the Company.

27.4) Remuneration of key management personnel

a) Scope

For reporting purposes in this section, Repsol considers "key management personnel" to be the members of the Corporate Executive Committee. In 2017, a total of 8 persons formed the Corporate Executive Committee. The term "key management personnel", made purely for reporting purposes, neither substitutes nor comprises a benchmark for interpreting other senior management pay concepts applicable to the Company under prevailing legislation (e.g. Royal Decree 1382/1985), nor does it have the effect of creating, recognizing, amending or extinguishing any existing legal or contractual rights or obligations.

This section itemizes the remuneration accrued in 2017 by the people who, at some juncture during the period and during the time they occupied such positions, were members of the Board of Directors. Unless indicated otherwise, the compensation figures provided for "key management personnel" do not include the compensation accrued by people who are also directors of Repsol, S.A.; the director compensation disclosures for these individuals are included in section 1 of this note.

b) Wages and salaries, executive welfare plan, pension fund and insurance premiums.

The total remuneration earned in 2017 by executive officers who formed part of the Corporate Executive Committee is as follows:

	€ Million
Salary	5.049
Allowances	0.318
Variable remuneration [1]	5.478
In-kind remuneration [2]	0.463
Executive welfare plan	1.047

[1] This consists of an annual bonus, and a multi-annual bonus, calculated both as a given percentage of the fixed remuneration earned on the basis of the degree to which certain targets are met.

[2] Includes, inter alia, vested entitlement to 6,568 additional shares (before withholdings) at the end of the vesting period for the fourth cycle of the share purchase plan for beneficiaries of the long-term incentive programs, valued at €14.82 per share, representing an equivalent amount of €97,353. It also includes contributions to pension plans for executives (see Note 28), and the amount of premiums paid for life and disability insurance, amounting to €0.238 million.

c) Advances and loans granted

No advances or loans had been granted to management as of December 31, 2017.

27.5) Indemnity payments to key management personnel

Key management personnel are entitled under their contracts to severance pay if their employment is terminated for any reason other than breach of executive duties, retirement, disability or their own free will without reference to any of the indemnifiable events specified in the contracts.

The Group has arranged a collected insurance agreement to assure such benefits for Corporate Executive Committee members with the title General Manager, and for Directors that have performed executive duties.

In 2017, no amounts have been paid by the Company's key management personnel in the form of termination benefits or compensation for non-compete clauses.

27.6) Other transactions with key management personnel

During 2017, Repsol's key management personnel did not conclude any material transaction with the Company or any of the Group companies outside the ordinary course of business or on terms other than those afforded to customers or other than on an arm's length basis.

Notwithstanding the above, executive personnel signed up for the 2015-2018, 2016-2019 and 2017-2020 cycles of the Share Purchase Plan for beneficiaries of the long-term incentive programs, as detailed in Note 28.

27.7) Civil liability insurance

The Repsol Group subscribed a civil liability policy for Board members, the executive officers referred to in Note 27.4.a), and the rest of officers and people executing such functions, for a total premium of €1.8 million. The policy also covers different Group companies under certain circumstances and conditions.

(28) PERSONNEL OBLIGATIONS

28.1) Defined contribution pension plans

Repsol has defined mixed modality plans for certain employees in Spain, which conform to current legislation. Specifically, this refers to pension plans with defined contributions for retirement and defined contributions for permanent disability and death. For contingencies of permanent disability and death, pension plans have life insurance policies with an external entity. Additionally, outside Spain, certain Group subsidiaries have a defined contribution pension plans for their employees.

The annual cost charged to "*Personnel expenses*" in the consolidated income statement in relation to the defined contribution pension plans detailed above amounted to €54 million in 2017 and €58 million in 2016.

Executives of the Repsol Group in Spain are beneficiaries of an executive pension plan that complements the standard pension plan denominated "*Plan de previsión de Directivos*" (Management remuneration plan) which covers the participant retirement, disability and death. Repsol makes defined contributions based on a percentage of participants' salaries. The plan guarantees a fixed return equivalent to 125% the prior year National Consumer Price Index. The plan is instrumented through collective insurances that cover pension obligations, subscribed with an insurance entity. Premiums paid under these policies finance and externalize the Group's commitments in respect of contributions, as well as the fixed return mentioned above.

The cost of this plan recognized under "*Personnel expenses*" in the income statement in 2017 and 2016 was €13.5 and €17.4 million, respectively.

28.2) Defined benefit pension plans

Repsol has arranged defined benefit pension plans for certain groups of employees. The amount charged to the Group's income statement in 2017 and 2016 was €2 million and €6 million respectively, while the related balance sheet provision at year-end 2017 and 2016 stood at €70 million and €87 million, respectively (see Note 13).

28.3) Long-term variable remuneration

The Company has implemented a loyalty building program aimed at senior executives and other persons occupying positions of responsibility in the Group, consisting of long-term incentives as part of their benefit package. The purpose of this program is to strengthen the identification of executives and managers with shareholders' interests, based on the Company's medium and long-term earnings sustainability as well as the compliance with the Strategic Plan, while at the same time facilitating the retention by the Group of key personnel.

At year end, the 2014-2017, 2015-2018, 2016-2019 and 2017-2020 long-term incentive programs were in force. The 2013-2016 plan was closed, as originally stipulated, on December 31, 2016 and its beneficiaries perceived their bonuses during 2017.

The four long-term incentive programs in effect are independent of each other but their main characteristics are the same. Fulfillment of the respective objectives tied to each program entitles the beneficiaries of each plan to receive an incentive in the first four months of the year following the last year of the plan. However, receipt of this incentive payment is tied to the beneficiary remaining in the Group's employ until December 31 of the last year of the plan, except in the special cases envisaged in the terms and conditions of the related plan.

If the incentive is to be received, the amount determined at the time the long-term incentive is applied a first variable coefficient on the basis of the extent to which the objectives set are achieved, and then a second variable coefficient tied to the beneficiary's average individual performance under the Management through Commitments scheme during the years used for benchmarking under each incentive program.

None of the plans involve the delivery of shares or options to beneficiaries, with the exception of Executive Directors to whom, as per the agreement approved by the shareholder annual meeting on May 19, 2017, under Agenda item 19, a payment shall be made partially in shares (30%) of the amount corresponding to the long-term incentive programs for 2014-2017, 2015-2018, 2016-2019 and 2017-2020. The 2016-2019 and 2017-2020 Programs involve targets pegged to Repsol's stock price performance.

The amount corresponding to the 2014-2017 Long-term Incentive Plan will be paid to the Executive Directors in a proportion of 70% in cash and the remaining 30% in Company shares, so that Mr. Josu Jon Imaz will receive €820,651 in cash and 11,380 Company shares, equivalent to an amount of €162,176, and Mr. Luis Suárez de Lezo Mantilla will receive €693,919 in cash and 9,623 Company shares, equivalent to an amount of €137,137.

As resolved by the General Shareholders' meeting on May 19, 2017, the final number of shares to be delivered to the Executive Directors has been be calculated taking into account: (i) the amount that is effectively payable to each Director following application of the corresponding taxes (or withholdings) ; and (ii) the weighted average for the daily volume of average weighted Repsol share prices in the fifteen trading sessions before the Friday of the week preceding the date on which the Board of Directors agrees payment of the Long-Term Incentive for Executive Directors in each of the Plans.

To reflect the commitments assumed under these incentive plans, the Group recognized a provision charge of €23 and €16 million in the 2017 and 2016 consolidated income statement, respectively. At December 31, 2017 and 2016 the Group had recognized provisions totaling €57 million and €50 million to meet its obligations under all the aforementioned plans respectively, to fulfill all the plans described above.

28.4) Share purchase plans for beneficiaries of long-term incentive programs and share acquisition plans

i.) *"Share Purchase Plan for Beneficiaries of the Long-Term Incentive Programs"*

This Plan allows for investment in Repsol, S.A. shares of up to 50% of the total long-term gross amount received. Its aim is to promote the alignment of beneficiaries (including Executive Directors and Corporate Executive Committee members) with the long-terms interests of both the Company and its shareholders. If the beneficiaries continue to hold the shares so acquired for three years after they are purchased and the rest of the Plan terms and conditions are met, the Company will provide them with one additional share for every three initially acquired.

The beneficiaries qualifying as Senior Management, defined to this end as the Executive Directors and the other Members of the Corporate Executive Committee, for cycles approved by the Annual General Meeting of May 19, 2017 are subject to an additional performance requirement in order to qualify for receipt of these additional shares, namely overall satisfaction of at least 75% of the targets set in the long-term incentive program closed in the year immediately preceding that of delivery of the shares.

At the date of preparation of the accompanying consolidated financial statements for issue, the fifth, sixth and seventh cycles of this Plan were in force (2015-2018, 2016-2019 and 2017-2020); key data for these cycles are provided below:

	No. of participants	Total initial investment (No. of shares)	Average price (€ / share)	Maximum commitment to deliver shares
Fifht cycle (2015-2018)	219	170,302	17.41	56,698
Sixth cycle (2016-2019)	132	160,963	11.38	53,604
Seventh cycle ciclo (2017-2020)	153	135,047	15.00	44,964

During this seventh cycle, the current members of the Corporate Executive Committee and other Executive Directors have acquired a total of 51,482 shares.

As a result of this Plan, at December 31, 2017 and 2016, the Group had recognized an expense under "*Personnel expenses*" with a counterbalancing entry under "*Other reserves*" in equity of €0.5 million and €0.4 million, respectively.

In addition, the fourth cycle of the Plan vested on May 30, 2017. As a result, the rights of 160 beneficiaries to 28,288 shares vested (receiving a total of 21,576 shares net of payment on account of the personal income tax to be made by the Company). Specifically, the rights of the members of the Corporate Executive Committee and the rest of the Executive Directors to 9,400 shares also vested (net of the withholding retained by the Company, these individuals received a total of 6,504 shares).

ii.) *"Share Acquisition Plans"*

The Share Acquisition Plans were approved at the Annual General Meetings of April 15, 2011 (the 2011-2012 Share Acquisition Plan), May 31, 2012 (the 2013-2015 Share Acquisition Plan) and April 30, 2015 (the 2016-2018 Share Acquisition Plan).

These Plans are targeted at employees of the Repsol Group in Spain and are designed to enable those so wishing to receive a portion of their remuneration in Repsol, S.A. shares up to an annual limit of €12,000. The shares to be delivered will be valued at Repsol, S.A.'s closing share price on the continuous Spanish stock market on each date of delivery to the beneficiaries.

In 2017 the Group purchased 539,430 shares of Repsol, S.A. for €7.8 million for delivery to employees. Under the scope of the 2016 Plan, the Group acquired 725,352 shares from Repsol, S.A. for a total of €8 million (see Note 6).

The members of the Corporate Executive Committee acquired a total of 5,768 shares in accordance with the plan terms and conditions in 2017.

The shares to be delivered under both schemes i) and ii) may be sourced from Repsol's directly or indirectly held treasury shares, new-issued shares or from third party entities with whom the Group has entered into agreements to guarantee coverage of the commitments assumed.

(29) ENVIRONMENTAL INFORMATION [1, 2, 3]

29.1) Environmental Assets

The criteria for measuring property, plant and equipment of an environmental nature, the purpose of which is to minimize environmental impact and to protect and improve the environment, are drawn up on the basis of the nature of the business activities carried on, based on the Group's technical criteria established in the "Repsol Safety and Environmental Cost Guide", which are based on the guidelines relating to these matters issued by the American Petroleum Institute (API).

Environmental property, plant and equipment and the related accumulated depreciation are recognized in the consolidated balance sheet together with other property, plant and equipment, classified by their nature for accounting purposes (see Note 11).

[1] The information provided in this Note does not include information on ROGCI's environmental assets recognized prior to the company's acquisition (see Not 1.4).
[2] For further information on safety and the environment, see sections 6.1, 6.3 and 6.4 of the Consolidated Management Report.
[3] As to the regulatory framework applicable to safety and the environment, see Appendix IV "*Regulatory Framework*".

The breakdown of the cost of the environmental assets identified and the related accumulated depreciation at December 31, 2017 and 2016 is as follows:

	€ Million					
	2017			2016		
	Cost	Accumulated amortization	Net	Cost	Accumulated amortization	Net
Atmosphere protection	471	(275)	196	444	(264)	180
Water management	501	(350)	151	507	(353)	154
Product quality	2,009	(1,013)	996	1,945	(946)	999
Soil and dismantling	148	(69)	79	158	(65)	93
Energy saving and efficiency	442	(175)	267	431	(162)	269
Waste management	40	(19)	21	42	(20)	22
Contingencies and spills	68	(11)	57	67	(7)	60
Other	260	(120)	140	236	(122)	115
	3,939	**(2,032)**	**1,907**	**3,830**	**(1,939)**	**1,891**

The cost includes €305 million of assets under construction at December 31, 2017 and €254 million at December 31, 2016.

Among the most significant environmental investments made in 2017, it is worth highlighting the ones dedicated to improving environmental quality of oil products, managing and optimizing water consumption, minimizing emissions into the atmosphere, increasing energy saving and efficiency and improving contingency systems and spill prevention systems.

Our main investment projects included the continuation of the fuel quality improvement project at the La Pampilla Refinery in Peru, with a €117 million investment in 2017, and the €7.6 million investment in Malaysia to change the type of pipeline for transmission of crude and condensed oil. This investment reduced energy consumption and the risk of spills, and lowered the impact on the marine environment. Also noteworthy is the €8 million investment in the Tarragona refinery and the €5 million investment in Chemicals to reduce NOx emissions into the atmosphere.

Furthermore, in 2017 an investment of €37 million was allocated to energy efficiency projects: highlights included a €5.4 million investment in the Petronor refinery to reduce emissions through the installation of new compressors in the fluid catalytic cracking unit, and the €5.2 million investment in Cartagena to reduce energy consumption in the atmospheric distillation unit.

29.2) Environmental provisions

Repsol recognizes the provisions required to cover the measures aimed at preventing and repairing environmental impact. These provisions are presented under "*Current and non-current provisions*" on the consolidated balance sheet and under the "*Other provisions*" column in the table reconciling the movement in provisions in Note 13.

The changes in the environmental provisions in 2017 and 2016 were as follows:

	€ Million	
	2017	2016
Balance at 1 January	**134**	**59**
Allowances charged to income statement	14	6
Use of provisions credited to income statement	(43)	(13)
Provisions released due to payment	(4)	(6)
Reclassifications and other changes	(20)	88
Balance at 31 December	**81**	**134**

Additionally, the Group has registered field dismantling provisions (see Note 13).

The insurance policies cover, subject to terms and conditions, civil liability for pollution on land and at sea and certain liabilities via-a-vis the authorities pursuant to the Environmental Liability Act, all of which derived from accidental, sudden and identifiable events, in keeping with habitual industry practice and applicable legislation.

29.3) Environmental expenses

Work relating to water management, atmospheric protection, waste management, remediation of soil and subsoil water and the development of environmental management systems are considered as environmental expenses. In 2017 and 2016, these expenses amounted to €162 million and €155 million, respectively, classified as *"Supplies"* and "*Other operating expenses*". These expenses include €69 and €72 million of expenses for the allowances needed to cover CO_2 emissions made in 2017 and 2016.

Also, environmental expenses in 2017 and 2016 include: other work carried out to enhance air quality in the amount of €31 and €25 million, respectively; water management in the amount of €19 and €18 million, respectively; waste management totaling €16 and €12 million, respectively; and soil and other restoration work for €12 and €9 million, respectively.

29.4) Carbon emission allowances

The provisions movements recognized in respect of CO_2 emission allowances used in 2017 and 2016 is as follows:

	€ Million	
	2017	2016
Balance at 1 January	**72**	**83**
Contributions charged to results [1]	69	72
Reclassifications and other movements [2]	(72)	(83)
Balance at 31 December	**69**	**72**

[1] Corresponds to the expense incurred to acquire the allowances needed to cover the Group's CO_2 emissions.
[2] In 2017 and 2016, corresponds to the derecognition of allowances used to cover emissions made in 2016 and 2015, respectively(see Note 10).

During 2017 and 2016, the companies comprising the consolidation scope recognized emission allowances allocated free of charge under the Spanish National Allocation plan equivalent to 8 million tons of CO_2, initially measured at €51 and €68 million, respectively (see Note 10).

The cost of the CO_2 management effort came to €17 million in 2017 and in 2016.

(30) FURTHER BREAKDOWNS

30.1) Staff[1]

Repsol Group employed a total of 24,226 people at December 31, 2017, geographically distributed as follows: Spain (16,353 employees), North America (1,393 employees), South America (3,696 employees), Europe, Africa and Brazil (2,546 employees), Asia and Russia (234 employees) and Oceania (4 employees). Average headcount in 2017 was 24,675 employees (26,422 employees in 2016).

Below is a breakdown of the Group's total staff[2] distributed by professional categories and genders at year-end 2017 and 2016:

	2017		2016	
	Men	Women	Men	Women
Executives	212	50	229	46
Technical Managers	1,648	685	1,669	641
Technicians	7,123	4,382	7,511	4,467
Manual workers and junior personnel	6,613	3,513	6,510	3,462
Total [1]	**15,596**	**8,630**	**15,919**	**8,616**

The Repsol Group employed a total of 573 people of differing abilities at year-end 2017 (2.37% of its workforce).

[1] For further information on the workforce and human resource management policies, see section 6.2 of the Consolidated Management Report.
[2] Pursuant to the provisions of Organic Law 3/2007, of March 22, which promotes true equality between men and women, published in the Official Stat Gazette of March 23, 2007.

In Spain in 2017, using the computation criteria stipulated in Spanish law on the rights of people with disability and their integration, the Group surpassed the legally required percentage threshold: its differently-abled workforce accounted for 2.56% of the total in Spain, namely 490 direct hires.

30.2) Fees paid to auditors

The approved fees for audit services, professional services related to the audit and other non-audit services provided during the year to Repsol Group companies by Deloitte Group companies and their controlled entities, as well as the fees for similar services provided by other audit firms and their controlled entities, are shown below:

	Main auditor [3]		Other auditors [4]	
€ Million	2017	2016	2017	2016
Fees for audit services	5.9	5.9	1.8	3.1
Fees for audit-related professional services [1]	1.1	1.1	-	0.2
Fees for other services [2]	0.6	0.5	0.8	0.2
Total	**7.6**	**7.5**	**2.6**	**3.5**

[1] Mainly includes the revision of the Group's Internal Control, the revision of the corporate social responsibility report and services relating to the processes for issuing bonds and other marketable securities.
[2] Includes tax, consulting and other services.
[3] The sum of these figures does not represent more than 10% of total revenue of the auditor (Deloitte, S.L.) and its organization as a whole.
[4] Mainly includes fees due to EY, S.L. for audit work and other services provided to Repsol Oil&Gas Canada, Inc. and its subsidaries.

Repsol's Annual Shareholders' Meeting held on May 19, 2017 approved the appointment of PricewaterhouseCoopers Auditores, S.L. as the auditor of Repsol, S.A. and the Group for 2018, 2019 and 2020.

30.3) Research and development

Research costs incurred are recognized as expenses for the year and development costs are capitalized only if all the conditions stipulated in the applicable accounting standard are met.

The expense recognized in the income statement in connection with research and development activities amounted to €65 million in 2017 and €73 million in 2016. For further information, see section 6.5 of the consolidated Management Report.

(31) SUBSEQUENT EVENTS

- On January 17, 2018, ROGCI repurchased a fixed-annual 3.75% bond maturing in February 2021 for a total of $251 million.

- On January 31, 2018, Repsol Norge AS acquired 7.7% of Visund (field operated by Statoil) at the Norwegian continental platform.

- On February 20, 2018, Mr. Mario Fernández Pelaz has resigned his position as Director of Repsol, S.A. Board of Directors.

- On February 22, 2018, Repsol, S.A. has reached an agreement with Rioja Bidco Shareholdings, S.L.U., ("Rioja") a company controlled by funds advised by CVC, for the sale of its stake in Gas Natural SDG, S.A. ("Gas Natural") corresponding to 200,858,658 shares, representing approximately 20.072% of the share capital of Gas Natural, for a total amount of €3,816,314,502, equivalent to a price of €19 per share. The goodwill generated for the Repsol Group would amount to approximately €400 million.

  Closing of the sale of the Shares is conditional upon the fulfilment of the following conditions:

  (i) granting in no more than six months, from the signing of the agreement, of the mandatory authorizations by the competent authorities in Mexico, South Korea, Japan and Germany regarding the concentration transaction that in those market entails the transfer of the Shares;

  (ii) the lack of opposition, express or tacit, by the Irish Central Bank regarding the indirect acquisition of a significant stake in the entity Clover Financial & Treasury Services Ltd. in the same period no longer than six months; and

(iii) the execution by Rioja of a shareholders agreement with Criteria Caixa, S.A.U. and GIP III Canary 1 S.à r.l. no later than 22 March, as well as the appointment, no later than the transaction closing date, of 3 people designated by Rioja as members of the board of Gas Natural replacing the three representative that Repsol currently has in the Board of Directors of Gas Natural.

(32) EXPLANATION ADDED FOR TRANSLATION TO ENGLISH

These consolidated financial statements are prepared on the basis of IFRSs, as endorsed by the European Union, and Article 12 of Royal Decree 1362/2007. Consequently, certain accounting practices applied by the Group may not conform to other generally accepted accounting principles in other countries.

APPENDIX I: MAIN COMPANIES COMPRISING THE REPSOL GROUP AT DECEMBER 31, 2017

					December 2017			
					%		€ Million	
Name	**Parent company**	**Country**	**Corporate purpose**	**Method of consol.** (1)	**Controlling Interest** (2)	**Total Group Interest**	**Equity** (3)	**Share Capital**(3)
UPSTREAM								
AESA - Construcciones y Servicios Bolivia , S.A.	Repsol Bolivia, S.A.	Bolivia	Transport of hydrocarbons (16)	F.C.	99.00	99.00	0	0
Agri Development, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M. (J.V.)	10.00	6.00	656	0
Akakus Oil Operations, B.V.	Repsol Exploración Murzuq, S.A.	Netherlands	Oil and gas exploration and production	E.M.	49.00	49.00	0	0
BP Trinidad & Tobago (19)	BPRY Caribbean Ventures, Llc.	United States	Oil and gas exploration and production	E.M. (J.V.)	100.00	30.00	1	1
BPRY Caribbean Ventures, Llc.	Repsol Exploración, S.A.	United States	Oil and gas exploration and production	E.M. (J.V.)	30.00	30.00	1,823	2,603
Cardón IV, S.A.	Repsol Exploración, S.A. (13)	Venezuela	Oil and gas exploration and production	E.M. (J.V.)	50.00	50.00	(440)	3
CSJC Eurotek - Yugra	Repsol Exploración Karabashsky, B.V.	Russia	Oil and gas exploration and production	E.M. (J.V.)	73.63	73.63	89	0
Dubai Marine Areas Ltd.	Repsol Exploración, S.A.	United Kingdom	Oil and gas exploration and production (16) (17)	E.M. (J.V.)	50.00	50.00	2	0
Equion Energia Ltd.	Talisman Colombia Holdco Ltd.	United Kingdom	Oil and gas exploration and production	E.M. (J.V.)	49.00	49.00	319	0
FEHI Holding S.ar.l.	TE Holding S.a.r.l.	Luxembourg	Portfolio company	F.C.	100.00	100.00	2,681	186
Foreland Oil Ltd. (10)	Rift Oil, Ltd.	British Virgin Islands	Oil and gas exploration and production	F.C.	100.00	100.00	51	238
Fortuna Resources (Sunda) Ltd. (10)	Talisman UK (South East Sumatra) Ltd.	British Virgin Islands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	44	0
Guará, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	25.00	15.00	1,524	0
MC Alrep, Llc.	AR Oil & Gaz, B.V.	Russia	JV company management services	E.M. (J.V.)	100.00	49.00	0	0
Lapa Oil & Gas, B.V. (5)	Guará, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	100.00	15.00	-	-
Occidental de Colombia LLC	Repsol International Finance, B.V.	United States	Portfolio company	E.M. (J.V.)	25.00	25.00	127	88
Paladin Resources Ltd.	TE Holding S.a.r.l.	United Kingdom	Portfolio company	F.C.	100.00	100.00	(554)	276
Pan Pacific Petroleum (Vietnam) Pty, Ltd. (5)	Repsol Exploración, S.A.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	6	0
Petrocarabobo, S.A.	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production	E.M. (J.V.)	11.00	11.00	643	517
Petroquiriquire, S.A. Emp. Venture	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production.	E.M. (J.V.)	40.00	40.00	(392)	217
Quiriquire Gas, S.A.	Repsol Venezuela, S.A.	Venezuela	Oil and gas exploration and production.	E.M. (J.V.)	60.00	60.00	8	0
Repsol Alberta Shale Partnership	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	986	1,197
Repsol Angola 22, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	(46)	241
Repsol Angola 35, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(1)	113
Repsol Angola 37, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	2	236
Repsol Angostura Ltd,	Repsol Exploración, S.A.	Trinidad and Tobago	Oil and gas exploration and production	F.C.	100.00	100.00	(2)	28
Repsol Aruba, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	4	6
Repsol Bulgaria, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	71	85
Repsol Canada Energy Partnership	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	5,548	2,333
Repsol Canada Inversiones, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	8,228	0
Repsol Ductos Colombia, S.A.S.	Talisman Colombia Holdco Ltd.	Colombia	Oil and gas exploration and production	F.C.	100.00	100.00	38	3
Repsol E&P Bolivia, S.A.	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	F.C.	100.00	100.00	584	127
Repsol E&P Canada Ltd.	Repsol Exploración, S.A.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	3	87
Repsol E&P Eurasia, LLc.	Repsol Exploración, S.A.	Russia	Oil and gas exploration and production	F.C.	99.99	99.99	(15)	0
Repsol E&P USA, Inc.	Repsol USA Holdings Corporation	United States	Oil and gas exploration and production	F.C.	100.00	100.00	2,533	2,740
Repsol E&P USA Holdings, Inc.	Repsol Oil & Gas Holdings USA, Inc.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	2,219	1,578
Repsol Ecuador, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	(287)	5
Repsol Energy North America Corporation	Repsol USA Holdings Corporation	United States	Marketing of LNG	F.C.	100.00	100.00	(445)	238
Repsol Exploración 17, B.V. (19)	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Repsol Exploración Aitoloakarnania, S.A. (5)	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Repsol Exploración Argelia, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	648	4
Repsol Exploración Atlas, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Repsol Exploración Boughezoul, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Repsol Exploración Caribe, S.L.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Repsol Exploración Cendrawasih I, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	(1)	25
Repsol Exploración Cendrawasih II, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	12
Repsol Exploración Cendrawasih III, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	4
Repsol Exploración Cendrawasih IV, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	0	6
Repsol Exploración Colombia, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	155	2
Repsol Exploración East Bula, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	3

					December 2017			
					%		€ Million	
Name	**Parent company**	**Country**	**Corporate purpose**	**Method of consol. (1)**	**Controlling interest (2)**	**Total Group Interest**	**Equity (3)**	**Share Capital(3)**
Repsol Exploración Guyana, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	15	0
Repsol Exploración Ioannina, S.A. (5)	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	1	0
Repsol Exploración Irlanda, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	12	0
Repsol Exploración Karabashsky, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	98	131
Repsol Exploración Kazakhstan, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production (16)	F.C.	100.00	100.00	8	0
Repsol Exploración Liberia, B.V. (7)	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	4	54
Repsol Exploración México, S.A. de C.V.	Repsol Exploración, S.A.	Mexico	Oil and gas exploration and production	F.C.	100.00	100.00	23	19
Repsol Exploración Murzuq, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	268	9
Repsol Exploración Perú, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	162	17
Repsol Exploración Seram, B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(3)	3
Repsol Exploración Sierra Leona, S.L.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production (16)	F.C.	100.00	100.00	8	3
Repsol Exploración Tobago, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	15	0
Repsol Exploración Venezuela, B.V.	Repsol Exploración, S.A.	Netherlands	Portfolio company	F.C.	100.00	100.00	381	920
Repsol Exploración, S.A.	Repsol S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	6,263	25
Repsol Exploration Australia, Pty, Ltd.	Repsol Exploración, S.A.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	0	21
Repsol Exploration Namibia Pty, Ltd.	Repsol Exploración, S.A.	Namibia	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(12)	0
Repsol Exploraçao Brasil, Ltda. (14)	Repsol Exploración, S.A. (15)	Brazil	Oil and gas exploration and production	F.C.	100.00	100.00	39	39
Repsol Investigaciones Petrolíferas, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	508	226
Repsol Libreville, S.A. avec A.G.	Repsol Exploración, S.A.	Gabon	Oil and gas exploration and production	F.C.	100.00	100.00	53	63
Repsol LNG Holdings, S.A.	Repsol Exploración, S.A.	Spain	Hydrocarbon marketing	F.C.	100.00	100.00	8	2
Repsol Louisiana Corporation	Repsol USA Holdings Corporation	United States	Oil and gas exploration and production	F.C.	100.00	100.00	23	86
Repsol Norge, AS	Repsol Exploración, S.A.	Norway	Oil and gas exploration and production	F.C.	100.00	100.00	107	0
Repsol OCP de Ecuador, S.A.	Repsol Ecuador, S.A.	Spain	Operation of an oil pipeline for the transport of hydrocarbons	F.C.	100.00	98.36	6	0
Repsol Offshore E & P USA, Inc.	Repsol USA Holdings Corporation	United States	Oil and gas exploration and production	F.C.	100.00	100.00	11	27
Repsol Oil & Gas Australia (JPDA 06-105) Pty Ltd.	Paladin Resources Ltd.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	(26)	133
Repsol Oil & Gas Australasia Pty Ltd.	Talisman International Holdings, B.V.	Australia	Shared services company	F.C.	100.00	100.00	14	76
Repsol Oil & Gas Canada, Inc. (12)	Repsol Energy Resources Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	1,206	5,005
Repsol Oil & Gas Holdings USA Inc.	FEHI Holding S.a.r.l.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	4,040	1,791
Repsol Oil & Gas Malaysia (PM3) Ltd.	Repsol Oil & Gas Malaysia Holdings Ltd.	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	13	10
Repsol Oil & Gas Malaysia Ltd.	Repsol Oil & Gas Malaysia Holdings Ltd.	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	209	0
Repsol Oil & Gas Niugini Kimu Alpha Pty Ltd.	Repsol Oil & Gas Niugini Ltd.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	1	5
Repsol Oil & Gas Niugini Kimu Beta Ltd.	Repsol Oil & Gas Niugini Ltd.	Papua Nueva Guinea	Oil and gas exploration and production	F.C.	100.00	100.00	4	13
Repsol Oil & Gas Niugini Ltd.	Repsol Oil & Gas Papua Pty, Ltd.	Papua Nueva Guinea	Oil and gas exploration and production	F.C.	100.00	100.00	56	303
Repsol Oil & Gas Niugini Pty Ltd.	Talisman International Holdings, B.V.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	300	548
Repsol Oil & Gas Papua Pty Ltd.	Repsol Oil & Gas Niugini Pty Ltd.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	286	287
Repsol Oil & Gas USA LLC.	Repsol E&P USA Holdings Inc.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	1,554	1,687
Repsol Oriente Medio, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production (16)	F.C.	100.00	100.00	64	0
Repsol Servicios Colombia, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	1	0
Repsol Sinopec Brasil, S.A.	Repsol S.A.	Brazil	Hydrocarbon operations and marketing	E.M. (J.V.)	60.01	60.01	6,394	6,733
Repsol Sinopec Resources UK Ltd.	Talisman Colombia Holdco Ltd.	United Kingdom	Oil and gas exploration and production	E.M. (J.V.)	51.00	51.00	0	2,848
Repsol Suroriente Ecuador, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	1	2
Repsol U.K., Ltd.	Repsol Exploración, S.A.	United Kingdom	Oil and gas exploration and production	F.C.	100.00	100.00	(5)	1
Repsol USA Holdings Corporation	Repsol Exploración, S.A.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	2,878	2,917
Repsol Venezuela Gas, S.A.	Repsol Venezuela, S.A.	Venezuela	Oil and gas exploration and production	F.C.	100.00	100.00	14	1
Repsol Venezuela, S.A.	Repsol Exploración Venezuela, B.V.	Venezuela	Oil and gas exploration and production	F.C.	100.00	100.00	351	668
SC Repsol Baicoi, S.R.L.	Repsol Exploración, S.A.	Romania	Oil and gas exploration and production	F.C.	100.00	100.00	15	40
SC Repsol Pitesti, S.R.L.	Repsol Exploración, S.A.	Romania	Oil and gas exploration and production	F.C.	100.00	100.00	5	11
SC Repsol Targoviste, S.R.L.	Repsol Exploración, S.A.	Romania	Oil and gas exploration and production	F.C.	100.00	100.00	38	46
SC Repsol Targu Jiu, S.R.L.	Repsol Exploración, S.A.	Romania	Oil and gas exploration and production	F.C.	100.00	100.00	2	6
Servicios Administrativos Cuenca de Burgos S.A. de C.V.	Repsol Exploración, S.A.	Mexico	Oil and gas exploration and production	F.C.	100.00	100.00	0	0

Name	Parent company	Country	Corporate purpose	Method of consol. (1)	December 2017 % Controlling Interest (2)	Total Group Interest	€ Million Equity (3)	Share Capital(3)
Talisman (Algeria) B.V.	Talisman Middle East, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	155	0
Talisman (Asia) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	(137)	0
Talisman (Block K 39) B.V.	Talisman K. Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	(5)	0
Talisman (Block K 44) B.V.	Talisman K. Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	7	0
Talisman (Block K 9) B.V.	Talisman Global Holdings, B.V.	Netherlands	Oil and gas exploration and production (16) (17)	F.C.	100.00	100.00	0	0
Talisman (Colombia) Oil & Gas Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	514	716
Talisman (Corridor) Ltd. (18)	Fortuna International (Barbados), Inc	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	930	39
Talisman (Jambi Merang) Ltd.	Talisman International Holdings, B.V.	United Kingdom	Oil and gas exploration and production	F.C.	100.00	100.00	62	68
Talisman (Pasangkayu) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(13)	43
Talisman (Sageri) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(80)	0
Talisman (Sumatra) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman (Vietnam 133 &134) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	42	29
Talisman (Vietnam 15-2/01) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	279	441
Talisman (Vietnam 46/02) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	49	50
Talisman Andaman B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	31	0
Talisman Colombia Holdco Ltd.	TE Holding S.a.r.l.	United Kingdom	Portfolio company	F.C.	100.00	100.00	3,988	3,947
Talisman Banyumas B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Talisman East Jabung B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	(15)	0
Talisman Energy DL, Ltd. (20)	Repsol Sinopec Resources UK Ltd.	United Kingdom	Oil and gas exploration and production (16) (17)	E.M. (J.V.)	100.00	51.00	-	-
Talisman Energy Investments Norge AS	Talisman Perpetual (Norway) Ltd.	Norway	Oil and gas exploration and production (16) (17)	F.C.	100.00	100.00	0	1
Talisman Energy NS, Ltd. (20)	Repsol Sinopec Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production (16) (17)	E.M. (J.V.)	100.00	51.00	-	-
Talisman Energy Tangguh B.V.	Talisman Energy (Sahara) B.V.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman Java B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Talisman Resources (Bahamas) Ltd. (9)	Paladin Resources Ltd.	Bahamas	Oil and gas exploration and production (16)	F.C.	100.00	100.00	7	0
Talisman Resources (North West Java) Ltd.	Talisman UK (South East Sumatra) Ltd.	United Kingdom	Oil and gas exploration and production (16)	F.C.	100.00	100.00	31	0
Talisman Sadang B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production (16) (17)	F.C.	100.00	100.00	0	0
Talisman Sakakemang B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	79	0
Talisman Sierra Leone B.V.	TE Global Holding, B.V.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman South Mandar B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman South Sageri B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman Transgasindo Ltd. (18)	Fortuna International (Barbados), Inc.	Barbados	Portfolio company	F.C.	100.00	100.00	(5)	24
Talisman UK (South East Sumatra) Ltd.	Paladin Resources, Ltd.	United Kingdom	Oil and gas exploration and production (16)	F.C.	100.00	100.00	47	0
Talisman Vietnam Ltd.	Talisman Oil, Ltd.	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	10	0
Talisman Vietnam 05-2/10 B.V.	TV 05-2/10 Holding, B.V.	Netherlands	Oil and gas exploration and production (16)	F.C.	100.00	100.00	0	0
Talisman Vietnam 07/03 B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	190	0
Talisman Vietnam 07/03-CRD Corporation LLC	Talisman International Holdings, B.V.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	157	43
Talisman Vietnam 135-136 B.V.	TV 135-136 Holding, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	274	0
Talisman Vietnam 146-147 B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	53	0
Talisman West Bengara B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	0	0
Transportadora Sulbrasileira de Gas, S.A.	Tucunaré Empreendimentos e Participaçõ	Brazil	Gas pipeline construction and operation	E.M. (J.V.)	25.00	25.00	-	18
Triad Oil Manitoba Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	5	0
YPFB Andina, S.A.	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	E.M. (J.V.)	48.33	48.33	841	147
YPFB Transierra, S.A.	YPFB Andina, S.A.	Bolivia	Transport of hydrocarbons via a gas pipeline and oil pipeline	E.M.	44.50	21.51	163	67
504744 Alberta Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production (16)	F.C.	100.00	100.00	(7)	0
7308051 Canada Ltd	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	42	252
8441251 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	13	12
8787352 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	2	2
Vung May 156-159 Vietnam B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	1	0

Name	Parent company	Country	Corporate purpose	Method of consol. (1)	Controlling Interest (2)	Total Group Interest	Equity (3)	Share Capital(3)
DOWNSTREAM								
Abastecimentos e Serviços de Aviaçao, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	E.M.	50.00	50.00	0	0
Air Miles España, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Programa Travel Club. Loyalty service	E.M.	26.67	25.78	10	0
Arteche y García, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	100.00	96.68	0	0
Asfalnor, S.A.	Petróleos del Norte, S.A.	Spain	Distribution and marketing of asphalt products	F.C.	100.00	85.98	0	0
Asfaltos Españoles, S.A.	Repsol Petróleo, S.A.	Spain	Asphalts	(4)	50.00	49.99	34	9
Benzirep-Vall, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	100.00	96.68	0	0
Caiageste - Gestao de Areas de Serviço, Lda.	GESPOST	Portugal	Operation and management of gas stations	E.M.	50.00	50.00	0	0
Campsa Estaciones de Servicio, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Operation and management of gas stations	F.C.	100.00	96.68	140	8
Carburants i Derivats, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Andorra	Distribution of oil derivative products	E.M.	33.25	32.15	2	0
Cogeneración Gequisa, S.A.	General Química	Spain	Production of electricity and steam	E.M.	39.00	19.50	9	2
Compañía Anónima de Revisiones y Servicios, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	95.00	91.85	3	1
Compañía Auxiliar de Remolcadores y Buques Especiales, S.A.	Repsol Petróleo, S.A.	Spain	Provision of maritime services	F.C.	100.00	99.19	7	0
Distribuidora Andalucía Oriental, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Fuel marketing	E.M. (J.V.)	50.00	48.34	2	1
Distribuidora de Petróleos, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Fuel marketing	F.C.	85.00	82.18	0	0
Dynasol Altamira, S.A. de C.V. (19)	Dynasol Elastómeros, S.A. de C.V.	Mexico	Service provisions	E.M.	100.00	50.00	2	0
Dynasol China, S.A. de C.V. (19)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Service provisions	E.M.	99.99	49.99	17	5
Dynasol Elastómeros, S.A. de C.V.	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Production and marketing of chemical products	E.M.	100.00	50.00	89	27
Dynasol Elastómeros, S.A.U.	Dynasol Gestión, S.L.	Spain	Production and marketing of chemical products	E.M.	100.00	50.00	50	17
Dynasol Gestión Mexico, S.A.P.I. de C.V. (19)	Repsol Química, S.A.	Mexico	Portfolio and shared services company	E.M.	50.00	50.00	0	0
Dynasol Gestión, S.L.	Repsol Química, S.A.	Spain	Portfolio and shared services company	E.M.	50.00	50.00	137	42
Dynasol, Llc.	Dynasol Gestión, S.L.	United States	Marketing of petrochemical products	E.M.	100.00	50.00	0	0
Energy Express S.L.U. (19)	Societat Catalana de Petrolis, S.A.	Spain	Operation and management of gas stations	F.C.	100.00	92.08	5	1
Estación de Servicio Barajas, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	96.00	92.81	3	1
Estaciones de Servicio El Robledo, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations (16)	F.C.	100.00	96.68	0	0
Gas Natural West África S.L.	Repsol LNG Holding, S.A.	Spain	Oil and gas exploration and production.	E.M. (J.V.)	100.00	72.06	0	0
Gastream México, S.A. de C.V. (16)	Repsol S.A.	Mexico	Other activities (16) (17)	F.C.	100.00	100.00	0	26
General Química, S.A.U.	Dynasol Gestión, S.L.	Spain	Manufacture and sale of petrochemical products	E.M.	100.00	50.00	44	6
Gestão e Admin. de Postos de Abastecimento, Unipessoal, Lda. GESPOST	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	F.C.	100.00	100.00	4	0
Gestión de Puntos de Venta GESPEVESA, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Gas station management	E.M. (J.V.)	50.00	48.34	54	39
Grupo Repsol YPF del Perú, S.A.C.	Repsol Perú B.V.	Peru	Shared services company	F.C.	100.00	100.00	2	0
Iberian Lube Base Oil Company, S.A.	Repsol Petróleo, S.A.	Spain	Development and production of lubricant base oils	(4)	30.00	29.99	206	180
Ibil, Gestor de Carga de Vehículo Eléctrico, S.A.	Repsol Nuevas Energías, S.A.	Spain	Operation of electric vehicle charging points	E.M. (J.V.)	50.00	50.00	4	12
Industrias Negromex, S.A. de C.V. (19)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Production of synthetic oilcloths	E.M.	99.99	49.99	0	0
Insa Altamira, S.A. de C.V. (19)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Supply of permanent staff	E.M.	99.99	49.99	17	6
Insa Gpro (Nanjing), Synthetic Rubber Co., Ltd.	Dynasol China, S.A. de C.V.	China	Production, search and development, sale of synthetic rubber.	E.M.	50.00	24.99	61	96
Insa, Llc. (19)	Dynasol Gestión, S.L.	United States	Marketing of rubber NBR products	E.M.	100.00	50.00	7	10
Klikin Deals Spain, S.L. (5)	Repsol Comercial de Productos Petrolíferc	Spain	Commercialization, platform for customer management and marketing plans	E.M.	70.00	67.68	-	-
Liaoning North Dynasol Synthetic Rubber Co., Ltd. (19)	Dynasol Gestión, S.L.	China	Production, search and development, sale of synthetic rubber.	E.M.	50.00	25.00	61	96
North Dynasol Shanghai Business Consulting Co Ltd.	Dynasol Gestión, S.L.	China	Marketing of rubber products	E.M.	50.00	25.00	-	-
OGCI Climate Investments, Llp. (5)	Repsol Energy Ventures, S.A.	United Kingdom	Technology Development	E.M.	14.29	14.29	16	19
Petróleos del Norte, S.A.	Repsol S.A.	Spain	Construction and operation of an oil refinery.	F.C.	85.98	85.98	1,112	121
Petronor Innovación, S.L.	Petróleos del Norte, S.A.	Spain	Research activities	F.C.	100.00	85.98	0	0
Polidux, S.A.	Repsol Química, S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	18	17
Principle Power (Europe), Ltd. (19)	Prinicple Power, Inc.	United Kingdom	Electricity production	E.M. (J.V.)	100.00	24.22	15	0
Principle Power Portugal Unipessoal, Lda. (19)	Prinicple Power, Inc.	Portugal	Electricity production	E.M. (J.V.)	100.00	24.22	15	0
Principle Power, Inc.	Repsol Energy Ventures, S.A.	United States	Holding company	E.M.	24.22	24.22	17	35
Refinería La Pampilla, S.A.A.	Repsol Perú B.V.	Peru	Hydrocarbon refining and marketing.	F.C.	82.39	82.39	416	444
Repsol Butano, S.A.	Repsol S.A.	Spain	Marketing of LPG	F.C.	100.00	100.00	1,207	59
Repsol Canada, Ltd. General Partner	Repsol Exploración, S.A.	Canada	Regasification of LNG	F.C.	100.00	100.00	4	5
Repsol Chemie Deutschland, GmbH	Repsol Química, S.A.	Germany	Marketing of chemical products	F.C.	100.00	100.00	2	0
Repsol Chile, S.A.	Repsol S.A.	Chile	Portfolio company (16)	F.C.	100.00	100.00	2	2
Repsol Comercial de Productos Petrolíferos, S.A.	Repsol Petróleo, S.A.	Spain	Marketing of oil products	F.C.	99.79	96.68	1,128	335
Repsol Comercial, S.A.C.	Refinería La Pampilla S.A.A.	Peru	Fuel marketing	F.C.	100.00	82.38	82	70
Repsol Directo, Lda.	Repsol Portuguesa, S.A.	Portugal	Distribution and marketing of oil products	F.C.	100.00	100.00	0	0
Repsol Directo, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of oil products	F.C.	100.00	96.68	3	0

					December 2017			
					%		€ Million	
Name	**Parent company**	**Country**	**Corporate purpose**	**Method of consol. (1)**	**Controlling interest (2)**	**Total Group interest**	**Equity (3)**	**Share Capital(3)**
Repsol Downstream México, S.A. de C.V (5)	Repsol Lubricantes y Especialidades, S.A.	Mexico	Production, acquisition, import, export, intermediation and marketing of all types of	F.C.	100.00	99.97	0	0
Repsol Eléctrica de Distribución, S.L.	Repsol Petróleo, S.A.	Spain	Distribution and supply of electricity	F.C.	100.00	100.00	8	0
Repsol Energy Canada, Ltd.	Repsol Exploración, S.A.	Canada	Marketing of LNG	F.C.	100.00	100.00	(1,379)	692
Repsol Energy Ventures, S.A.	Repsol Nuevas Energías, S.A.	Spain	Development of new energy source projects	F.C.	100.00	100.00	17	2
Repsol Exploration Advanced Services, AG	Repsol Exploración, S.A.	Switzerland	Human resource service provider	F.C.	100.00	100.00	1	0
Repsol Gas Portugal, S.A.	Repsol Butano, S.A.	Portugal	Marketing of LPG	F.C.	100.00	100.00	34	1
Repsol GLP de Bolivia, S.A.	Repsol Exploración, S.A. (11)	Bolivia	Marketing of GLP (16)	F.C.	100.00	100.00	0	0
Repsol Italia, SpA	Repsol S.A.	Italy	Marketing of oil products	F.C.	100.00	100.00	35	2
Repsol Lubricantes y Especialidades, S.A.	Repsol Petróleo, S.A.	Spain	Production and marketing of oil derivatives	F.C.	100.00	99.97	72	5
Repsol Lubrificantes e Especialidades Brasil Participacoes. Ltda.	Repsol Lubricantes y Especialidades, S.A.	Brazil	Production and marketing of lubricants	F.C.	100.00	100.00	1	2
Repsol Marketing, S.A.C.	Repsol Perú B.V.	Peru	Fuel and special product marketing	F.C.	100.00	100.00	12	3
Repsol Maroc, S.A.	Repsol Butano, S.A.	Morocco	Marketing of GLP (16)	E.M.	99.96	99.96	0	1
Repsol Nuevas Energías, S.A.	Repsol S.A.	Spain	Production, distribution and sale of biofuels	F.C.	100.00	100.00	90	1
Repsol Perú, B.V.	Repsol S.A.	Netherlands	Portfolio company	F.C.	100.00	100.00	209	159
Repsol Petróleo, S.A.	Repsol S.A.	Spain	Import of products and operation of refineries	F.C.	99.97	99.97	4,085	218
Repsol Polímeros, S.A.	Repsol Química, S.A.	Portugal	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	296	60
Repsol Portuguesa, S.A.	Repsol S.A.	Portugal	Distribution and marketing of oil products	F.C.	100.00	100.00	209	59
Repsol Química, S.A.	Repsol S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	1,403	60
Repsol St. John LNG, S.L.	Repsol LNG Holding, S.A.	Spain	Sector studies	F.C.	100.00	100.00	0	0
Repsol Trading Perú, S.A.C.	Repsol Trading, S.A.	Peru	Trading and transport	F.C.	100.00	100.00	2	3
Repsol Trading Singapore Pte., Ltd.	Repsol Trading, S.A.	Singapore	Trading and transport	F.C.	100.00	100.00	(28)	0
Repsol Trading USA Corporation	Repsol USA Holdings Corporation	United States	Trading and transport	F.C.	100.00	100.00	(83)	0
Repsol Trading, S.A.	Repsol S.A.	Spain	Supply, Marketing, Trading and Transport	F.C.	100.00	100.00	462	0
Rocsole, Ltd.	Repsol Energy Ventures, S.A.	Finland	Technology Development	E.M.	13.16	13.16	2	5
Saint John Gas Marketing Companuy	Repsol St. John LNG, S.L.	United States	Liquefaction plant investment project in Canada	F.C.	100.00	100.00	0	2
Saint John LNG Development Company, Ltd.	Repsol St. John LNG, S.L.	Canada	Liquefaction plant investment project in Canada	F.C.	100.00	100.00	0	3
Servicios de Seguridad Mancomunados, S.A.	Repsol Petróleo, S.A.	Spain	Safety	F.C.	100.00	99.98	1	0
Servicios Logisticos Combustibles de Aviacion, S.L.	Repsol Lubricantes y Especialidades, S.A.	Spain	Transport of aviation oil products	E.M. (J.V.)	50.00	49.29	25	4
Servicios y Operaciones de Perú S.A.C	Repsol Perú B.V.	Peru	Other activities (16)	F.C.	100.00	100.00	0	0
Sociedade Abastecedora de Aeronaves, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	E.M.	25.00	25.00	0	0
Sociedade Açoreana de Armazenagen de Gas, S.A.	Repsol Gas Portugal, S.A.	Portugal	Marketing of LPG	E.M.	25.07	25.07	4	1
Societat Catalana de Petrolis, S.A. (PETROCAT)	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of oil products	F.C.	94.94	91.89	(5)	6
Solgas Distribuidora de Gas, S.L.	Repsol Butano, S.A.	Spain	Marketing of LPG	F.C.	100.00	100.00	0	1
Solred, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Management of payment methods at gas stations	F.C.	100.00	96.68	42	7
Sorbwater Technology, A.S. (5)	Repsol Energy Ventures, S.A.	Norway	Water management and water treatment technology in E&P.				2	9
Spelta Produtos Petrolíferos Unipessoal, Lda.	Repsol Gas Portugal, S.A.	Portugal	Marketing of LPG	F.C.	100.00	100.00	2	0
Terminales Canarios, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Supply and distribution of oil products	E.M. (J.V.)	50.00	48.34	26	20
The Repsol Company of Portugal, Ltd.	Repsol S.A.	Portugal	Leasing of logistics assets in Portugal	F.C.	100.00	100.00	2	1
Windplus, S.A.	Repsol Nuevas Energías, S.A.	Portugal	Technology development for wind generation	E.M.	20.60	19.70	2	1
CORPORATION								
Albatros, S.à.r.L.	Repsol S.A.	Luxembourg	Portfolio company	F.C.	100.00	100.00	218	0
AR Oil & Gaz, B.V.	Repsol Exploración, S.A.	Netherlands	Portfolio company	E.M. (J.V.)	49.00	49.00	471	0
Carbón Black Española, S.A.	Repsol S.A.	Spain	Portfolio company	F.C.	100.00	100.00	78	0
Edwards Gas Services LLC	Repsol Oil & Gas USA LLC.	United States	Portfolio company	E.M.	50.00	50.00	148	71
Fortuna International (Barbados) Inc. (18)	Talisman International (Luxembourg), S.a.	Barbados	Portfolio company	F.C.	100.00	100.00	103	64
Fortuna International Petroleum Corporation	Repsol Oil & Gas Canada Inc.	Barbados	Portfolio company	F.C.	100.00	100.00	625	536
Gas Natural SDG, S.A.	Repsol S.A.	Spain	Generation of electricity and wind power and the purchase and sale of gas	E.M.	20.07	20.07	18,305	1,001
Gaviota RE, S.A. (8)	Albatros, S.a.r.l.	Luxembourg	Insurance and reinsurance.	F.C.	100.00	100.00	271	14
Greenstone Assurance, Ltd.	Gaviota RE, S.A.	Bermuda	Insurance and reinsurance ("run-off" company)	F.C.	100.00	100.00	3	3
Oleoducto de Crudos Pesados, Ltd.	Repsol OCP de Ecuador, S.A.	Cayman Islands	Portfolio company	E.M.	29.66	29.66	(17)	84
Oleum Insurance Company Ltd.	Repsol Oil & Gas Canada Inc.	Barbados	Insurance and reinsurance ("run-off" company)	F.C.	100.00	100.00	429	3
Repsol Bolivia, S.A.	Repsol S.A.	Bolivia	Service provisions	F.C.	100.00	100.00	453	222
Repsol Energy Resources Canada, Inc.	Repsol Canada Inversiones, S.A.	Canada	Portfolio company	F.C.	100.00	100.00	8,135	9,498
Repsol Gestión de Divisa, S.L.	Repsol S.A.	Spain	Financial	F.C.	100.00	100.00	13	0

					December 2017			
					%		€ Million	
Name	**Parent company**	**Country**	**Corporate purpose**	**Method of consol.(1)**	**Controlling Interest (2)**	**Total Group Interest**	**Equity (3)**	**Share Capital(3)**
Repsol International Finance, B.V.	Repsol S.A.	Netherlands	Financing and holding of shares	F.C.	100.00	100.00	1,103	297
Repsol Netherlands Finance, BV	Repsol International Finance, B.V.	Netherlands	Financial	F.C.	100.00	100.00	159	0
Repsol Oil & Gas RTS Sdn.Bhd.	TE Holding S.a.r.l.	Malaysia	Shared services company	F.C.	100.00	100.00	(4)	13
Repsol Oil & Gas SEA Pte. Ltd.	TE Holding S.a.r.l.	Singapore	Shared services company	F.C.	100.00	100.00	6	5
Repsol Services Company	Repsol USA Holdings Corporation	United States	Service provisions	F.C.	100.00	100.00	33	37
Repsol Sinopec Brasil, B.V.	Repsol Sinopec Brasil, S.A.	Netherlands	Portfolio company	E.M. (J.V.)	100.00	60.01	4,728	4,337
Repsol Tesorería y Gestión Financiera, S.A.	Repsol S.A.	Spain	Financial	F.C.	100.00	100.00	817	0
Rift Oil Ltd.	Talisman International Holdings, B.V.	United Kingdom	Portfolio company	F.C.	100.00	100.00	133	139
Talisman Finance (UK) Ltd.	TEGSI (UK), Ltd.	United Kingdom	Finance (16) (17)	F.C.	100.00	100.00	0	2
Talisman International (Luxembourg), S.a.r.l.	Repsol Oil & Gas Canada Inc.	Luxembourg	Portfolio company	F.C.	100.00	100.00	1,366	64
Talisman International Holdings B.V.	TE Holding S.a.r.l.	Netherlands	Portfolio company	F.C.	100.00	100.00	193	814
Talisman Perpetual (Norway) Ltd.	TE Holding S.a.r.l.	United Kingdom	Portfolio company (16)	F.C.	100.00	100.00	1	1
TE Finance S.ar.l.	TE Holding, S.a.r.l.	Luxembourg	Financial	F.C.	100.00	100.00	1,980	0
TE Holding S.ar.l.	Repsol Oil & Gas Canada, Inc.	Luxembourg	Portfolio and finance company	F.C.	100.00	100.00	2,406	1,876
TEGSI (UK) Ltd.	TE Holding, S.a.r.l.	United Kingdom	Shares services company (16)	F.C.	100.00	100.00	3	5
TV 05-2/10 Holding, B.V.	Talisman International Holdings, B.V.	Netherlands	Portfolio company	F.C.	100.00	100.00	0	0

(1) Method of consolidation:
F.C.: Full consolidation
E.M.: Equity method. Joint ventures are identified as "JV".
(2) Percentage corresponding to direct and indirect stake of the parent company immediately above the subsidiary.
(3) Corresponds to Equity and Share Capital data used in the Group's consolidation process. Companies whose functional currency is not the euro have been converted at the closing exchange rate. Amounts have been rounded (less than half a million down to zero).
(4) Interests in joint operations (see Appendix II) which are structured through a Company, this vehicle does not limit its rights to the assets or obligations for the liabilities relating to the arrangement.
(5) Companies incorporated into the Repsol Group in 2017 (see Appendix Ib).
(6) Parent company of a group comprising more than thirty companies. This information can be obtained from the consolidated annual accounts of said company (www.portal.gasnatural.com)
(7) This company has a registered office in Liberia, which is currently being derecognized.
(8) This company holds a non-controlling share in Oil Insurance, Ltd (5.86%), which is registered in Bermudas.
(9) This company, legally constituted in Bahamas, is registered for tax purposes in the United Kingdom.
(10) These companies, legally constituted in the British Virgin Islands, are registered for tax purposes in the United Kingdom.
(11) Parent company previously known as Repsol Butano, S.A.
(12) This company is the parent company for Repsol Groundbirch Partnership, registered in the United States.
(13) Parent company for this company was Repsol Venezuela Gas, S.A.
(14) This company previously known as Tucunare Empreendimentos e Participaçoes, Ltda.
(15) Previous parent company was Repsol Perú, B.V.
(16) Inactive company.
(17) Company in the process of liquidation.
(18) These companies, legally constituted in the Barbados, are registered for tax purposes in the Netherlands.
(19) Share Capital and Equity data correspond to 2016.

APPENDIX Ib: MAIN CHANGES IN THE CONSOLIDATION SCOPE

For the year ended December 31, 2017

a) Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:

					12/31/2017		
Registered name	**Country**	**Parent company**	**Item**	**Date**	**Method of consolidation (1)**	**% of voting rights acquired**	**% of voting rights in the entity post-acquisition (2)**
Repsol Exploración Aitoloakarnania, S.A.	Spain	Repsol Exploración, S.A.	Constitution	february-17	F.C.	100.00%	100.00%
Repsol Exploración Ioannina, S.A.	Spain	Repsol Exploración, S.A.	Constitution	february-17	F.C.	100.00%	100.00%
Air Miles España, S.A.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Increase part.	february-17	E.M.	1.67%	26.67%
OGCI Climate Investments, Llp.	United Kingdom	Repsol Energy Ventures, S.A.	Constitution	april-17	E.M.	14.29%	14.29%
Sorbwater Technology, A.S.	Norway	Repsol Energy Ventures, S.A.	Acquisition	may-17	E.M.	11.29%	11.29%
Pan Pacific Petroleum (Vietnam) Pty, Ltd.	Australia	Repsol Exploración, S.A.	Acquisition	june-17	F.C.	100.00%	100.00%
JSC Eurotek	Russia	AR Oil & Gaz, B.V.	Constitution	august-17	E.M. (JV)	100.00%	100.00%
JSC Yuzhno-Khadyrykhinskoye	Russia	AR Oil & Gaz, B.V.	Constitution	august-17	E.M. (JV)	100.00%	100.00%
Repsol Downstream México S.A. de C.V.	Mexico	Repsol Lubricantes y Especialidades, .S.A	Constitution	september-17	F.C.	100.00%	100.00%
TNO (Tafnefteotdacha)	Russia	AR Oil & Gaz, B.V.	Increase part.	october-17	E.M. (JV)	0.03%	99.57%
Klikin Deals Spain, S.L.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Acquisition	december-17	E.M.	70.00%	70.00%
Lapa Oil & Gas, B.V.	Netherlands	Guará, B.V.	Constitution	december-17	E.M.	100.00%	100.00%

(1) Method of consolidation:
F.C.: Full consolidation.
E.M: Equity method. Joint ventures are identified as *"JV"*
(2) Corresponds to the percentage of equity in the acquired company.

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

					12/31/2017			
Registered name	**Country**	**Parent company**	**Item**	**Date**	**Method of consolidation (1)**	**% voting rights sold or retired**	**% of voting rights held in the entity after sale**	**Profit/(loss) generated (millions of euros) (2)**
Talisman North Jabung, Ltd.	Canada	Talisman (Asia), Ltd.	Absorption	January -17	F.C.	100.00%	0.00%	-
Talisman (Ogan Komering) Ltd.	Canada	Repsol Oil & Gas Canada, Inc.	Disposal	March -17	F.C.	100.00%	0.00%	3
Repsol Central Alberta Partnership	Canada	Repsol Oil & Gas Canada, Inc.	Winding up	May 17	F.C.	100.00%	0.00%	-
Repsol Wild River Partnership	Canada	Repsol Oil & Gas Canada, Inc.	Winding up	May 17	F.C.	100.00%	0.00%	-
8787387 Canada, Ltd.	Canada	Repsol Oil & Gas Canada, Inc.	Winding up	May 17	F.C.	100.00%	0.00%	-
8441316 Canada, Ltd.	Canada	Repsol Oil & Gas Canada, Inc.	Winding up	May 17	F.C.	100.00%	0.00%	-
Talisman East Tanjung, B.V.	Netherlands	Talisman International Holdings, B.V.	Winding up	June 17	F.C.	100.00%	0.00%	-
Talisman Sumatra, B.V.	Netherlands	Talisman International Holdings, B.V.	Winding up	June 17	F.C.	100.00%	0.00%	-
Talisman Vietnam 45, B.V.	Netherlands	Talisman International Holdings, B.V.	Winding up	June 17	F.C.	100.00%	0.00%	-
Talisman Vietnam 46-07, B.V.	Netherlands	Talisman International Holdings, B.V.	Winding up	June 17	F.C.	100.00%	0.00%	-
Talisman International Holdings, B.V. S.C.S.	Luxembourg	Talisman Global Holdings, B.V.	Winding up	June 17	F.C.	100.00%	0.00%	-
Talisman Middle East, B.V.	Netherlands	Talisman Global Holdings, B.V.	Absorption	June 17	F.C.	100.00%	0.00%	-
Talisman K. Holdings, B.V.	Netherlands	Talisman Global Holdings, B.V.	Absorption	June 17	F.C.	100.00%	0.00%	-
TV 135- 136 Holding, B.V.	Netherlands	Talisman International Holdings, B.V.	Absorption	June 17	F.C.	100.00%	0.00%	-
Talisman Global Holdings, B.V.	Netherlands	Talisman International Holdings, B.V.	Absorption	June 17	F.C.	100.00%	0.00%	-
Talisman Energy (Sahara), B.V.	Netherlands	Talisman International Holdings, B.V.	Absorption	June 17	F.C.	100.00%	0.00%	-
Repsol Moray Firth, Ltd.	United Kingdom	Repsol UK Round 3, Ltd.	Winding up	July-17	F.C.	100.00%	0.00%	-
Repsol UK Round 3, Ltd.	United Kingdom	Repsol Nuevas Energías, S.A.	Winding up	July-17	F.C.	100.00%	0.00%	-
FEX GP, Llc. (3)	United States	Repsol Oil & Gas USA, Llc.	Absorption	July-17	F.C.	100.00%	0.00%	-
Rock Solid Images US Group, Inc.	United States	Repsol USA Holdings Corporation	Disposal	August-17	E.M.	30.00%	0.00%	(1)
OJSC Eurotek	Russia	AR Oil & Gaz, B.V.	Winding up	August-17	E.M (J.V.)	100.00%	0.00%	-
Repsol Oil & Gas Malaysia Holdings, Ltd.	Barbados	Talisman Oil Limited	Absorption	August-17	F.C.	100.00%	0.00%	-
Talisman Oil Limited	Barbados	Fortuna International Petroleum Corpoı	Absorption	August-17	F.C.	100.00%	0.00%	-
Repsol Lusitania, S.L.	Spain	Repsol Química, S.A.	Absorption	October-17	F.C.	100.00%	0.00%	-
CSJC Eurotek- Yugra (4)	Russia	Repsol Exploración Karabashsky, S.A.	Decrease in stake	November-17	E.M. (J.V.)	26.39%	73.61%	8
JSC Eurotek	Russia	AR Oil & Gaz, B.V.	Disposal	December-17	E.M. (J.V.)	100.00%	0.00%	Note (5)
JSC Yuzhno-Khadyrykhinskoye	Russia	AR Oil & Gaz, B.V.	Disposal	December-17	E.M. (J.V.)	100.00%	0.00%	Note (5)
Principle Power, Inc.	United States	Repsol Energy Ventures, S.A.	Decrease in stake	December-17	E.M.	0.57%	24.22%	-
Talisman Colombia, B.V.	Netherlands	TE Colombia Holding, S.a.r.l.	Winding up	December-17	F.C.	100.00%	0.00%	-
Talisman Holding International, S.a.r.l.	Luxembourg	Repsol Oil & Gas Canada, Inc.	Winding up	December-17	F.C.	100.00%	0.00%	-
Talisman Ocensa Pipelines Holdings, AG	Switzerland	Talisman Colombia, B.V.	Winding up	December-17	F.C.	100.00%	0.00%	-
Fortuna Finance Corporation, S.a.r.l.	Luxembourg	TE Holding, S.a.r.l.	Absorption	December-17	F.C.	100.00%	0.00%	-
TE Capital, S.a.r.l.	Luxembourg	TE Holding, S.a.r.l.	Absorption	December-17	F.C.	100.00%	0.00%	-
Amulet Maritime, Ltd.	United Kingdom	TEGSI (UK), Ltd.	Winding up	December-17	F.C.	100.00%	0.00%	-
Talisman Perú, B.V.	Netherlands	Repsol Exploración Perú, S.A.	Absorption	December-17	F.C.	100.00%	0.00%	-

(1) Method of consolidation:
F.C.: Full consolidation.
E.M: Equity method. Joint ventures are identified as *"J.V."*
(2) Corresponds to net income before tax.
(3) This company is the parent of FEX LP, Llc, which is registered in the United States. It is included in the absorption of theparent.
(4) This company was consolidated under the full consolidation method prior to the sale of 25% of its interest.
(5) These companies have been sold generating a loss of -€78 million.

APPENDIX Ib: MAIN CHANGES IN THE CONSOLIDATION SCOPE

For the year ended December 31, 2016

a) Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:

				12/31/2016			
Name	**Country**	**Parent company**	**Concept**	**Date**	**Consolidation method [(1)]**	**% of voting rights acquired**	**% of voting rights in the entity post-acquisition[(2)]**
Repsol UK, Ltd.	United Kingdom	Repsol Exploración, S.A.	Constitution	jan-16	F.C.	100.0%	100.0%
Rocsole, Ltd.	Finland	Repsol Energy Ventures, S.A.	Acquisition	jan-16	E.M.	15.63%	15.63%
Inch Cape Offshore, Ltd.	United Kingdom	Wind Farm Energy U.K., Ltd.	Increase part.	jan-16	F.C.	49.00%	100.00%
Repsol Ductos Colombia, S.A.S.	Colombia	Talisman Colombia Holdco, Ltd.	Constitution	apr-16	F.C.	100.00%	100.00%
Vung May 156-159 Vietnam B.V. [(3)]	Netherlands	Repsol Exploración, S.A.	Constitution	jun-16	F.C.	100.00%	100.00%
Petronor Innovación, S.L.	Spain	Petróleos del Norte, S.A.	Constitution	oct-16	F.C.	100.00%	100.00%
Repsol E&P USA Holdings, Inc.	United States	Repsol Oil & Gas Holdings USA, Inc.	Constitution	dec-16	F.C.	100.00%	100.00%

[(1)] Consolidation method:
F.C. : Fully consolidated
E.M.: Equity method.
[(2)] Percent (direct and indirect) stake in a subsidiary held by the parent company directly above it in the Group structure.
[(3)] Brought within scope of consolidation in the course of the year. Previously inactive.

Changes in legal and tax domicile:

Name	**Previous jurisdiction of residence**	**New jurisdiction of residence**	**Date**
Repsol Company of Portugal, Ltd. [(1)]	United Kingdom	Portugal	jan-16
Talisman International (Luxembourg), S.a.r.l [(2)]	Barbados	Luxembourg	dec-16
Repsol Oil & Gas USA, Llc [(3)]	USA (Delaware)	USA (Texas)	dec-16
Repsol Oil & Gas Holdings USA, Inc [(4)]	USA (Delaware)	USA (Texas)	dec-16
FEX GP, Llc [(5)]	USA (Delaware)	USA (Texas)	dec-16

[(1)] Change of tax residence, legal domicile is still the United Kingdom.
[(2)] Formerly, Talisman International (Barbados), Inc
[(3)] Formerly, Talisman Energy USA, Inc
[(4)] Formerly, Fortuna Energy Holdings, Inc
[(5)] Formerly Fex GP, Inc., this company is the parent of FEX L.P., whose registration has also been moved to Texas, USA.

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

				12/31/2016			
Name	**Country**	**Parent company**	**Concept**	**Date**	**% of voting rights sold or retired**	**% of total voting rights done post-alienation**	**Profit/(loss) generated € Million**
Moray Offshore Renewables, Ltd.	United Kingdom	Repsol Moray Firth, Ltd.	Alienation	jan-16	33.36%	0.00%	7
Alsugas Gaviota, S.L.	Spain	Repsol Tesorería y Gestión Financiera, S.L.	Liquidation	mar-16	100.00%	0.00%	-
Talisman Energy Norge AS	Norway	Talisman Middle East B.V.	Liquidation	mar-16	100.00%	0.00%	-
Talisman Oil & Gas (Australia) Pty, Ltd.	Australia	Paladin Resources Limited	Alienation	apr-16	100.00%	0.00%	-9
Beatrice Offshore Windfarm, Ltd.	United Kingdom	Beatrice Wind, Ltd.	Alienation	may-16	25.00%	0.00%	Note (2)
Inch Cape Offshore, Ltd.	United Kingdom	Wind Farm Energy U.K., Ltd.	Alienation	may-16	100.00%	0.00%	Note (2)
Beatrice Wind, Ltd (3)	United Kingdom	Wind Farm Energy U.K., Ltd.	Alienation	may-16	100.00%	0.00%	Note (2)
Wind Farm Energy U.K., Ltd (4)	United Kingdom	Repsol Nuevas Energías, S.A.	Alienation	may-16	100.00%	0.00%	Note (2)
Talisman (Jambi) Ltd.	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	may-16	100.00%	0.00%	-
Talisman Indonesia Ltd.	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	may-16	100.00%	0.00%	-
TE Resources S.ar.l.	Luxembourg	TE Holding S.ar.l.	Liquidation	may-16	100.00%	0.00%	-
Talisman International Business Corporation	Barbados	Repsol Oil & Gas Canada, Inc	Liquidation	jun-16	100.00%	0.00%	-
TLM Finance Corp	Canada	Repsol Oil & Gas Canada, Inc	Absorption	jun-16	100.00%	0.00%	-
New Santiago Pipelines AG (5)	Switzerland	Talisman Ocensa Pipelines Holdings AG	Absorption	jun-16	100.00%	0.00%	-
Santiago Pipelines AG (5)	Switzerland	Talisman Ocensa Pipelines Holdings AG	Absorption	jun-16	100.00%	0.00%	-
Talisman Santiago AG (5)	Switzerland	New Santiago Pipelines AG	Absorption	jun-16	100.00%	0.00%	-
Talisman SO AG (5)	Switzerland	Santiago Pipelines AG	Absorption	jun-16	100.00%	0.00%	-
TE Colombia Holding S.ar.l	Luxembourg	TE Holding S.ar.l.	Liquidation	jun-16	100.00%	0.00%	-
Repsol Exploración Gorontalo B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	-
Repsol Exploración Numfor B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	-
Repsol LNG Offshore B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	1
Repsol Gas del Perú, S.A.	Peru	Repsol Butano, S.A.	Alienation	jun-16	99.85%	0.00%	Note (6)
Repsol Gas de la Amazonía, S.A.C.	Peru	Repsol Gas del Perú, S.A.	Alienation	jun-16	100.00%	0.00%	Note (6)
Via Red Hostelería y Distribución, S.L.	Spain	Repsol Butano, S.A.	Alienation	jul-16	100.00%	0.00%	-
Fusi GP, Llc. (7) (8)	USA	Repsol Oil & Gas USA Llc.	Absorption	jul-16	100.00%	0.00%	-
Fortuna (US) L.P.	USA	Fusi GP, Llc.	Liquidation	jul-16	100.00%	0.00%	-
Talisman Energy Services, Llc. (7) (9)	USA	Repsol Oil & Gas USA Llc.	Absorption	jul-16	100.00%	0.00%	-
TE Global Services, Llc. (7) (10)	USA	Talisman Energy Services, Llc.	Absorption	jul-16	100.00%	0.00%	-
TE NOK, S.a.r.l. (11)	Luxembourg	TE Holding S.ar.l.	Absorption	jul-16	100.00%	0.00%	-
Talisman UK Investments, Ltd.	United Kingdom	TE Holding S.ar.l.	Liquidation	aug-16	100.00%	0.00%	-
Papua Petroleum (PNG), Ltd.	Papua New Guinea	Papua Petroleum Pty Ltd.	Liquidation	aug-16	100.00%	0.00%	-
Duragas, S.A.	Ecuador	Repsol Butano, S.A.	Alienation	oct-16	100.00%	0.00%	Note (12)
Servicios de Mantenimiento y Personal, S.A.	Ecuador	Repsol Butano, S.A.	Alienation	oct-16	100.00%	0.00%	Note (12)
Talisman Wiriagar Overseas, Ltd.	British Virgin Islands	Talisman Energy Tangguh, B.V.	Alienation	dec-16	100.00%	0.00%	21
Repsol Capital, S.L. (13)	Spain	Repsol Tesorería y Gestión Financiera S.L.	Absorption	dec-16	100.00%	0.00%	-
Tecnicontrol y Gestión Integral, S.L. (13)	Spain	Repsol Tesorería y Gestión Financiera S.L.	Absorption	dec-16	100.00%	0.00%	-
Repsol E&P T&T, Ltd	Trinidad & Tobago	Repsol Exploración, S.A.	Alienation	dec-16	100.00%	0.00%	17
Kuosol S.A.P.I. de C.V.	Mexico	Repsol Nuevas Energías, S.A.	Alienation	dec-16	50.00%	0.00%	-
Principle Power, Inc.	USA	Repsol Energy Ventures, S.A.	Decrease part.	dec-16	0.58%	24.79%	-
Gas Natural Fenosa SDG, S.A.	Spain	Repsol, S.A.	Decrease part.	dec-16	10.08%	20.07%	233
Red Sea Oil Corporation	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	dec-16	100.00%	0.00%	-
TE Global Holding, S.a.r.l.	Luxembourg	Talisman Holding International, S.a.r.l.	Liquidation	dec-16	100.00%	0.00%	-

(1) Net income before tax.
(2) Companies transferred as part of the sale of the wind power business in the United Kingdom to the Chinese Group SIDIC Power (see Note 4.1).
(3) Formerly, Repsol Beatrice, Ltd.
(4) Formerly, Repsol Nuevas Energias UK, Ltd.
(5) Merged into Talisman Ocensa Pipelines Holdings AG.
(6) Transferred as part of the sale of the LPG business in Peru (see Note 4.1).
(7) Merged into Talisman Energy USA Inc.
(8) Formerly, Fusi GP, Inc.
(9) Formerly, Talisman Energy Services, Inc.
(10) Formerly, TE Global Services, Inc.
(11) Merged into TE Capital, S.a.r.l.
(12) Transferred as part of the sale of the LPG business in Ecuador (see Note 4.1).
(13) Merged into Repsol Tesorería y Gestión Financiera, S.A.

APPENDIX II: JOINT OPERATIONS OF THE REPSOL GROUP AT DECEMBER 31, 2017

The Repsol Group's main Joint Operations (Note 2) are shown below (including those in which the Group is involved through a joint arrangement [1]:

Name	Interest % [1]	Operator	Activity
UPSTREAM			
Angola			
Block 22	50.00%	Repsol	Exploration
Algeria			
Boughezoul (104b, 117, 133c, 135b and 137b)	51.00%	Repsol	Exploration
EMK	9.10%	Groupement Berkin	Development/Production
Greater MLN	35.00%	Pertamina	Development/Production
Menzel Ledjmet Sud-Est /405a	35.00%	Pertamina	Development/Production
Ourhoud Field / 404,405,406a	2.00%	Organisation Ourhoud	Development/Production
Reggane Nord	29.25%	Groupement Reggane	Development/Production
S.E. Illizi	72.50%	Repsol	Exploration
Tin Fouyé Tabenkor (TFT)	30.00%	Groupement TFT	Development/Production
Aruba			
Aruba	50.00%	Repsol	Exploration
Australia			
Kitan	25.00%	ENI	Development/Production
Bolivia [2]			
Amboro - Espejos	48.33%	YPF B Andina, S.A	Exploration
Arroyo Negro	48.33%	YPF B Andina, S.A	Development/Production
Boqueron	48.33%	YPF B Andina, S.A	Development/Production
Camiri	48.33%	YPF B Andina, S.A	Development/Production
Carahuaicho 8B	24.17%	YPF B Andina, S.A	Exploration
Carahuaicho 8C	24.17%	YPF B Andina, S.A	Exploration
Carahuaicho 8D	48.33%	YPF B Andina, S.A	Exploration
Cascabel	48.33%	YPF B Andina, S.A	Development/Production
Cobra	48.33%	YPF B Andina, S.A	Development/Production
Enconada	48.33%	YPF B Andina, S.A	Development/Production
Guairuy	48.33%	YPF B Andina, S.A	Development/Production
Huacaya (Caipipendi)	37.50%	Repsol	Development/Production
Iñiguazu	37.50%	Repsol	Exploration
La Peña - Tundy	48.33%	YPF B Andina, S.A	Development/Production
Los Penocos	48.33%	YPF B Andina, S.A	Development/Production
Los Sauces (Grigota)	48.33%	YPF B Andina, S.A	Development/Production
Margarita (Caipipendi)	37.50%	Repsol	Development/Production
Monteagudo	39.67%	Repsol	Development/Production
Oriental	24.17%	YPF B Andina, S.A	Exploration
Palacios	48.33%	YPF B Andina, S.A	Development/Production
Patujú	48.33%	YPF B Andina, S.A	Development/Production
Puerto Palos	48.33%	YPF B Andina, S.A	Development/Production
Rio Grande	48.33%	YPF B Andina, S.A	Development/Production
Sabalo	24.17%	Petrobras	Development/Production
San Alberto (San Alberto)	24.17%	Petrobras	Development/Production
Sara Boomerang III	48.33%	YPF B Andina, S.A	Exploration
Sirari	48.33%	YPF B Andina, S.A	Development/Production
Víbora	48.33%	YPF B Andina, S.A	Development/Production
Yapacani	48.33%	YPF B Andina, S.A	Development/Production
Brazil			
Albacora Leste	6.00%	Petrobras	Development/Production
BM-C-33 (C-M-539)	21.00%	Statoil	Exploration
BM-ES-21 (ES-M-414)	6.66%	Petrobras	Exploration
BM-S-50 (S-M-623)	12.00%	Petrobras	Exploration
BM-S-51 (S-M-619)	12.00%	Petrobras	Exploration
BM-S-9A (SPS-50)- Lapa (Carioca)	15.00%	Total	Development/Production
BM-S-9 (SPS-55)- Sapinhoá (Guará)	15.00%	Petrobras	Development/Production
Bulgaria			
Han Asparuh	30.00%	Total	Exploration

[1] Joint operations in the *Upstream* segment include the blocks of joint operations where the Group holds acreage for exploration, development an production of oil and gas.

Name	Interest % [1]	Operator	Activity
Canada [3]			
Chauvin Alberta	63.10%	Repsol	Development/Production
Chauvin Saskatchewan	92.54%	Repsol	Development/Production
Edson	79.23%	Repsol	Development/Production
Groundbirch/Saturn- No Montney Rights	35.19%	Repsol	Development/Production
Misc. Alberta	55.86%	Repsol	Exploration [4]
Misc. British Columbia	67.03%	Repsol	Exploration
Misc. Saskatchewan	74.51%	Repsol	Exploration
North Duvernay	87.88%	Repsol	Development/Production
Quebec	80.00%	Repsol	Exploration
Total Frontier	2.47%	Repsol	Exploration
Wild River	49.22%	Repsol	Development/Production
Colombia [5]			
Caguan 5	50.00%	Meta Petroleun Corp.	Exploration
Caguan 6	40.00%	Meta Petroleun Corp.	Exploration
Catleya	50.00%	Ecopetrol	Exploration
Chipirón	8.75%	Oxycol	Development/Production
COL-4	33.40%	Repsol	Exploration
Cosecha	17.50%	Oxycol	Development/Production
CPE-8	50.00%	Repsol	Exploration
CPO-9	45.00%	Ecopetrol	Exploration/Production
Cravo Norte	5.63%	Oxycol	Development/Production
Gua Off 1	30.00%	Repsol	Exploration
Mundo Nuevo	21.00%	Equion	Exploration
Niscota	30.00%	Equion	Exploration
Piedemonte	24.50%	Equion	Development/Production
RC-11	50.00%	Repsol	Exploration
RC-12	50.00%	Repsol	Exploration
Rio Chitamena	15.19%	Equion	Development/Production
Rondon	6.25%	Oxycol	Development/Production
Tayrona	20.00%	Petrobras	Exploration
Ecuador			
Block 16 (Wati extension)	35.00%	Repsol	Services Contract
Tivacuno	35.00%	Repsol	Services Contract
Spain			
Albatros	82.00%	Repsol	Development/Production
Angula	53.85%	Repsol	Development/Production
Bezana	44.45%	Petroleum Oil & Gas Spain	Exploration [4]
Bigüenzo	44.45%	Petroleum Oil & Gas Spain	Exploration [4]
Boquerón	61.95%	Repsol	Development/Production
Casablanca -Montanazo Unificado	68.67%	Repsol	Development/Production
Casablanca No Unit	67.35%	Repsol	Development/Production
Montanazo D	72.44%	Repsol	Development/Production
Rodaballo	65.42%	Repsol	Development/Production
United States [3]			
Alaska			
North Slope (113 blocks)	49.00%	Armstrong	Exploration
North Slope (2 blocks)	49.00%	Armstrong	Development/Production
North Slope (227 blocks)	25.00%	Armstrong	Exploration
Eagle Ford	35.41%	Statoil	Development/Production
Gulf of Mexico			
Alaminos Canyon (4 blocks)	10.00%	Statoil	Exploration
Atwater Valley (3 blocks)	50.00%	Repsol	Exploration
Garden Banks (4 blocks)	50.00%	Repsol	Exploration
Green Canyon (6 blocks)	20.00%	Repsol	Exploration
Green Canyon (5 blocks)	20.00%	BHP	Exploration
Green Canyon (6 blocks)	28.00%	BHP	Development/Production
Green Canyon (2 blocks)	33.34%	Repsol	Exploration
Green Canyon (1 block)	34.00%	Repsol	Exploration
Green Canyon (1 block)	40.00%	Murphy	Exploration
Keathley Canyon (3 blocks)	10.00%	Statoil	Exploration
Keathley Canyon (6 blocks)	22.50%	Llog	Development/Production
Keathley Canyon (4 blocks)	60.00%	Repsol	Exploration
Walker Ridge (5 blocks)	60.00%	Repsol	Exploration
Walker Ridge (3 blocks)	30.00%	Llog	Exploration
Marcellus	83.96%	Repsol	Development/Production

Marcellus [(4)]	99.73%	Repsol	Exploration
Midcontinent	7.24%	SandRidge	Development/Production
Gabon			
Luna Muetse (G4-246)	48.00%	Repsol	Exploration
Greece			
Aitoloakarnania	60.00%	Repsol	Exploration
Ioannina	60.00%	Repsol	Exploration
Guyana			
Kanuku	70.00%	Repsol	Exploration
Indonesia			
Corridor PSC	36.00%	Conoco	Development/Production
East Jabung	51.00%	Repsol	Exploration
Jambi Merang	25.00%	JOB Jambi Merang	Development/Production
Sakakemang	90.00%	Repsol	Exploration
Ireland			
Dunquin FEL	33.56%	ENI	Exploration
Libya			
NC-115 (Development)	20.00%	Akakus	Development/Production
NC-115 (Exploration)	40.00%	Repsol	Exploration
NC-186 (Development)	16.00%	Akakus	Development/Production
NC-186 (Exploration)	32.00%	Repsol	Exploration
Malaysia			
Angsi South Channel (Unit.)	60.00%	Repsol	Development/Production
PM03 CAA	41.44%	Repsol	Development/Production
PM305	60.00%	Repsol	Development/Production
PM314	60.00%	Repsol	Development/Production
SB1 Kinabalu	60.00%	Repsol	Development/Production
SB309	70.00%	Repsol	Exploration
Block 46-CN	33.15%	Repsol	Development/Production
Morocco			
Gharb Offshore Sud	75.00%	Repsol	Exploration
Mexico			
Block 11	60.00%	Repsol	Exploration
Norway			
Licencia 019B (Gyda)	61.00%	Repsol	Development/Production
Licencia 019B (Tambar East Unit)	9.76%	Aker BP	Development/Production
Licencia 025 (Gudrun)	15.00%	Statoil	Development/Production
Licencia 038 (Varg)	65.00%	Repsol	Development/Production
Licencia 038C (Rev)	70.00%	Repsol	Development/Production
Licencia 052 (Veslefikk)	27.00%	Statoil	Development/Production
Licencia 053B (Brage)	33.84%	Wintershall	Development/Production
Licencia 055 (Brage)	33.84%	Wintershall	Development/Production
Licencia 055 B (Brage)	33.84%	Wintershall	Development/Production
Licencia 055 D (Brage)	33.84%	Wintershall	Development/Production
Licencia 185 (Brage)	33.84%	Wintershall	Development/Production
Licencia 187 (Gudrun)	15.00%	Statoil	Exploration
Licencia 316 (Yme)	60.00%	Repsol	Development/Production
Licencia 316B (Yme)	60.00%	Repsol	Development/Production
Licencia 528 (6707/8, 6707/9, 6707/11)	6.00%	Centrica R. Norge	Development/Production
Licencia 528 B	6.00%	Centrica R. Norge	Development/Production
Licencia 705 (6705/7, 6705/8, 6705/9, 6705/10)	40.00%	Repsol	Exploration
Licencia 801 (6605/2,3 og, 6608/1,2 og and 6706/10)	50.00%	Repsol	Exploration
Licencia 840	20.00%	Statoil	Exploration
Licencia 847	20.00%	Wintershall	Exploration
PL 847B	20.00%	Wintershall	Exploration
PL 897	30.00%	Statoil	Exploration
Papua New Guinea			
PDL 10	40.00%	Repsol	Development/Production
PPL 261	50.00%	Repsol	Exploration
PPL 287	50.00%	Repsol	Exploration
PPL 426	66.60%	Repsol	Exploration
PRL 8	22.29%	Oil Search	Exploration
PRL 21	35.10%	Horizon Oil	Development/Production
PRL 28	37.50%	Eaglewood	Development/Production
PRL 38	25.00%	Repsol	Development/Production
PRL 40	60.00%	Repsol	Development/Production

Name	Interest % [1]	Operator	Activity
Peru			
Block 56	10.00%	Pluspetrol	Development/Production
Block 57	53.84%	Repsol	Exploration/Production
Block 88	10.00%	Pluspetrol	Development/Production
Region of Iraqi Kurdistan			
Kurdamir	40.00%	Repsol	Development/Production
Topkhana	80.00%	Repsol	Development/Production
United Kingdom [6]			
P019 (22/17n)	30.08%	RSRUK	Development/Production
P020 (22/18n)	30.08%	RSRUK	Development/Production
P073 (30/18_E)	51.00%	RSRUK	Development/Production
P073 (30/18_W)	51.00%	RSRUK	Exploration
P079 (30/13a)	31.88%	RSRUK	Exploration
P101 (13/24a)	34.53%	RSRUK	Exploration
P111 (30/3a Upper)	15.55%	RSRUK	Development/Production
P111 (30/3a Blane Field)	30.75%	RSRUK	Development/Production
P116 (30/16n)	51.00%	RSRUK	Development/Production
P185 (30/11b)	30.60%	RSRUK	Exploration
P185 (30/11b)_Developm.	51.00%	RSRUK	Development/Production
P185 (30/12b)	30.60%	RSRUK	Exploration
P187 (11/30a Beatrice)	51.00%	RSRUK	Development/Production
P1031 (11/25a Beatrice)	51.00%	RSRUK	Development/Production
P1031 (12/21a Beatrice)	51.00%	RSRUK	Development/Production
P201 (16/21a)	7.65%	Premier	Development/Production
P201 (16/21d)	7.65%	Premier	Development/Production
P219 (16/13a)	16.07%	RSRUK	Development/Production
P219 (16/13e)	16.07%	RSRUK	Exploration
P220 (15/17n-F2- Saltire)	51.00%	RSRUK	Development/Production
P220 (15/17n-Sub Area)	20.40%	EnQuest Heather	Development/Production
P220 (15/17n-F2- Piper+ rest of Block)	51.00%	RSRUK	Development/Production
P225 (16/27a - Contract Area 3)	13.50%	JX Nippon	Exploration
P225 (16/27a- Contract Area 3 Andrew Field Area)	5.03%	BP Amoco	Development/Production
P237 (15/16a)	51.00%	RSRUK	Development/Production
P240 (16/22a- non Arundel Area)	18.86%	RSRUK	Development/Production
P241 (21/1a)_Developm.	51.00%	RSRUK	Development/Production
P241 (21/1a Rest of Block)	51.00%	RSRUK	Exploration
P241 (21/1a)	51.00%	RSRUK	Exploration
P241 (21/1c)	51.00%	RSRUK	Development/Production
P241/P244 (21/1c/21/2a- Cretaceus Area West)	51.00%	RSRUK	Development/Production
P244 (21/2a)	51.00%	RSRUK	Development/Production
P249 (14/19n - Residual -Claymore)_Develop.	51.00%	RSRUK	Development/Production
P249 (14/19n - Residual -Claymore)	51.00%	RSRUK	Exploration
P249 (14/19n_F1- Claymore)	47.16%	RSRUK	Development/Production
P249 (14/19n_F2- Scapa/Claymore)	51.00%	RSRUK	Development/Production
P250 (14/19a)	51.00%	RSRUK	Exploration
P250 (14/19a)_Developm.	51.00%	RSRUK	Development/Production
P250 (14/19s- Rest of Block)	51.00%	RSRUK	Exploration
P250 (14/19s- Rest of Block)_Develop	51.00%	RSRUK	Development/Production
P250 (14/19s- F1)	51.00%	RSRUK	Development/Production
P250 (15/17a-Sub Area)	20.40%	EnQuest Heather	Development/Production
P250 (15/17s-F1- Chanter / Saltire / Lona)	51.00%	RSRUK	Development/Production
P250 (15/17s-Rest of Block)	51.00%	RSRUK	Development/Production
P255 (30/14 Flyndre Area)	3.83%	Maersk	Development/Production
P255 (30/14 Cawdor Sub Area)	4.93%	Maersk	Development/Production
P255 (30/14 Cawdor Sub Area)_Develop.	4.93%	Maersk	Development/Production
P255 (30/19a Affleck)	17.00%	Maersk	Development/Production
P256 (30/16s)	51.00%	RSRUK	Development/Production
P263 (14/18a)	51.00%	RSRUK	Development/Production
P266 (30/17b)	51.00%	RSRUK	Development/Production
P291 (22/17s)	30.08%	RSRUK	Development/Production
P291 (22/22a)	30.08%	RSRUK	Development/Production
P291 (22/23a)	30.08%	RSRUK	Development/Production
P292 (22/18a)	30.08%	RSRUK	Development/Production
P294 (20/05a_F1)	51.00%	RSRUK	Development/Production
P294 (20/05a)	51.00%	RSRUK	Exploration
P295 (30/16t)	51.00%	RSRUK	Development/Production
P297 (13/28a)	33.02%	RSRUK	Exploration
P297 (13/28a)_Devel.	35.28%	RSRUK	Development/Production

Name	Interest % (1)	Operator	Activity
P307 (13/29a)_Devel.	35.28%	RSRUK	Development/Production
P307 (13/29a)	36.55%	RSRUK	Exploration
P324 (14/20b-Claymore Extension)	51.00%	RSRUK	Development/Production
P324 (14/20b)	25.50%	RSRUK	Development/Production
P324 (14/20b-f1+f2)	51.00%	RSRUK	Development/Production
P324 (15/16b)	51.00%	RSRUK	Development/Production
P324 (15/16c)	51.00%	RSRUK	Development/Production
P324 (15/23a)	34.38%	RSRUK	Exploration
P324 (15/23a)_Developm.	34.38%	RSRUK	Development/Production
P344 (16/21b Rest of Block)	30.60%	RSRUK	Development/Production
P344 (16/21b_F1*-Balmoral Field Area)	8.06%	Premier	Development/Production
P344 (16/21c*- Rest of block excluding Stirling)	30.60%	RSRUK	Development/Production
P344 (16/21c_f1*-Balmoral)	8.06%	Premier	Development/Production
P344 (16/21c_f1*)	7.81%	Premier	Development/Production
P534 (98/06a-Wareham)	2.55%	Perenco	Development/Production
P534 (98/06a-Wych Farm UOA)	2.53%	Perenco	Development/Production
P534 (98/07a)	2.55%	Perenco	Exploration
P585 (15/12b)	20.40%	EnQuest Heather	Exploration
P593 (20/05c)	51.00%	RSRUK	Development/Production
P593 (20/05e)	51.00%	RSRUK	Exploration
P729 (13/29b - Ross Unitised Field UUOA interests)	35.28%	RSRUK	Development/Production
P729 (13/29b - Blake Ext Non Skate (retained area)	40.80%	RSRUK	Exploration
P729 (13/29b - Blake Ext Non Skate_Devel.)	40.80%	RSRUK	Development/Production
P810 (13/24b- Rest of Block)	35.28%	RSRUK	Exploration
P810 (13/24b-Rest of Block)	35.28%	RSRUK	Development/Production
P810 (13/24b Blake Area)	34.53%	RSRUK	Development/Production
P973 (13/28c)	35.28%	RSRUK	Development/Production
P983 (13/23b)	25.50%	RSRUK	Exploration
PL089 (SZ/8, SY/88b, SY/98a)	2.55%	Perenco	Exploration
PL089 (SZ/8a, SY/88b, SY/98a)	2.55%	Perenco	Development/Production
Romania			
Baicoi	49.00%	OMV	Exploration
Pitesti	49.00%	OMV	Exploration
Targoviste	49.00%	OMV	Exploration
Targu Jiu	49.00%	OMV	Exploration
Russia (7)			
Alkanovskoe	49.00%	AROG	Development/Production
Avgustovskoe	49.00%	AROG	Development/Production
Bazhkovskoe	49.00%	AROG	Development/Production
Borschevskoe	49.00%	AROG	Development/Production
Karabashkiy - 78	73.63%	Eurotek Yugra	Exploration
Karabashkiy - 79	73.63%	Eurotek Yugra	Exploration
Karabashsky-1	73.63%	Eurotek Yugra	Exploration
Karabashsky-2	73.63%	Eurotek Yugra	Exploration
Karabashsky-3	73.63%	Eurotek Yugra	Exploration
Karabashsky-9	73.63%	Eurotek Yugra	Exploration
Kileyskiy	73.63%	Eurotek Yugra	Exploration
Kochevnenskoe	49.00%	AROG	Development/Production
Kovalevskoe	49.00%	AROG	Development/Production
Kulturnenskoe	49.00%	AROG	Development/Production
North Borschevskoe	49.00%	AROG	Development/Production
Novo-Kievskoe	49.00%	AROG	Development/Production
Penzenskoe	49.00%	AROG	Development/Production
Saratovskoe	49.00%	AROG	Development/Production
Solnechnoe	49.00%	AROG	Development/Production
South-Kultashikhskoe	49.00%	AROG	Development/Production
South-Solnechnoe	49.00%	AROG	Development/Production
Stepnoozerskoe	48.79%	AROG	Development/Production
West-Avgustovskoe	49.00%	AROG	Development/Production
West-Kochevnenskoe	49.00%	AROG	Development/Production
Yelginskoe	48.79%	AROG	Development/Production
Trinidad and Tobago			
5B Manakin	30.00%	BPTT	Development/Production
East Block	30.00%	BPTT	Development/Production
S.E.C.C. (IBIS)	10.50%	EOG	Development/Production
West Block	30.00%	BPTT	Development/Production

Name	Interest % [1]	Operator	Activity
Venezuela [8]			
Barua Motatan	40.00%	Petroquiriquire	Development/Production
Carabobo	11.00%	Petrocarabobo	Development/Production
Cardón IV	50.00%	Cardon IV	Development/Production
Mene Grande	40.00%	Petroquiriquire	Development/Production
Quiriquire	40.00%	Petroquiriquire	Development/Production
Quiriquire (Gas)	60.00%	Quiriquire Gas	Development/Production
Yucal Placer Norte	15.00%	Total	Development/Production
Yucal Placer Sur	15.00%	Total	Development/Production
Vietnam			
Bloque 07/03 (CRD)	51.75%	Repsol	Exploration
Bloque 15-2/01	60.00%	Thang Long JOC	Development/Production
Bloque 16-1 (TGT- Unitization)	0.67%	Hoang Long	Development/Production
Bloque 133 and 134	49.00%	Repsol	Exploration
Bloque 135 and 136	40.00%	Repsol	Exploration
Bloque 146 and 147	80.00%	Repsol	Exploration
DOWNSTREAM			
Canada			
Canaport LNG Ltd Partnership	75.00%	Repsol	Regasification LNG
Spain			
Asfaltos Españoles, S.A.	50.00%	Repsol	Asphalts
Iberian Lube Base Oils Company, S.A.	30.00%	SK Lubricants	Lubricants and Specialist Products

[1] Corresponds to the Group company's stake in the Joint Arrangement.
[2] Repsol holds an interest in YPFB Andina, S.A., which, at December 31, 2017, came to 48.33% (see Appendx I).
[3] Rights over the acreage in Canada and the United States are defined in a wide range of joint operating agreements. They havebeen grouped by geographical areas and Repsol's stake.
[4] Exploration activities involving unconventional resources.
[5] Repsol holds stakes in Equion Energía, Ltd. (Equion) and Occidental de Colombia, Llc. (OXYCOL) which, at December 31, 2017, came to 49% and 25%, respectively (see Appendix I).
[6] Repsol holds a stake in Repsol Sinopec Resources UK, Ltd. (RSRUK) which,at December 31, 2017, came to 51% (see Appendix I).
[7] Repsol holds a stake in AR Oil&Gaz, B.V. (AROG) which, at December 31, 2017, came to 49% (see Appendix I).
[8] Repsol holds interests in Petroquiriquire, S.A., Cardon IV, S.A. and Petrocarabobo, S.A.,which, at December 31, 2017, came to 40%, 50% and 11%, respectively (see Appendix I).

APPENDIX III: SEGMENT REPORTING AND RECONCILIATION WITH IFRS-EU FINANCIAL STATEMENTS[1]

Income Statement figures

The reconciliation between adjusted net income (loss) and IFRS-EU net income (loss) at December 31, 2017 and 2016 is as follows:

€ Million

	Adjusted net income		ADJUSTMENTS: Reclass. Joint Ventures		Special Items		Inventory Effect		Total Adjustments		Net income under EU-IFRS	
Results	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**	**2017**	**2016**
Operating income	3,214	2,067	(610)	98	42	(448)	143	194	(425)	(156)	2,789	1,911
Financial result	(356)	(315)	126	(68)	(82)	149	-	-	44	81	(312)	(234)
Net income from companies accounted for using the equity method - net of taxes	323	371	580	(177)	-	-	-	-	581	(177)	904	194
Income before tax	**3,181**	**2,123**	**96**	**(147)**	**(39)**	**(299)**	**143**	**194**	**200**	**(252)**	**3,381**	**1,871**
Income tax	(738)	(164)	(96)	147	(350)	(323)	(36)	(51)	(482)	(227)	(1,220)	(391)
Net income from continuing operations	**2,443**	**1,959**	**-**	**-**	**(389)**	**(622)**	**107**	**143**	**(282)**	**(479)**	**2,161**	**1,480**
Net income attributed to minority interests	(38)	(37)	-	-	1	4	(3)	(10)	(2)	(6)	(40)	(43)
Net income from continuing operations	**2,405**	**1,922**	**-**	**-**	**(388)**	**(618)**	**104**	**133**	**(284)**	**(485)**	**2,121**	**1,437**
Net income from interrupted operations	-	-	-	-	-	299	-	-	-	299	-	299
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT	**2,405**	**1,922**	**-**	**-**	**(388)**	**(319)**	**104**	**133**	**(284)**	**(186)**	**2,121**	**1,736**

€ Million

	Net amount of sales [(2)]		Operating reult		Depreciation and amortization of fixed assets [(3)]		Income / (expenses) for the impairment of assets		Share of results of companies accounted for using the equity method		Income tax	
Segmentos	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Upstream	6,333	4,963	1,009	(87)	(2,379)	(2,393)	(743)	(352)	32	(8)	(735)	12
Downstream	39,240	32,244	2,467	2,467	(739)	(716)	(3)	(233)	20	18	(677)	(545)
Corporación	(1,635)	(820)	(262)	(313)	(62)	(64)	(80)	-	271	361	290	(5)
TOTAL ADJUSTED FIGURES [(1)]	**43,938**	**36,387**	**3,214**	**2,067**	**(3,180)**	**(3,173)**	**(826)**	**(585)**	**323**	**371**	**(1,122)**	**(538)**
Adjustments												
Upstream	(2,240)	(1,668)	(482)	(563)	777	640	643	296	576	(182)	(100)	144
Downstream	(29)	(29)	122	487	3	4	4	7	6	7	2	3
Corporación	-	(1)	(65)	(80)	1	-	80	-	(1)	(2)	-	-
IFRS-EU FIGURES	**41,669**	**34,689**	**2,789**	**1,911**	**(2,399)**	**(2,529)**	**(99)**	**(282)**	**904**	**194**	**(1,220)**	**(391)**

(1) Figures drawn up according to the Group´s reporting model described in Note 4.
(2) The revenue figure corresponds to the sum of the *"Sales"* and *"Services rendered and other income"*. The itemization by provenance (customers or inter-segment transactions) is as follows:

€Million

	Customers		Inter-segment		Total	
Segments	2017	2016	2017	2016	2017	2016
Upstream	4,719	4,159	1,614	804	6,333	4,963
Downstream	39,218	32,228	22	16	39,240	32,244
Corporate	1	-	-	4	1	4
(-) Inter-segment adjustments and eliminations of operating income	-	-	(1,636)	(824)	(1,636)	(824)
TOTAL	**43,938**	**36,387**	**-**	**-**	**43,938**	**36,387**

(3) Including depreciation of failed dry wells. For more information, see Note 21.

(1) Some of these metrics presented in this Appendix are Alternative Performance Metrics (APMs) in accordance with European Securities Markets Authority (ESMA) guidelines. For further information, see Appendix I of the consolidated Management Report.

Balance sheet figures

	€ Million							
	Non-current assets		Net operating investments [2]		Capital employed [4]		Investments accounted for using the equity method	
Segments	2017	2016	2017	2016	2017	2016	2017	2016
Upstream	25,636	29,186	2,072	1,889	21,612	23,853	303	364
Downstream	10,312	10,444	757	(496)	9,749	9,469	242	214
Corporate	3,968	4,042	27	(1,893)	4,969	5,933	3,229	3,323
ADJUSTED FIGURES [1]	**39,916**	**43,672**	**2,856**	**(500)**	**36,330**	**39,255**	**3,774**	**3,901**
Adjustments								
Upstream	(7,126)	(7,577)	(324)	(565)	1,152	1,095	5,411	6,229
Downstream	(22)	(23)	(2)	1	19	17	81	41
Corporate	(4)	(1)	3	6	-	-	2	5
EU-IFRS FIGURES	**32,764**	**36,071**	**2,533**	**(1,058)**	**37,501**	**40,367**	**9,268**	**10,176**

[1] Figures drawn up according to the Group´s reporting model described in Note 4.
[2] Excludes *"Non-current financial investments"*, *"Deferred tax assets"* and *"Other non-current assets"*.
[3] Includes investments accrued during the period net of disposals but does not include net investments in *"Other financial assets"*.
[4] Includes capital employed (see Note 5) corresponding to joint ventures, non-current non-financial assets, operating working capital and other non-financial liability headings.

APPENDIX IV: REGULATORY FRAMEWORK

The activities of Repsol, S.A. and its subsidiaries are subject to extensive regulation, whose key aspects are described below.

Spain

Basic legislation

Spain currently has a legislation which implements a liberalization of the Oil Industry, an example of which is the Hydrocarbons Sector Law 34/1998 of October 7 ("LSH"), which has been amended by several legislative acts.

Law 2/2011, of March 4, on Sustainable Economy, modified the Hydrocarbons Sector Law, establishing binding guidelines for energy planning under criteria designed to contribute to the creation of a safe, cost-effective, economically-sustainable, and environmentally-friendly energy system.

Law 3/2013 of June 4, regarding the creation of the National Markets and Competition Commission (CNMC – "Comisión Nacional de los Mercados y la Competencia," in Spanish), created as an overseeing body, charged with the duties and tasks relating to supervision and control of regulated markets, which were previously supervised by various National Commissions, including the Energy and Competition.

Controlling concentration regime in the energy sector

The aforementioned Law 3/2013 modified the regime controlling corporate transactions in the energy sector, allocating duties to the Ministry of Industry, Energy and the Digital Agenda (MINETAD). It devises a new *ex post* regime with respect to certain transactions by either requiring the buyer to notify MINETAD of the execution of certain transactions or by means of the imposition of conditions on the business operations of the companies acquired, in so far as energy supply in Spain is deemed threatened.

A novelty of this new control regime is that in addition to extending to the electricity and gas sectors, it now extends to the liquid hydrocarbons sector including companies that pursue refining activities, pipeline transportation, and storage of petroleum products (related activities), or companies that hold title to said assets. Such assets acquire the condition of strategic assets.

Principal operators and dominant operators

Under Royal Decree-Law 5/2005, of March 11, the CNE - currently the CNMC - is obliged to publish not only the list of principal operators but also the dominant operators in each energy market or sector. Dominant operators are defined as those commanding a share of more than 10% of the benchmark market. On the other hand, a principal operator is considered an operator ranked among the top five players by market share. Designation as a dominant operator or principal operator implies certain regulatory restrictions.

Oil and gas exploration and production

Hydrocarbon deposits and underground storage existing on Spanish territory and in the territorial marine subsoil and ocean bottoms which are under Spanish sovereignty are considered public properties.

Exploration permits are granted by national or regional governments, depending on whether autonomous areas are affected, and exclusive investigation rights for the area in question are granted for periods lasting six years. In turn, the concession for exploiting hydrocarbon reserves grants the owners exclusive exploration rights for 30 years, renewable for two successive ten-year periods, as well as the right to continue exploration activities in these areas and obtain authorization to freely sell the hydrocarbon products they obtain.

Law 8/2015, regulating specific tax and non-tax measures related to oil and gas exploration, research and operation activities, fosters non-conventional extraction, or 'fracking' and creates an incentive regime for regional and local governments that pursue such activities, as well as creating a scheme for land owners to share in the profits derived from the related extraction activity.

Furthermore, on November 18, 2017, Royal Decree-Law 16/2017 came into force, establishing safety provisions applicable to the hydrocarbon research and operation at sea ("RDL"), which partially transposes Directive 2013/30/EU, of June 12, 2013 on safety of offshore oil and gas operations ("Offshore Directive") into Spanish law.

The purpose of the RDL is to establish minimum requirements that offshore hydrocarbon research and operations must meet to prevent major accidents and to mitigate their consequences and to define action principles to ensure that offshore operations (including operations undertaken outside the EU) are performed employing a systematic risk management approach to ensure that the residual risk of serious accidents is considered acceptable.

Oil products

Law 11/2013 of July 26, regarding measures to support entrepreneurs and to stimulate growth and job creation, introduces a number of measures in the wholesale and retail markets for petroleum products intended to increase effective competition in the sector.

In the retail side of the business, it introduces changes to exclusive supply agreements for the distribution of vehicle fuel. Specifically, their term is now limited to 1 year (from 5 years previously); they can be automatically rolled over for additional one-year periods, for a maximum of three years, if and only if the distributor so desires. The new legislation also bans clauses that set, recommend or influence, directly or indirectly, the price at which fuel is sold to the public.

Additionally, it establishes limits on growth in the number of fuel supply facilities of wholesalers with provincial markets shares of over 30%. Law 8/2015 stipulates that from 2016 on, this market share shall no longer be measured in terms of points of sale but rather based on prior-year sales figures, allowing the government to revise this percentage threshold in three years' time or even remove the restriction altogether, market trends and the sector's business structure so permitting.

Finally, Law 8/2015 allows owners of oil and gas product retailers that do not belong to the distribution network of a wholesale operator (private label networks operating without exclusive supply agreements) to inform consumers of the origin of the fuel they sell by advertising the wholesaler from which they purchase the said fuel. Furthermore, oil and gas product retailers may supply products to other retailers, subject only to the requirement of first registering themselves in the special duty registry.

Minimum stock for security

Royal Decree 1766/2007, regulates the obligation to maintain a minimum inventory in the oil and natural gas sectors, the obligation to diversify the natural gas provisions and the activities of the Corporation of Strategic Reserves of Petroleum Products (CORES for its acronym in Spanish).

The obligation to maintain minimum stocks of oil and gas products for security reasons, excluding LPG, currently requires storing at all times an amount equivalent to 92 days of sales based on the sales during the previous 12 months. Repsol was obliged to maintain a stock corresponding to 50 days of sales, while the remaining inventory required to make up the difference with the above mentioned safety stock requirement are held by CORES on behalf of the various operators (strategic reserves).

Royal Decree-Law 15/2013, of December 13, introduces an amendment to the Hydrocarbon Sector Act, indicating that via regulation, administrative procedures and obligations needed to ensure, on an ongoing basis, a minimum safety buffer equivalent, at least, to the higher of the volume corresponding to 90 days of average net daily imports and 61 days of average internal daily consumption corresponding to the year of reference and measured in oil equivalent.

LPG

The prices of oil derivatives are deregulated, with the exception of LPG, which is, under certain circumstances, subject to retail price ceilings. The prices of bulk LPG and bottled LPG in cylinders with capacity of under 8 kilograms or over 20 kilograms are deregulated. Law 18/2014 of October 15 has had the effect of also deregulating the prices of containers with capacity of under 8 kilograms or over 20 kilograms with a tare weight of no more than 9 kilograms other than containers of LPG mixes intended for use for fuel purposes; this measure favors certain players over others as a function of the tare weight of the containers they market and, in practice, does not constitute full sector deregulation.

Ministerial Order IET/389/2015 of March 5, 2015 updates the system for automatically determining the maximum price at which bottled LPG can be retailed and for determining the price of piped LPG, adjusting the formulae used to calculate raw material costs in order to, as per the wording of the Order, adapt them "to the supply reality in the Spanish market in recent years''. Adaptation of these formulae does not apply to sales costs, thereby resulting in a reduction in maximum bottled LPG retail prices and piped LPG retail prices.

Additionally, Law 18/2014 consolidate users' right to home delivery of containers weighing between 8 and 20 kilograms by obliging the LPG wholesalers with the biggest market shares in the corresponding mainland and island territories to perform this home-delivery service. Failure to fulfil this obligation constitutes a very serious offence. The list of LPG wholesalers so obliged is determined by a resolution issued by the General Directorate of Energy Policy and Mining every 3 years. Every 5 years, the Spanish government is entitled to revise the terms of this obligation and has the power to remove it. The current list of mandatory home suppliers is as follows: Repsol Butano on the mainland and in the Balearics, DISA in the Canary Islands and Atlas in Ceuta and Melilla.

Natural Gas

Law 12/2007 of July 2, which amended the Hydrocarbon Sector Act incorporated measures for achieving a completely liberalized market. This legislation establishes the framework for eliminating the tariff system and creates the role of the supplier of last resort with ultimate liability for supplying customers lacking sufficient bargaining power. Moreover, these suppliers are subject to a price cap (“last resort tariff”), set by MINETAD. Activities in the natural gas sector can be classified into: i) regulated activities: transport (including storage, regasification and transport per se) and distribution of natural gas; and ii) deregulated activities: production, supply and marketing of natural gas. The Natural Gas System Operator, Enagás S.A. is responsible for the coordinating and ensuring that the system works properly. Law 8/2015 creates an official natural gas hub with a view to facilitating entry into the market of new suppliers and increasing competition, creating a new single hub operator, tasked with management of the gas ”*hub*”, the MIBGAS (which stands for Iberian Gas Market in Spanish), which ensures that all participating entities comply with the established rules.

Electricity sector regulation in Spain

Deregulation of the Spanish electricity sector began in 1997 with the passage of Law 54/1997, of November 27, the Electricity Sector Act, which was amended by Law 17/2007, of July 4, and more recently by Law 24/2013, of December 26, which took effect on December 28, 2013.

Generation and supply activities continue to be deregulated, developed by competitive businesses, while transmission, distribution and the system’s technical and financial management remain as regulated activities, characterized by an access that requires administrative authorization, activities normatively set their remuneration and are subject to specific obligations. Power supply, for its part, is classified as a service of general economic interest.

Royal Decree 413/2014 regulates the legal and economic regime governing the production of electric power using renewable sources, combined heat and power systems and waste and affects the Repsol Group's facilities, formerly part of the now-defunct 'special' regime and now assimilated into the 'ordinary' regime. Ministerial Order IET/1045/2014 of June 16, meanwhile, enacts the standard facility remuneration parameters applicable to certain electricity-producing facilities that use renewable energy sources, CHP systems or waste.

Recently, Royal Decree 900/2015, of October 9, regulating the administrative, technical and financial conditions was passed, which governs the permitted forms of electricity distribution and generation with self-consumption.

Contributions to the national energy efficiency fund

Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 on energy efficiency makes it binding on member states to justify a quantity of energy savings by 2020, obliging each state to establish energy efficiency obligation schemes such that energy distributors and/or retailers are obliged to achieve a cumulative quantity of energy savings by year-end 2020 means of annual savings between 2014 and 2020 equivalent to 1.5% of their annual energy sales.

Royal Decree-Law 8/2014 and Law 18/2014 transpose this EU Directive into Spanish law by establishing a National Energy Efficiency Fund (NEEF) by virtue of which gas and electricity distributors, oil product wholesalers and liquid petroleum gas wholesalers (although the latter are not considered bound parties under the Directive) are allocated an annual energy saving target at the national level called savings obligations, which is quantified in financial terms.

The successive IET/ETU ministerial orders stipulating mandatory contributions to the National Energy Efficiency Fund, are being appealed by the various companies encompassed by the aforementioned National Fund contribution obligation, including the Group entities subject to this obligation.

Energy audits

Spanish Royal Decree 56/2016, of February 12, transposing Article 8 of Directive 2012/27/EU, of the European Parliament and of the Council, of October 25, 2012, on energy efficiency, in respect of energy audits, energy service and energy audit provider accreditation and the promotion of energy efficiency, took effect in February 2016.

It has the effect of obliging all enterprises that are not SMEs (“large enterprises”) within the European Union to carry out regular energy audits with a view to analyzing whether their energy management is as good as possible and having them establish the opportune energy savings and efficiency opportunities and proposals as warranted. The Group's energy management systems, which are based on the international ISO 50001 standard, are found in the Group's main industrial companies.

Climate change and alternative fuels

Following the Paris Agreement, countries' commitments under their respective National Determined Contributions (NDCs) will have a significant impact on the development of new climate policies. As a signatory of the *Paris Pledge for Action* document, Repsol supports the agreement, and works toward being part of the climate change solution.

In this connection, the Council of Ministers approved the National Action Framework on December 9, 2016 on alternative energy sources for transport. *Climate Change and Air Quality.* Furthermore, the future Climate Change and Energy Transition Law is being discussed, with the public consultation completed in October 2017 prior to the drawing up of the preliminary draft. This Law represents a commitment on behalf of the Prime Minister to fulfil the objectives set out in the Paris Agreement and in the framework of the European Union, which has already been assumed by Spain.

Royal Decree 639/2016, of December 9, published on December 10 lays down a framework of measures to implement an infrastructure for alternative fuels, with the aim of minimizing the dependence of the transport industry on oil, mitigating the environmental impact of transport, and setting threshold requirements for the creation of an infrastructure for alternative fuel, including charging stations for electric vehicles and natural gas and hydrogen refuelling stations.

Bolivia

The 2009 Bolivian Constitutions establishes that state-owned company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) is authorized to enter into service agreements with companies for the latter to undertake activities in its name and on its behalf in exchange for remuneration or payment for their services.

The Bolivian oil and gas industry is regulated by Law 3,058 of May 19, 2005 (the “Hydrocarbons Law”).

On May 1, 2006, Supreme Decree 28,701 was published, which nationalized the country's hydrocarbons. Furthermore, the shares required to enable YPFB to control at least 50% plus one vote in different companies, among them Empresa Petrolera Andina, S.A., (currently known as YPFB Andina) were nationalized.

On December 11, 2015, Law No. 767 was passed to promote investment in oil and gas exploration and production in Bolivia. Furthermore, Law No. 817 of July 19, 2016 was enacted supplementing Article 42 of Law No. 3058, previously amended by Law No. 767, allowing YPFB to enforce addendums to Operating Contracts to extend their term.

Operating Contracts

According to the Hydrocarbons Law and the Nationalization Decree, Repsol E&P Bolivia S.A. and its subsidiary YPFB Andina S.A. signed with YPFB the Operating Contracts establishing the conditions for the prospecting and production of hydrocarbons in Bolivia, effective as of May 2, 2007. Additionally, on May 8, 2009, the Natural Gas and Liquid Hydrocarbon Delivery Agreements establishing the terms and conditions governing the delivery of hydrocarbons by the Holder were signed.

On November 14, 2017, an addendum to the Operating Contract was signed for Área Caipipendi, approved by Law No. 1013 of December 27, 2017. This addendum seeks to establish the continuation of Oil Operations in Area from May 2, 2031 onwards, subject to compliance with a new investment plan to be enforced by the Holder.

Canada

In the Canadian provinces of British Columbia, Alberta and Saskatchewan where the majority of the Company's exploration and production interests in Canada lie, the provincial governments own the majority of the subsurface mineral rights to crude oil and natural gas. These governments grant rights to explore for and produce oil and natural gas from crown lands under the conditions set forth in provincial legislation and regulations. In addition to Crown lands, the Company participates in leases entered into from freehold mineral owners through direct negotiation.

The royalties applicable to production in Crown lands are established by government regulation and, in general, calculated as a percentage of gross production based on the productivity of the wells, geographic location, date on which the oil fields were discovered, recovery method and type of quality of oil derivative produced. Occasionally, the provincial governments may roll out incentive programs for exploration and development. Such programs seek to reduce for royalty rate fees, grace periods for fees or tax credits. Fees payable on production in privately owned land are established by means of negotiation between the owner and the oil company.

Companies operating in the Canadian oil and natural gas industry are subject to extensive regulation and control of operations (including land ownership, exploration, development, production, refining, transportation and marketing in addition to environmental matters) as a result of legislation and policy enacted at both the federal level (by the government of Canada) and by the various provincial governments. Generally speaking, oversight of such operations is undertaken by regulatory bodies that include the British Columbia Oil and Gas Commission, the Alberta Energy regulatory entity, the Saskatchewan Ministry of Economy and the Saskatchewan Ministry of the Environment, as well as federal regulatory bodies such as the Canadian Environmental Assessment Agency and the National Energy Board of Canada. Environment legislation restricts and prohibits the release or emission of various substances, such as sulphur dioxide, carbon dioxide and nitrous oxide. The regulations also impose conditions or prohibitions in operating in certain environmentally sensitive areas and establish requirements that regulate the satisfactory abandonment and reclamation of well and facility sites.

Non-compliance with the legislation, regulations, orders, directives or other applicable guidelines can result in fines or other sanctions.

In November 2016, the provincial government of Alberta issued regulations regarding carbon emissions that included a carbon levy across all industry sectors. The price per tonne of carbon dioxide emitted will increase to the previously announced amount of $30 CDN in 2018 and compared to $20 CDN in 2017. The fee is paid at the time that hydrocarbons are eliminated or acquired in a gas or oil pipelines The regulation contains exemptions for the producers and processors of raw material through to 2023, with certain exceptions. The Company has applied for and received exemption certificates in all possible cases.

In addition to the provincial regulations, the Canadian Federal Government has announced, as part of the Pan-Canadian Framework on Clean Growth and Climate Change, the possibility of provinces applying further increases to the price of carbon to $50 CDN per tonne by 2022.

Ecuador

In accordance with the Constitution of 2008 and the Hydrocarbons Law of Ecuador, the nation's hydrocarbon fields and the associated substances are the inalienable, imprescriptible and unattachable property of the State.

The amended legislation of the Hydrocarbons Law and the Internal Tax Regime Law, of July 27, 2010, established that all agreements for the exploration and exploitation of hydrocarbons must be modified to reflect the amended reformed services agreement model.

This model involves the contractor being obliged to provide services using its own economic resources and at its own risk. In exchange, the contractor will receive a set price per net barrel of oil produced and delivered to the state. This price, which constitutes the contractor's gross revenue, is contractually stipulated based on estimated depreciation schedules, cost/expense schedules and a reasonable profit in light of the risk incurred.

Repsol Ecuador, S.A. (Ecuador Branch) entered into the services agreement for Block 16, which came into force on January 1, 2011. In addition, on January 22, 2011, it signed the service agreement of the Tivacuno Block.

United States

Offshore exploration and production

The two government agencies responsible for offshore exploration and production are the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) under the U.S. Department of the Interior. The BOEM is in charge of responsibly ensuring the economic and environmental development of US offshore resources. Its functions include the leasing (agreements that grant oil and gas mining rights), the revision and management of oil and gas exploration, the approval of development plans and the performance of analyses pursuant to the National Environmental Policy Act and other environmental studies. The BSEE is responsible for safety and environmental supervision of offshore oil and gas operations. Its functions include the development and application of security and environmental regulations, the authorization of offshore exploration, development and production, the performance of inspections and the response to oil spills.

Onshore exploration and production

With regard to U.S. onshore exploration and production activities, the oil and gas industry is primarily regulated by the laws of the individual States, with the exception of certain environmental matters and operations on Federal land. At present, the Company has operations in Alaska, Kansas, Louisiana, Oklahoma, Pennsylvania and Texas. In the different states, exploration and production activities are controlled by the Alaska Department of Natural Resources, the Corporate Commission of Kansas, the Louisiana Department of Natural Resources, the Corporate Commission of Oklahoma and the Railroad Commission of Texas. Each of these states has its own environmental protection agency. In Pennsylvania, the local Department of Environmental Protection is responsible for both environmental protection activities and the regulation of exploration and production activities.

Federal authorities do have exclusive jurisdiction over certain environmental aspects that affect the gas and oil sector. The United States Environmental Protection Agency The Environmental Protection Agency (EPA) applies laws and regulations such as the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act, which regulates dangerous discharges. The environmental impact of the projects is regulated by the National Environmental Policy Act (NEPA), which is managed by different Federal agencies depending on the type of project.

Transport

The Federal Energy Regulatory Commission (FERC) governs the transport of natural gas as part of inter-State trade and the transport of oil via oil pipelines within the same field. The States regulate other types of transport.

Liquefied natural gas

The Natural Gas Act grants the Federal Energy Regulatory Commission (FERC) the exclusive power to regulate plants that import and export liquefied natural gas arriving in the United States and leaving the country with the authorization of the Office of Fossil Energy at the US Department of Energy (DOE).

Trading of gas, crude oil and refined products

The FERC regulates the sale of natural gas as part of inter-State trade. A number of US regulatory bodies are empowered to regulate the oil and refined products trading market. The Federal Trade Commission (FTC) has the power to regulate crude oil trading activities. The Environmental Protection Agency (EPA) regulates refined products marketed to private consumers such as gasoline and diesel. Trading of financial derivatives is regulated by the Commodities Futures Trading Commission (CFTC).

On December 18, 2015, the 2016 Consolidated Appropriation Act was passed (Public law no. 114-113). This piece of legislation repeals Article 103 of the Energy Policy and Conservation Act (EPCA), thereby eliminating the ban on exporting crude oil produced in the US. The legislation preserves the President's power to restrict oil exports in response to a national emergency, enforce trade sanctions and remedy oil supply scarcity or the sustained distortion of oil prices significantly above world market levels.

Indonesia

Under Indonesia's 1945 Constitution, all natural resources (including oil and gas) within Indonesian territory are owned and controlled by the State. The regulation of oil and natural gas in Indonesia is based on Law No. 22 of 2001 ("Law No. 22"), which sets out broad principles for the regulation of the industry. These principles are applied by means of a series of implementing regulations promulgated under Law No. 22, as well as ministerial regulations and decrees.

Law No. 22 restructured and liberalised the State's control over the oil and gas industry. SKK Migas is the current successor to Perusahaan Pertambangan Minyak dan Gas Bumi Negara ("PERTAMINA") as the supervisory party to the production sharing contracts (PSCs).

The Ministry of Energy and Mineral Resources ("MEMR") is responsible for approving the first Plan of Development ("POD") under production sharing contracts and overseeing the State's ownership and management of oil and gas resources. With assistance from the Directorate General of Oil and Gas ("MIGAS"), the MEMR formulates government policy, determines the blocks to be opened for bidding, is responsible for approval of transfers by contractors of their participating interest (in consultation with SKK Migas) and issues the licenses required for the conduct of refining oil and gas marketing activities, such as the production of liquified natural gas using refining and marketing structures.

The Ministry of Finance is responsible for issuing instructions concerning the basis of the Government's share derived from the exploitation of liquified natural gas and subordinated by Directorate General of Tax and Directorate General of Customs and Excise, determining the taxes, duties and excise due on LNG development activities, deciding on issues related to government guarantees and formulating, determining and implementing policies on State Owned Assets.

Pursuant to Law No. 22, companies wishing to explore for and exploit oil and gas reserves must enter into a Cooperation Contract with SKK MIGAS. The form of Cooperation Contract typically entered into in respect of exploration and production activities in Indonesia is a PSC.

Under a PSC the Government of Indonesia retains ownership of the oil and gas (prior to delivery) and the contractor bears all the risk and costs of exploration, development and production in return for an agreed percentage share of oil and/or gas production and recovery of eligible operating costs from production.

On January 16, 2017, the the Government of Indonesia introduced a new form of PSC (the “Gross Split PSC”) under Minister of Energy & Mineral Resources Regulation No. 8 of 2017 regarding Gross Split Production Sharing Contract (“Regulation 8/2017”). On December 28, 2017, the Government of Indonesia enacted Government Regulation No. 53 of 2017 on the tax treatment of the Gross Split Production Sharing Contract (Government Regulation 53/2017), governing the tax conditions applicable to Gross Split PSCs. At present, no Repsol PSC takes on the form of a Gross Split.

Peru

Regulation of the hydrocarbons market in Peru is included in its Constitution. The Constitution states that the government promotes the private initiatives, recognizing the economic pluralism, and having the state a subsidiary role in terms of business concerns. The Constitution establishes that private and public business activity must be treated equally under the law, and those national and foreign investments are subject to the same conditions. In addition, the Constitution stipulates that the country's natural resources are the property of the state and that the terms and conditions of access to and use of these resources by private parties must be regulated by means of organic laws.

Natural and legal persons, whether Peruvian or foreign, who pursue oil and gas activities must expressly subject themselves to the laws of the Republic of Peru, renouncing the right to any diplomatic recourse.

The most important authorities with competence over Peruvian oil and gas matters are: the Ministry of Energy and Mining (MINEM for its acronym in Spanish), which is tasked with drafting, passing, proposing and applying sector policy; the Energy & Mining Investment Oversight Body (OSINERGMIN), tasked with oversight of the natural and legal persons carrying out activities related to the electricity and hydrocarbon sub-sectors and the imposition of penalties for any breaches of the legal and technical obligations issued by the MINEM and PERUPETRO. The Environmental Assessment and Taxation Body (OEFA) is the technical institution specialized in ensuring compliance with the standards, obligations and incentives laid down in prevailing environmental regulations.

Exploration and Production

The Organic Law of Hydrocarbons (OLH), regulates this natural resource. To provide legal assurance to investors, it states that contracts under its framework shall be considered Contract-Law, and therefore can only be modified by written agreement between the two parties. To achieve these goals the OLH created PERUPETRO, a state-owned Limited Company organized in accordance with the General Corporate Law, to which the state, as owner of the hydrocarbons located in its territory, grants the right of ownership over the hydrocarbons, so that PERUPETRO can negotiate, execute and monitor exploration and/or exploitation contracts, with a licensee (Contractor) by means of License Agreements, Service Agreements and other forms of contracts authorized by MINEM.

Hydrocarbon refining and marketing

The OLH stipulates that any national or foreign individuals or legal entities may install, operate, and maintain petroleum refineries, plants for processing natural gas and condensed, natural asphalt, greases, lubricants, and petrochemicals, subject to the norms specifically established by The Mines and Energy Ministry.

In Peru, the price of hydrocarbon derivatives is regulated by supply and demand.

Venezuela

The Constitution of the Bolivarian Republic of Venezuela stipulates that the mines and oil and gas fields, irrespective of their nature, located on national territory, under the territorial sea, in the exclusive economic zone or on the continental platform, belong to the Republic, are public-domain goods and are, therefore, inalienable and imprescriptible.

By virtue of organic law and to protect national interests, the Venezuelan State has reserved the Venezuelan oil and gas activities for itself. For reasons of economic and political sovereignty and for national strategic purposes, the State holds all of the shares of Petróleos de Venezuela, S.A. (PDVSA), or the entity that may be set up to run the oil and gas industry.

Venezuela's Hydrocarbons Organic Law (LOH) regulates all matters regarding the exploration, operation, refining, industrialization, transportation, storage, sale and conservation of hydrocarbons, including related refined products and the works required to perform these activities. Pursuant to the LOH, the performance of activities involving the exploration, extraction, collection, transport and storage of hydrocarbons is reserved to the State, which may undertake them directly or through wholly-owned State companies. The State may also conduct these activities through mixed owned companies whose equity interest is over 50%.

The Mixed Companies agreements referred to in the LOH do not impose restrictions on this legal form of company in terms of transferring funds in the form of cash dividends, loan repayments or the redemption of shareholder advances in foreign currency (USD).

Activities relating to the exploration, operation, collection, storage, use, industrialization, sale and transportation of non-associated natural gas and associated gas are subject to the provisions set out in the Organic Gaseous Hydrocarbons Law and its regulations.

Under Foreign Exchange Agreement No. 37, private domestic or foreign holders of gas exploration and operation licenses as defined in the Organic Gaseous Hydrocarbons Law, may hold in bank accounts or in analogous form the foreign currency representing the proceeds of operation of their licenses, including the proceeds of export sales or changes in consumption patterns.

On January 14, 2016, Decree No. 2184 was published in the Extraordinary Official Journal of the Bolivarian Republic of Venezuela No. 6,214, declaring a State of Economic Emergency throughout the entire territory of the Republic for a period of 60 days, providing the State with the power to enact exceptional and extraordinary economic, social, environmental, political and legal measures, in addition to others. This Decree has been successively extended on 11 occasions, with the most recent, Presidential Decree No. 3,074, published on September 15, 2017, in Extraordinary Official Gazette No. 41,237.

The Constituent Assembly was called by the President of the Bolivarian Republic, Nicolás Maduro, via Presidential Decree No. 2,830, published on May 1, 2017; all public authorities are subordinated under the Constituent Assembly and are obliged to comply and ensure compliance with the legal documents issued by said Assembly. The maximum term of this Assembly has been set at two years.

On December 6, 2017, Resolution No. 164 was published by the Ministry of Popular Power over Oil, establishing a 30-day system for revising and validating all national and international agreements entered into and those pending, by PDVSA, its subsidiaries and mixed-ownership companies in which PDSVA holds shares.

Official Gazette No. 41,310, of December 29, 2017 contained the publication of the Constitutional Foreign Production Investment Law, establishing the principles, policies and procedures that regulate foreign production investments in goods and services. The special legislation regulating foreign investments in specific sectors of the economy shall prevail over said law, including those addressing hydrocarbon matters, mining and telecommunications matters. Currently, the National Executive finds itself in the 90-day period prior to the entry into force of the law to set out the corresponding regulations.