

# INTERIM MANAGEMENT REPORT

For the first half of 2016



REPSOL, S.A. and Investees comprising the Repsol Group

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

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## 1. MAIN EVENTS DURING THE PERIOD

In 2016, subsequent to the acquisition of Talisman Energy Inc. (currently Repsol Oil & Gas Canada Inc. and hereinafter “ROGCI”) and the publication of the new 2016-2020 Strategic Plan, Repsol has moved forward with its **transformation process**, designed through different efficiency programs and synergies, divestments in non-strategic assets, and a reduction in investment, in order to prepare itself to face the low prices environment as well as uncertain about market dynamics.

### RESULTS<sup>1</sup>

€ Million	H1 2016	H1 2015	Variation
Upstream	63	(238)	126%
Downstream	934	973	(4%)
Gas Natural Fenosa	195	227	(14%)
Corporation and adjustments	(275)	278	(199%)
<b>Adjusted Net Income</b>	<b>917</b>	<b>1,240</b>	<b>(26%)</b>
Inventory effect	2	(57)	104%
Special items	(280)	(130)	(115%)
<b>Net Income</b>	<b>639</b>	<b>1,053</b>	<b>(39%)</b>

In the first half of 2016, in an environment marked by low crude oil and gas prices, lower Refining margins, a mild unusual climate in the northern hemisphere and high market volatility, **Adjusted Net Income** amounted to €17 million. In comparison with the results of the same period in the previous year, it is noteworthy the improvement in Upstream results, which continue implementing efficiency and cost reduction measures while at the same time increasing production, which were partially offset by lower Corporation results during this period, mainly caused by the absence of the extraordinary exchange rate gains which were obtained in 2015, and lower Downstream results, most notably as a result of lower margins in the Refining business.

**Net Income**, amounted to €639 million, and was negatively affected by certain Special items during the period: extraordinary costs necessary to meet the workforce restructuring plans deployed within the framework of the efficiency programs, as well as the effects of the devaluation in Venezuela. This was only partially offset by capital gains generated from divestments in the LPG businesses, piped gas assets and new energies. Section 3 includes a more detailed analysis of results for the first half.

### OTHER EVENTS

As part of **active portfolio management measures** during the first half of 2016:

- An agreement has been reached for the sale of its LPG businesses in Peru and Ecuador to the South American international operator Abastible. In June, the sale of the LPG business in Peru has been completed for €236 million, generating capital gains of €81 million after taxes;
- UK wind farm business has been sold to the Chinese group SDIC Power for €265 million generating capital gains of €100 million after taxes;

<sup>1</sup> All the information presented throughout this section, unless expressly indicated otherwise, has been prepared in accordance with the Group’s reporting model, which is described in Note 2.6 “*Information by business segment*” in the interim condensed consolidated financial statements for the first half of 2016. Appendix I of this document includes the reconciliation between the adjusted figures and those corresponding to IFRS-EU financial information. Some of the figures included in this document are considered alternative performance measures reporting procedures (APMs), in accordance with the Guidelines of the European Securities Markets Authority (ESMA) (see Appendix I “*Alternative Performance Measures*”).

- In addition, within the framework of the agreement reached in 2015 for the sale of piped gas business in Spain, Repsol Butano, S.A. sold certain facilities to Redexis Gas, S.A. for €19 million, generating capital gains of €71 million after taxes.

In 2016, Repsol's **financial prudence** measures continued, which are making it possible for the Group to maintain its credit rating. **Net financial debt** at the end of the first half amounted to €1,709 million, which is below to that in December 2015, despite the fact that dividends were paid in January. This trend can be explained by the €775 million of free cash flow generated during the period even in a the difficult context of prices.

The Company has maintained its **shareholder remuneration scheme** and closed in January and July two capital increases through the "*Repsol Flexible Dividend*" program, which allows shareholders to choose to receive their compensation, in total or in part, in new shares or cash.

Repsol's **performance on the stock exchange** ended with a 12.7% revaluation; during the first six months of the year, with a performance which is superior to the Ibex-35 index as well as the other peers in the European Oil & Gas industry.

During the first half, necessary **actions to reduce** around 1,500 jobs continued as announced in the 2016-2020 Strategic Plan. In June, an agreement was signed to facilitate the adjustment process in Spain, based on the commitment acquired to right-size the company in a responsible manner and on consensus. Furthermore, workforce adjustments have been made worldwide (mainly in the US and Canada).

Finally, Repsol maintains its commitment to **Safety and the Environment**. As regards to workplace accidents, the Overall Lost Time Injury Frequency Rate (LTIFR) rose as compared to the first half of 2015, while the Total Recordable Incident Rate (TRIR<sup>1</sup>) dropped. Regarding the environment, during the first half of 2016, actions aimed at improving our facilities were implemented to reduce energy consumption, and have represented a reduction of 145,000 tons in CO<sub>2</sub> emissions assuming equivalent operating conditions.

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<sup>1</sup> This indicator widens the scope of accident probability, as it measures the consequences of personal damages to include other less serious accidents. Repsol has therefore considered the TRIR is the most appropriate indicator currently in existence for evaluating accident figures.

## MAIN FIGURES AND INDICATORS

<b>Financial indicators</b> <sup>(1)</sup>	<b>H1 2016</b>	<b>H1 2015</b>	<b>Macroeconomic environment</b>	<b>H1 2016</b>	<b>H1 2015</b>
<b>Results</b>			Brent (\$/bbl) average	39.8	57.8
EBITDA CCS	2,409	2,471	WTI (\$/bbl) average	39.8	53.3
Adjusted Net Income	917	1,240	Henry Hub (\$/Mbtu) average	2.0	2.8
Net Income	639	1,053	Algonquin (\$/Mbtu) average	2.9	6.9
Earnings per share (€/share)	0.44	0.73	Average exchange rate (\$/€) average	1.12	1.12
Capital employed <sup>(2)(5)</sup>	40,531	40,702			
ROACE (%) <sup>(3)</sup>	5.3	3.0			
			<b>Our business performance</b> <sup>(1)</sup>	<b>H1 2016</b>	<b>H1 2016</b>
<b>Financial overview</b>			<b>Upstream</b>		
Free cash flow <sup>(4)</sup>	775	(8,023)	Net liquids production (kbb/d)	251	168
Net financial debt <sup>(5)</sup>	11,709	11,934	Net gas production (kboe/d)	454	273
Net financial debt / EBITDA CCS (x times)	2.43	2.68	Net hydrocarbon production (kboe/d)	705	440
Net financial debt / Capital employed (%) <sup>(5)</sup>	28.9	29.3	Average crude oil realization price (\$/bbl)	35.1	51.1
			Average gas realization price (\$/kscf)	2.3	3.1
<b>Shareholder remuneration</b>			EBITDA	933	903
Total shareholder remuneration (€acción)	0.466	0.472	Adjusted Net Income	63	(238)
			Net Investments <sup>(10)</sup>	1,281	9,649
<b>Main stock indicators</b> <sup>(1)</sup>	<b>H1 2016</b>	<b>H1 2015</b>			
Share price at close of financial year (€)	11.41	15.75	<b>Downstream</b>		
Average share price (€)	10.26	16.97	Refining capacity (kbb/d)	998	998
Market capitalisation (at closure)	16,451	21,651	Conversion index in Spain (%)	63	63
			Refining margin indicator in Spain (\$/bbl)	6.4	8.9
<b>Other indicators</b>	<b>H1 2016</b>	<b>H1 2015</b>	Oil product sales (kt)	22,051	22,721
			Petrochemical product sales (kt)	1,477	1,424
<b>People</b>			LPG sales (kt)	1,052	1,230
Total employees <sup>(6)</sup>	26,944	28,277	Gas sales in North America (TBtu)	220.8	164.2
Number of new hires in the year <sup>(7)</sup>	1,308	4,866	EBITDA CCS	1,577	1,743
			Adjusted Net Income	934	973
<b>Safety and environmental management</b>			Net Investments <sup>(10)</sup>	(258)	283
Overall Frequency Rate of accidents <sup>(8)</sup>	0.82	0.77	<b>Gas Natural Fenosa</b>		
Total Frequency Rate of accidents <sup>(9)</sup>	1.74	2.04	Adjusted Net Income	195	227
Reduction of CO <sub>2</sub> emissions (million t)	145	100			

<sup>(1)</sup> Where applicable, expressed in €million.

<sup>(2)</sup> Capital employed from continuing operations.

<sup>(3)</sup> The ROACE for the first half of 2016 is an annualised indicator by a mere extrapolation of this period's figures, and the corresponding to the 2015 financial year corresponds to the annual real data.

<sup>(4)</sup> Corresponds to the cash flow from operating and investment activities. During 2015, this includes the investment in the ROGCI business combination (see Note 4.1 in the interim condensed consolidated financial statements corresponding to the first half of 2016).

<sup>(5)</sup> Comparative figure 2015 corresponds to December 31, 2015.

<sup>(6)</sup> The workforce figure does not include employees of partially-owned companies in which Repsol does not have management control.

<sup>(7)</sup> The reporting criteria was changed to further align it with the figure recorded on the 2015 consolidated management report. It only contemplates fixed and temporary employees with no prior working relationship with the company as new hires. The % of fixed new hires in the year for the first half of 2016 and 2015 amounts 44% and 72%, respectively.

<sup>(8)</sup> Overall Lost Time Injury Frequency Rate (LTIFR) with sick leave: number of lost time and fatal accidents recorded over the year, per million work hours.

<sup>(9)</sup> Total Recordable Incident Rate (TRIR): number of time accidents without lost time, with lost time and fatal accidents over the year, per million work hours.

<sup>(10)</sup> Net investments in operating assets divestments.

## 2. MACROECONOMIC OUTLOOK

### RECENT ECONOMIC DEVELOPMENTS

After the global economy grew 3.1% during 2015, the slowest rate since 2009 and an episode of higher instability at the beginning of 2016, the activity in recent months seems to have stabilized to similar rates to those during previous years. In general terms, developed economies have shown a gradual recovery, faced with the need for deleveraging within the current environment of uncertainty and financial instability. This will strongly affect any decision regarding consumption and investment. Emerging economies reflected a clear deceleration trend which was further aggravated by the low price of commodities; this trend has slowed to a halt this year.



Source: IMF (WEO July, 2016) and Economic Research Department of Repsol

By regions, the Eurozone held its moderate growth, based on the gradual improvement of the employment situation as well as the ECB's expansive monetary policies. Activity in Spain is moving forward in a surprisingly positive manner as a result of the favorable evolution of employment. Therefore, the 2016 growth might be slightly over 3.0%, surpassing IMF forecast (WEO July 2016) which placed annual growth at 2.6%. Nonetheless, at the same time some of the favorable tailwinds seem to be dying down, such as the depreciation of the euro or the lower prices of crude oil, which will have a gradual impact on growth.

Meanwhile, US growth has been lower than expected, especially during the Q12016 (1.1% quarter-on-quarter annualised) due to the strong dollar and the decline in investing in the energy sector. Although high-frequency data point to a more favorable outlook, serious risks still persist.

In this context, the US Federal Reserve has continued to postpone the expected normalization of interest rates, while the ECB expanded its monetary stimulus, including corporate bonds in its purchasing program.

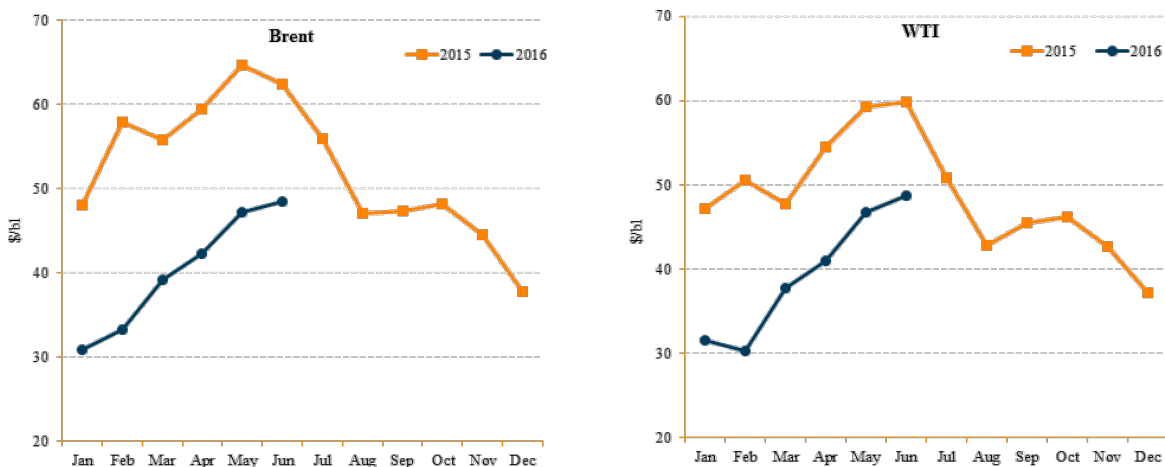
Given the boost from central banks and a recovery in the price of crude oil, most emerging economies have been alleviated its deceleration. The Chinese economy also contributed to this dynamic. The complexity of the rebalance of the Chinese economy and concerns regarding its health led to global uncertainty towards the end of 2015 and beginning of 2016. This exerted a negative influence on commercial flows as well as international financial markets. However, during the first months of the year, Chinese growth stabilized thanks to greater stimuli, most notably infrastructure spending, thereby dissipating the fear of a hard landing in the short term. Other key emerging countries such as Brazil and Russia are currently beginning a recovery after profound recession, while India has provided positive surprises by keeping its growth rates very high.

## DEVELOPMENTS IN THE ENERGY SECTOR

### Crude – Brent

During the first half of 2016, crude oil prices (Brent and WTI) continued on a generally upward swing, although not without volatility. After minimum levels in January, when the Brent market dropped to a low not seen for 13 years (on January 20) of \$26.39/bbl, the price of European crude oil reached \$51.33/bbl at the beginning of June. The first half average price was around \$39.8/bbl, representing a 31% drop in the price vs. the same period of 2015.

Evolution of Brent and WTI prices per barrel

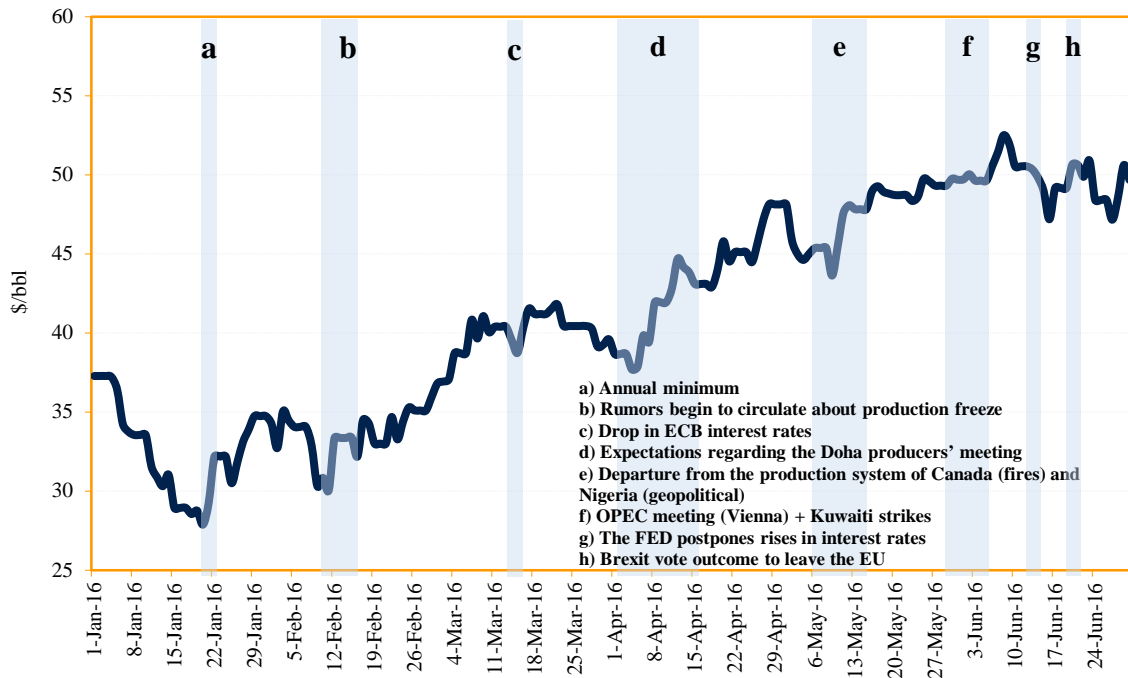


Source: Bloomberg and Economic Research Department of Repsol.

Among the factors supporting this trend are the following: drop in Non-OPEC production, especially in non-conventional shale areas in the US; solid global demand growth still underpinned by low prices; and diverse geopolitical matters (Nigeria, Kuwait, and Kurdistan Iraq) as well as natural disasters (Canada), leading to a significant volume out of the system. In summary, market feeling has shifted since the beginning of the year, due to the registered rebalancing of the market in the second quarter of 2016. According to the International Energy Agency June report, during the second half of the year the level of supply and demand and global offer should even off.

Factors which have introduced volatility in the market include: OPEC inaction on the market glut, most notably after meetings held in Doha (April 17) and Vienna (June 2) where no consensus was reached to freeze the supply level; the uncertainty regarding possible rises in interest rates by the FED, and the increasingly worrying situation in the UK with regard to the Brexit referendum on June the 23th that resulted in a small majority in favor of leaving the EU. All the above factors had sporadic downward effects, which were not sufficient to reverse the rising price trend.

**Chief factors affecting the listed price of a barrel of Brent crude oil during the first half of 2016**



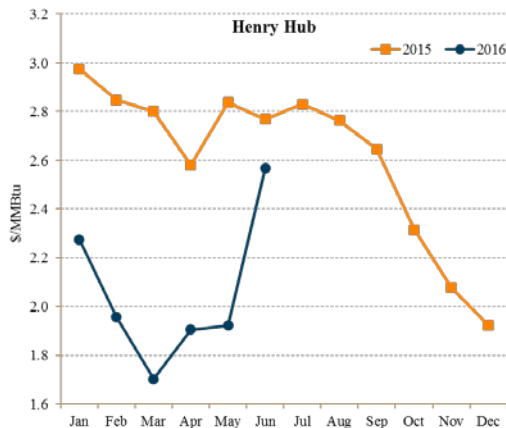
Source: Bloomberg and Economic Research Department of Repsol.

*Gas Natural – Henry Hub (HH)*

As regards US natural gas, the HH price was \$2.0/MBtu (until June 28, 2016 during the first half of 2016, which is 27% below the average price recorded during the same period the prior year (\$2.8/MBtu).

During the first months of the year, the price reflected a downward trend due to the persistence of a lax balance characterized by high production levels and inventories. However, during May and June, prices spiked upward due to indications of a possible sustained drop in production as well as provisions for temperature increases.

**Henry Hub Evolution**



Source: Bloomberg and Economic Research Department of Repsol.

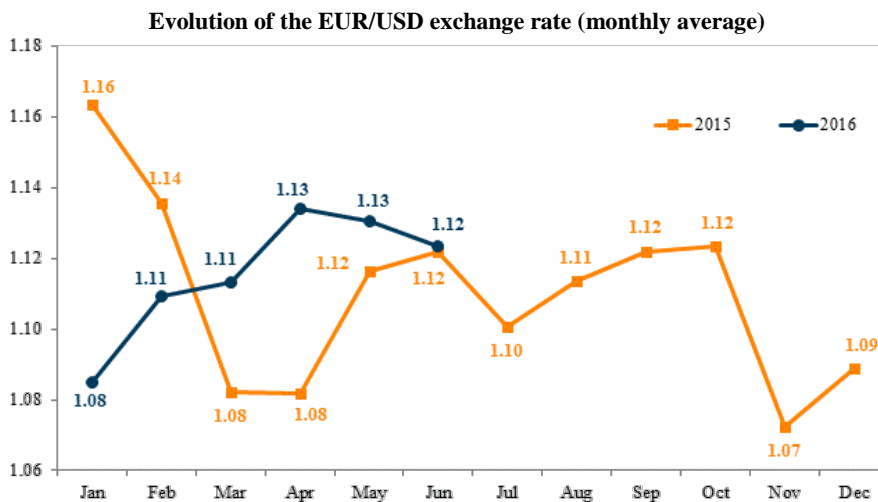


## EVOLUTION OF EXCHANGE RATE

So far this year, the foreign exchange market has been guided by the uncertainty regarding the deceleration momentum of Chinese growth as well as other developed economies, vulnerabilities of emerging economies, and above all the pace of US interest rates normalization. All the above in a context of expansive monetary policies on the ECB and Bank of Japan (BOJ) set as a result of low inflation expectations mainly arising from the drop in the price of oil.

The beginning of the year was very unstable for international financial markets, which were focused on safe assets. China attempted to gain ground by depreciating the Renminbi, while at the same time the price of crude oil dropped to levels close to \$35/bl leading to a strong depreciation of emerging currencies. The euro and the yen remained stable within this uncertain context, and the US\$ strengthened its position.

The risk in emerging countries decreased after the markets' assimilation of a decline in global growth forecast and China's application of fiscal and monetary stimuli. Additionally, less optimistic data from the US labor market assuaged fears of a new rise in interest rates by the FED, which favored an appreciation of emerging currencies. Japan's clear position in the G-20 against competitive devaluation solidified confidence in the Yen, which resulted in an important revaluation. Despite the fact that the ECB extended asset purchasing programs, the euro remained in the average range of around 1.11 vs. the dollar, guided by the normalization rate of FED interest rates.



Source: Bloomberg and Economic Research Department of Repsol.

At the end of the first half of the year, Brexit agitated the foreign exchange market. While the sterling pound went into a downward spiral, the euro drop but resisting the depreciative pressure, while the dollar and the yen once again act as safe haven assets. Finally, the Renminbi also tended to depreciate starting in April, and then began to accelerate its depreciation as a result of the Brexit referendum results.

### 3. RESULTS, FINANCIAL OVERVIEW AND OUR SHAREHOLDER REMUNERATION

#### 3.1 RESULTS AND CASH FLOW

€ Million	H1 2016	H1 2015	Variation
Upstream	63	(238)	126%
Downstream	934	973	(4%)
Gas Natural Fenosa	195	227	(14%)
Corporation and adjustments	(275)	278	(199%)
<b>Adjusted Net Income</b>	<b>917</b>	<b>1,240</b>	<b>(26%)</b>
Inventory effect	2	(57)	104%
Special items	(280)	(130)	(115%)
<b>Net Income</b>	<b>639</b>	<b>1,053</b>	<b>(39%)</b>

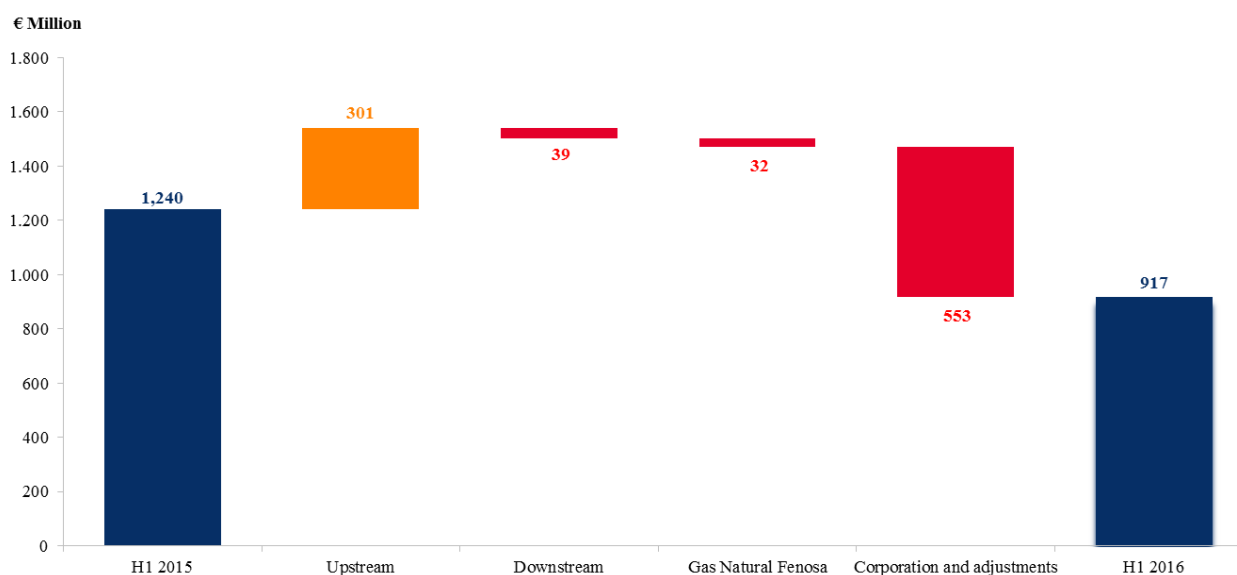
NOTE: For further information on the business segments results, see Note 3 "Segment Results" of the interim condensed consolidated financial statements for the first half of 2016.

#### *Adjusted Net Income*

Compared to the same period the prior year, results for the first half of 2016 were produced in a macroeconomic environment marked by low crude oil and gas prices (a 31% decrease in Brent prices, a 28% decrease in Henry Hub prices, and a 58% decrease in Algonquin prices), lower Refining margins, and the favourable international context in the Chemical business.

**Adjusted Net Income** for the first half of 2016 amounted to €917 million. The EBITDA CCS totalled €2,409 million, which is in line with the previous year, while net investments (€1,038 million) dropped 90% compared to 2015 (when ROGCI was acquired).

**Adjusted Net Income Variation for H1 2016 vs H1 2015**



#### *Upstream*

In **Upstream**, realization crude oil and gas prices decreased by 31% and 26%, respectively, as a result of the decline in international benchmark prices, which fell to their lowest levels in January (Brent prices in \$26.39 bbl), to progressively improve throughout the period (Brent prices in \$50 bbl). Despite this

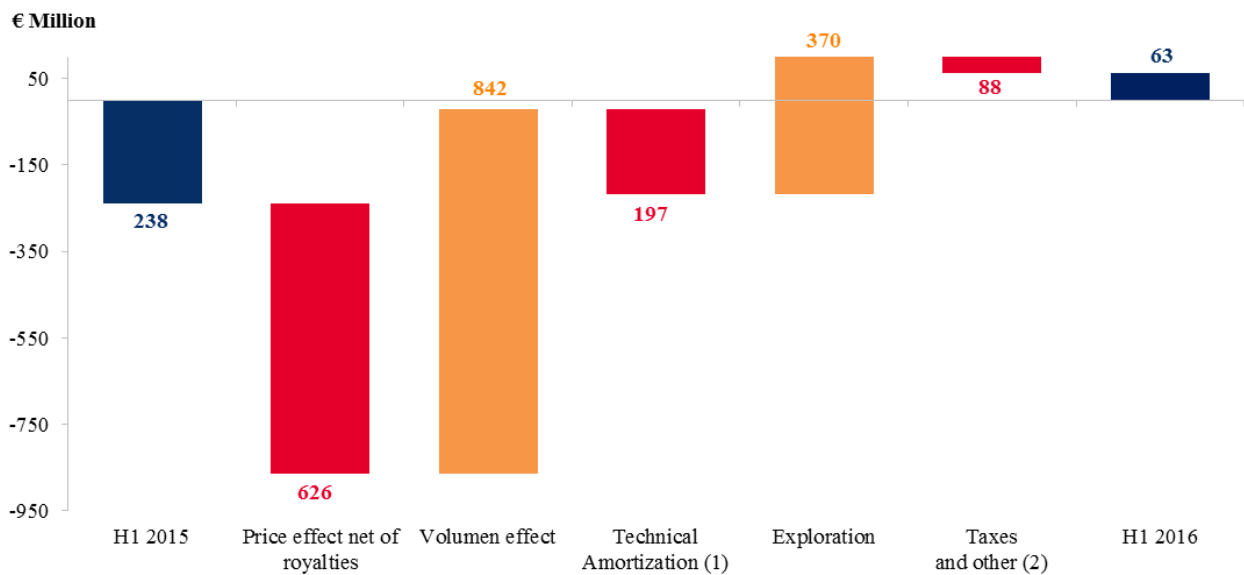
difficult environment, the Upstream's adjusted net income has improved significantly. For the comparison of 2015 and 2016 results, it should be taken into consideration that after the acquisition of ROGCI its businesses have been consolidated since May 8, 2015.

Production has increased by 60%, reaching an average of 705 Kboe/d, mainly due to the contribution of the ROGCI assets (228.1 Kboe/d until May 8, 2016), and the start-up of production at Cardón IV (Venezuela) in the third quarter of 2015 and the new wells located in Sapinhoá Norte (Brazil), offsetting the decreased production in Trinidad and Tobago due to stoppages and maintenance work. Moreover, regarding the exploratory activity, the conclusion of six exploratory drills and five appraisal drills during the period stands out. Four had positive results, four negative, and three were under evaluation.

During the period, the negative impacts of low crude and gas prices have been more than offset by the important reduction in expenses. It should be noted the reduction in operating costs due to improvements in the efficiency of operations, a drop in exploration costs due to fewer failed drills, and the capitalization of Geology and Geophysics (G&G) <sup>1</sup> costs, as well as lower tax costs due to the effect of the appreciation of the Brazilian and Colombian currencies.

EBIDTA in Upstream amounted to €33 million, which is 3% higher than 2015. Net investments for the first half of 2016, which already include ROGCI's assets as well as the capitalization of G&G costs, dropped 87% compared to 2015 (including ROGCI acquisition).

#### Adjusted Net Income Variation from Upstream for H1 2016 vs H1 2015



(1) Higher amortizations due to the inclusion of ROGCI which was partially offset by lower amortizations arising from impairment of the value of certain assets in 2015.

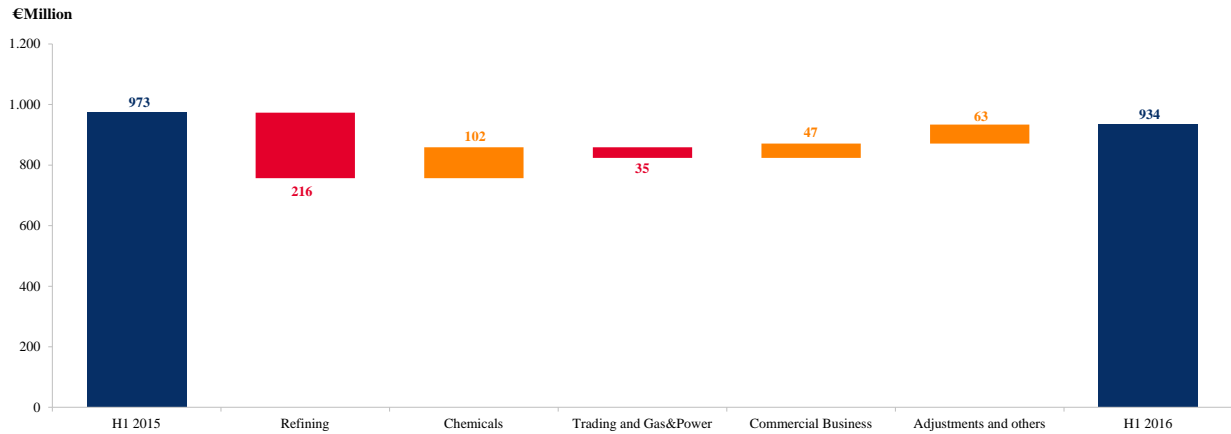
(2) Taxes and other net costs (mainly by the inclusion of ROGCI).

<sup>1</sup> In 2016, within the context of the integration of the ROGCI businesses and based on past experience, the Group capitalised its G&G expenses. This change in the Group's accounting procedures is applied respectively, and is discussed in Note 2.3 "Accounting policies and comparative information" of the interim condensed consolidated financial statements corresponding to the first half of 2016.

### Downstream

**Downstream's** adjusted net income in 2016 amounted to €34 million, which represents a 4% decrease with respect to the same period in 2015.

#### Adjusted Net Income Variation from Downstream for H1 2016 vs H12015



This performance is primarily attributable to:

- In Refining, the negative impact of the reduction of margins (arising from spread weakness of middle distillate and narrower spreads of heavy crude oil) and decreased distillation for planned stops in Cartagena and Tarragona, which was partially offset by lower energy costs and the decrease on Spanish taxes.
- Better margins and growth in sales in the Chemical business, supported by an improved international environment, lower stoppage-related costs, and the positive effect of the reduction in taxes in Spain.
- Lower Trading results and the adverse trend in the Gas&Power business in North America due to lower margins as a result of low gas prices, despite the increased volume sold.
- Results from commercial businesses (Marketing, LPG, Lubricants, etc.) improved with respect to the prior year, with higher income from LPG standing out due to the indemnities arising from losses resulting from the application of the maximum retail prices for regulated LPG container formula.

The EBITDA CCS of Downstream totaled €1,577 million (2015: €1,743 million), while net investments amounted to €258 million, including €87 million related to the sale of the UK offshore wind farm business, the LPG business in Peru and the piped gas assets in Spain.

### Gas Natural Fenosa

Adjusted net income for **Gas Natural Fenosa** during the first half in 2016 was €95 million compared to €227 million for the same period in previous year. This decline is mainly attributable to lower results in the gas commercialization business, due to commodities prices, and in the gas distribution business in Latin American caused by the negative impact of the exchange rate difference arising from the depreciation in local currencies, all partially offset by improved results from the sale of electricity in Spain due to low pool prices.

### Corporation and adjustments

**Corporation and adjustments** in the first half of 2016 amounted to €275 million. The difference can mainly be explained by lower financial results which were favorably affected in 2015 by the exceptional results obtained from the effect of the exchange rate on important positions held in dollars as result of the collection of indemnities from the YPF expropriation. In 2016, the financial result already reflects the integration of ROGCI's finance expenses, partially offset by the gains generated on the repurchase of bonds. Regarding the Corporation's operating expenses in 2016, despite the inclusion of ROGCI (Calgary) corporation expenses, cost reduction due to efficiency gains and the synergies materialized with ROGCI during the period have had a favorable impact.

### Net Income

Adjusted Net Income should include the effects of:

- Positive **Inventory effect** of €2 million by the increase in the price of crude oil and products during the first half of the year.
- **Special items** (after taxes) during the first half of 2016 amounted to €280 million, mainly due to: i) Divestments<sup>1</sup>: capital gains obtained from the sale of the UK offshore wind farm business (€00 million), the LPG business in Peru (€81 million) and piped gas assets in Spain (€71 million), ii) Workforce<sup>2</sup> restructuring charges: headcount reduction costs mainly at the corporate center in Spain, including adjustments made to the management team, and iii) Provisions and others: mainly as a result of the effect of the devaluation in Venezuela, provisions for onerous contracts for the use of drilling platforms and provisions for contingencies.

The breakdown of Special items by corresponding concept and segment is as follows:

€ Million	Upstream		Downstream		Corporation		TOTAL	
	H1 2016	H1 2015	H1 2016	H1 2015	H1 2016	H1 2015	H1 2016	H1 2015
Divestments	(11)	(3)	261	29	-	(15)	250	11
Workforce restructuring	(54)	(7)	(130)	(1)	(162)	(26)	(346)	(34)
Impairment	(8)	(65)	(2)	(11)	-	(7)	(10)	(83)
Provisions and other	(137)	(30)	(21)	12	(16)	(6)	(174)	(24)
<b>TOTAL</b>	<b>(210)</b>	<b>(105)</b>	<b>108</b>	<b>29</b>	<b>(178)</b>	<b>(54)</b>	<b>(280)</b>	<b>(130)</b>

Due to the above, **Net Income** amounted to €39 million compared to €1,053 million for the same period in the previous year.

The main financial performance indicators for the first half of 2016 and 2015 are as follows:

PERFORMANCE INDICATORS	H1 2016	H1 2015
Return on average capital employed (ROACE) (%)	5.3	3.0
Earnings per Share (€share)	0.44	0.73

<sup>1</sup> For further information please see 4.3 heading in the interim condensed consolidated financial statements corresponding to the first half of 2016.

<sup>2</sup> Refer to 4.4 heading in this document.

### Cash Flow

The following is a reflection of the performance of cash flows during the period, indicating the company capacity for generating cash flow within the current complex scenario, thanks to the quality of the Company's asset as well as reductions in cost and investments.

	<b>H1 2016</b>	<b>H1 2015</b>
<b>I. CASH FLOWS FROM OPERATING ACTIVITIES</b>		
<b>EBITDA CCS</b>	<b>2,409</b>	<b>2,471</b>
Changes in working capital	(723)	(652)
Dividends received	303	119
Income tax received / (paid)	119	(222)
Other proceeds from / (payments for) operating activities	(336)	(239)
	<b>1,772</b>	<b>1,477</b>
<b>II. CASH FLOWS FROM OPERATING ACTIVITIES</b>		
	<b>(997)</b>	<b>(9,500)</b>
<b>FREE CASH FLOW (I. + II.)</b>	<b>775</b>	<b>(8,023)</b>
Payments for dividends and payments on other equity instruments:	(271)	(245)
Net Interest and leasing	(462)	(393)
Financial operations <sup>(1)</sup>	(366)	6,149
<b>NET INCREASE / (DECREASE) IN CASH AND CASH EQUIVALENTS</b>	<b>(324)</b>	<b>(2,512)</b>
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD</b>	<b>2,769</b>	<b>5,027</b>
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>	<b>2,445</b>	<b>2,515</b>

<sup>(1)</sup> Includes payments for dividends and payments on other equity instruments, interest payments, other proceeds from/ (payments for) financing activities, proceeds from / (payments for) equity instruments , proceeds from / (payments for) financial liabilities and the exchange rate fluctuations effect.

## 3.2 FINANCIAL OVERVIEW

During the first half of 2016, in line with the commitment of strengthening the Group's financial structure after the acquisition of ROGCI, different measures have been launched to maintain its credit rating.

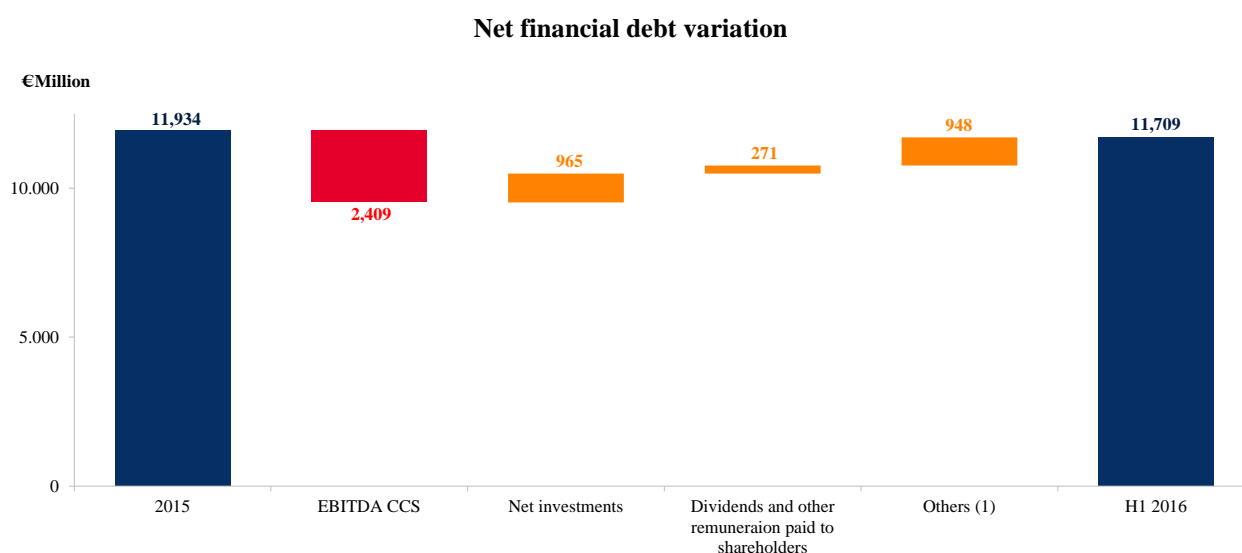
Improvements in cash flows generated by business during the period made it possible to cover net investment needs, the payment of interest and dividends, and the reduction of the Group's net debt.

In line with the financial prudence policy, as well as the commitment to keep a high level of liquidity, the liquid resources held by the Group at the end of the six-month period in the form of cash and available lines of credit widely surpassed short-term debt maturities.

### *Leverage*

Net financial debt at the end of the first half of the year amounted to €1,709 million, which is €225 million less than in December 2015.

The evolution of adjusted net financial debt in the first half of 2016 is described below:



<sup>(1)</sup> Mainly includes income tax payments, net interests, changes in working capital, dividends received and provisions applied.

### *Main financing operations*

- On January 2016, Repsol International Finance, B.V. issued €100 million of 15-year 5.375% bonds; the issue was placed privately and was priced at 96.298% of par.
- During the first half of 2016 ROGCI has repurchased bond issues due 2019, 2021, 2027, 2035, 2037, 2038 and 2042 with a total face value of \$631 million.
- During the period Repsol, S.A. has received financing from several banks with maturities between 2017 and 2020. At June 30, 2016 the outstanding debt amounted to €1,520 million.
- In early July 2016, Repsol International Finance B.V. issued two private placement bonds. One matures in 2 years in the amount of €600 million, with a variable Euribor 3-month coupon + 70 bps, and the other at 3 years at €100 million and a 0.125% fixed annual coupon.

### Maturity dates for gross debt

The maturity date profile of the existing financial debt at June 30, 2016, is as follows:

Gross Debt <sup>(1)(2)</sup> (€Million)	Total Amount	Maturity of Bonds <sup>(1)</sup> issued at June 30, 2016				
		Year	Currency	Nominal	%	Maturity date
Maturity in 2016	2,064	2017	€	886 <sup>(3)</sup>	4.75	feb-17
			£	250 <sup>(4)</sup>	6.63	dec-17
		2018	€	750 <sup>(3)</sup>	4.38	feb-18
Maturity in 2017	2,602	2019	€	1,000 <sup>(3)</sup>	4.88	feb-19
			\$	364 <sup>(4)</sup>	7.75	jun-19
Maturity in 2018	1,947	2020	€	1,200 <sup>(3)</sup>	2.63	may-20
			€	600 <sup>(3)</sup>	2.13	dec-20
Maturity in 2019	1,675		\$	241 <sup>(4)</sup>	3.75	feb-21
			€	1,000 <sup>(3)</sup>	3.63	oct-21
Maturity in 2020	2,166		€	500 <sup>(3)</sup>	2.25	dec-26
			\$	55 <sup>(4)</sup>	7.25	oct-27
Maturity in 2021 and subsequent	3,810	2021 and subsequent	€	100 <sup>(3)</sup>	5.38	jan-31
			\$	90 <sup>(4)</sup>	5.75	may-35
<b>TOTAL</b>	<b>14,264</b>		\$	131 <sup>(4)</sup>	5.85	feb-37
			\$	119 <sup>(4)</sup>	6.25	feb-38
			\$	97 <sup>(4)</sup>	5.50	may-42
			€	1,000 <sup>(5)</sup>	4.50	mar-75

<sup>(1)</sup> Does not include €1,000 million of perpetual subordinated bond issued by Repsol International Finance, B.V (RIF) on March 25, 2015.

<sup>(2)</sup> Includes exchange rate derivatives and interest.

<sup>(3)</sup> Notes issued by RIF by under its "Euro 10,000,000,000 Guaranteed Euro Medium Term Note Programme" (EMTN) which is guaranteed by Repsol S.A.

<sup>(4)</sup> Issuances through ROGCI, within the scope of the "Universal Shelf Prospectus" programs and the medium term bond issuance program "Medium-Term Note Shelf Prospectus" in the United States and Canada, respectively.

<sup>(5)</sup> Subordinated bond, maturing in 60 years, issued by RIF and guaranteed by Repsol S.A. Coupon scheduled for reset on March 25, 2025 and March 25, 2045.

Moreover, Repsol International Finance, B.V. ("RIF"), holds a Euro Commercial Paper (ECP) Programme, arranged on May 16, 2013 and guaranteed by Repsol, S.A. with a limit up to €2,000 million. As a result of emissions and cancellations, the active balance at June 30, 2016 was €1,011 million.

### Financial prudence

The Group's liquidity during 2016 thus far, including undrawn credit facility commitments was over €6,659 million, which is sufficient to cover 1.8 times the maturities of current debt. Repsol held undrawn credit facilities amounting to €4,214 and €6,360 million during the first half of 2016 and December 31, 2015, respectively.

Net debt and net debt to capital employed ratio, in which capital employed refers to net debt plus total equity, provide a true and fair view of the volume of necessary borrowings and their relative weighting in the funding of capital employed in transactions.

INDICATORS OF FINANCE SITUATION	06/30/2016	06/30/2015
Net financial debt (€Million)	11,709	11,934
Net financial debt / EBITDA CCS (x times) <sup>(1)</sup>	2.43	2.68
Net financial debt / Capital employed (%)	28.9	29.3
Liquidity/ Short-term gross debt (x times)	1.8	2.15

<sup>(1)</sup> This indicator is compared with the total amount of the first half of 2015.



### Credit rating

Repsol, S.A. and ROGCI's current credit rating is as follows:

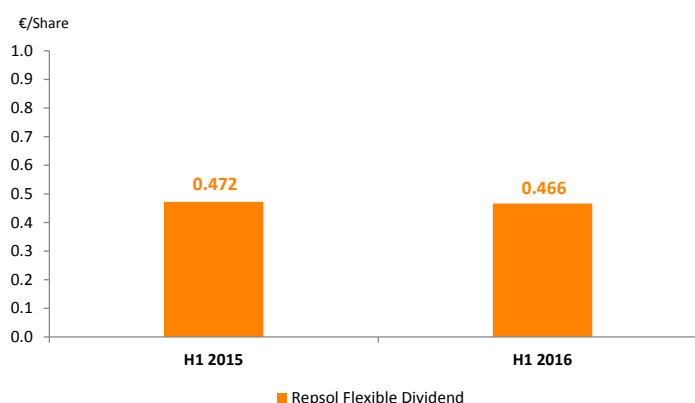
TERM	STANDARD & POOR'S		MOODY'S		FITCH RATINGS	
	Repsol, S.A.	Repsol Oil & Gas Canada Inc.	Repsol, S.A.	Repsol Oil & Gas Canada Inc.	Repsol, S.A.	Repsol Oil & Gas Canada Inc.
Long-term	BBB-	BBB-	Baa2	Baa3	BBB	BBB-
Short-term	A-3	A-3	P-2	P-3	F-3	F-3
Outlook	Negative outlook	Negative outlook	Negative outlook	Negative outlook	Negative outlook	Negative outlook
Latest data review	03/21/2016	03/21/2016	03/21/2016	03/21/2016	03/23/2016	03/23/2016

### Treasury shares and own equity investments

During the first six months of 2016, transactions with relevant treasury shares and own equity investments took place. For further information on treasury shares and equity instruments, please see Note 4.6.2 heading "Treasury shares and own equity investments" of the interim condensed consolidated financial statements for the first half of 2016.

## 3.3 SHAREHOLDER REMUNERATION

Shareholder remuneration in the first half of 2016 and 2015, including cash dividend and script dividend under the "Repsol flexible dividend" program, is as follows:



Remuneration indicated in the above table for the first half of 2015 includes the sum of the irrevocable purchase commitment of free of charge allocation rights assumed by Repsol in its paid-up capital increase executed in January 2015 (€0.472 per right), under the remuneration scheme called "Repsol flexible dividend". Consequently, Repsol has paid a total gross amount of €245 million to its shareholders in the first half of 2015, and has delivered 24,421,828 new shares for an equivalent amount of €92 million, to those who opted to receive new-issue company shares.

Remuneration during the first half of 2016 includes the sum of the irrevocable purchase commitment of free of charge allocation rights assumed by Repsol in its paid-up capital increase executed in January 2015 (€0.466 per right), under the remuneration scheme called "Repsol flexible dividend". Consequently, Repsol has paid a total gross amount of €228 million to its shareholders in the first half of 2016, and has delivered 41,422,248 new shares for an equivalent amount of €25 million, to those who opted to receive new-issued company shares.

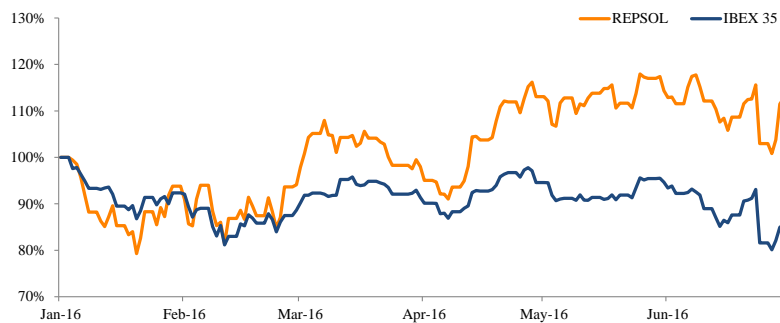
Likewise, in July 2016, under the “*Repsol Flexible Dividend*” program, and to replace what would have been the dividend on account for 2015, Repsol made a cash of € 149 million (€0.292 per right) to those shareholders who chose to sell their free of charge allocation rights to the Company, and distributed 23,860,793 shares, for an equivalent amount of €272 million, to those who chose to receive new shares in the Company.

For additional information on the total remuneration received by shareholders, the aforementioned paid-up capital increases issued under the “*Repsol flexible dividend*” scheme, see Note 4.6.1 heading “*Issued share capital*” of the interim condensed consolidated financial statements for the first half of 2016.

### *Performance of our shares*

Ibex-35 performance during the first half of 2016 was generally negative as for most of the leading European markets. Although at the beginning of the year stock markets received a push from the announcement and subsequent implementation of the European Central Bank's "Quantitative Easing" scheme, macroeconomic uncertainties mainly caused by the Brexit referendum vote, and to a lesser degree, Spain's current political state of affairs inverted this positive trend during the rest of year. The Ibex closed the period with a 14% reduction after a loss of over 870 points in June.

**Repsol's share price performance relative to the Ibex-35**

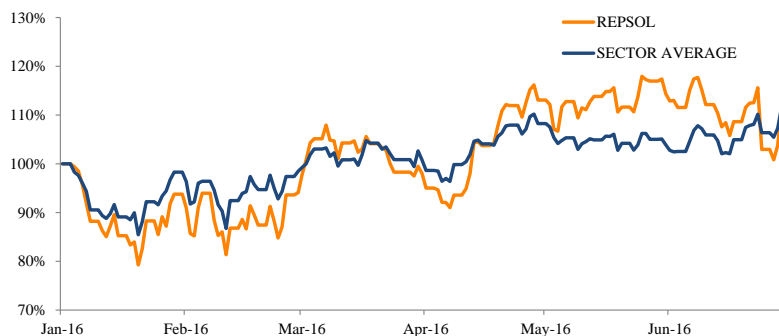


Source: Bloomberg.

Repsol shares closed the first half of 2016 with a 12.7% increase. Both Repsol and the rest of the European oil sector benefited during this period from the gradual recovery of oil prices from minimums reached in January this year.

Macroeconomic uncertainty unleashed by Brexit also penalized the sector at the end of June which was reflected in the generalized performance of stock exchanges. Nonetheless, during the first weeks of July, Repsol shares had totally recovered after their drop caused by the UK referendum outcome. Repsol is still a leader in its sector as well as within Ibex-35 as regards shareholder remuneration.

**Repsol's share price performance relative to Peer group**



Source: Sector average formed by BP, ENI, Total, RDS(B), OMV, Galp and Statoil.

The main stock-exchange indicators of the Group during the first half of 2016 and 2015 are detailed below:

<b>MAIN STOCK EXCHANGE INDICATORS</b>	<b>H1 2016</b>	<b>H1 2015</b>
Shareholder remuneration (€/share) <sup>(1)</sup>	0.466	0.472
Share Price at close of financial year <sup>(2)</sup> (euros)	11.41	15.75
Average share price (euros)	10.26	16.97
Maximum Price for the period (euros)	11.94	18.54
Minimum Price for the period (euros)	8.02	14.37
Outstanding shares at the end of the period (€Million)	1,442	1,375
Market capitalization at the end of the period (€Million) <sup>(3)</sup>	16,451	21,651
Book value per share (euros) <sup>(4)</sup>	19.84	22.56

<sup>(1)</sup> The shareholder remuneration policy for the each period includes dividends paid and the fixed price set for Repsol for the freely-assigned acquisition rights included in the “Repsol Flexible Dividend” program.

<sup>(2)</sup> Corresponds to the quoted year-end price per share in the Continuous Market of the Spanish Stock Exchanges.

<sup>(3)</sup> Corresponds to the trading price per share at closing multiplied by the number of outstanding shares.

<sup>(4)</sup> Corresponds to the Net Equity attributable to the parent / number of shares outstanding at closing.

## 4. PERFORMANCE OF OUR BUSINESS AREAS

### 4.1 UPSTREAM

<b>Figures, indicators and investments</b>			<b>Results</b>			
	<b>H1 2016</b>	<b>H1 2015</b>	<b>€ Million</b>	<b>H1 2016</b>	<b>H1 2015</b>	<b>Variation</b>
Net production of liquids (kbbbl/d)	251	168	Operating income	(79)	(182)	57%
Net production of gas (kboe/d)	454	273	Income tax	137	(56)	345%
Total Net production of hydrocarbons (kboe/d)	705	440	Income from equity affiliates and non-controlling interests	5	-	-
Average crude realization price (\$/bbl.)	35.1	51.1	<b>Adjusted Net Income<sup>(1)</sup></b>	<b>63</b>	<b>(238)</b>	<b>126%</b>
Average gas realization price (\$/Thousand Scf)	2.3	3.1	Special items	(210)	(105)	(100%)
Bonus, dry wells and general and administration expenses <sup>(3)</sup>	65	422	<b>Net Income</b>	<b>(147)</b>	<b>(343)</b>	<b>57%</b>
<b>Net investments<sup>(1)(2)</sup></b>	<b>1,281</b>	<b>9,649</b>	Effective Tax Rate (%)	(173)	31	(204)
			<b>EBITDA</b>	<b>933</b>	<b>903</b>	<b>3%</b>
			<sup>(1)</sup> Breakdown of Net Adjusted Income by geographic area:			
			<b>Geographical Area</b>	<b>H1 2016</b>	<b>H1 2015</b>	<b>Variation</b>
			Europe, Africa and Brazil	58	(55)	205%
			South America	172	87	98%
			North America	(114)	(19)	(500%)
			Asia and Russia	19	29	(34%)
			Exploration and other	(72)	(280)	74%
			<b>Adjusted Net Income</b>	<b>63</b>	<b>(238)</b>	<b>126%</b>

<sup>(1)</sup> Gross investments less divestments during the period.

<sup>(2)</sup> Gross investment during the period are broken down as follows:

- Investment in development (73% of total investments): Trinidad and Tobago (21%), US (17%), UK (11%), Brazil (11%), Algeria (10%), Venezuela (9%), Bolivia (5%) and Canada (5%).

- Investment in exploration (21% of total investments): US (23%), Brazil (12%), Angola (11%), Indonesia (9%), Colombia (6%), Bulgaria (6%), Australia (4%), Norway (4%), and Algeria (3%).

<sup>(3)</sup> Only includes direct costs for oil and gas exploration projects.

#### Main events of the first half of 2016

- **Exploratory campaign:** during the first half of 2016, drilling concluded in six exploratory wells and five appraisal wells, four with positive results (all of them appraisal), four with negative results (all of them exploratory) and three (two exploratory and one appraisal), which at June 30 were still under evaluation. At the end of the first half of 2016, there were three ongoing exploration wells and one appraisal. Additionally, two drills in Indonesia and one in Rumania were suspended.
- During March of 2016, **Armstrong Oil and Gas** become the **company operator in the US Alaskan North Slope**.
- In March, the **Bolivian Margarita-Huacaya field** reached an output of 20 million of daily cubic meters (Mm<sup>3</sup>/d) of gas, which is a **new maximum production record**.
- At the Margarita-Huacaya field in Bolivia, **well MGR-7ST began producing** from the H1B reservoir during the month of March, thanks to the early start-up of the recollection duct.
- The Colombian authorities (ANH) granted approval to **the temporary suspension of production in the CPO-9 field** for a six-month period, due to the prices of crude oil. The drilling plan was moved up to take place in 2017.
- During the first quarter of the year, two exploratory drills finished in Malaysia (**Zoisit-1 and Baiduri-1**) with **negative outcomes**.
- On April 6 in Malaysia, Repsol signed a **10-year extension for the PM3 CAA PSC production block (Production Sharing Contract)** with Petroliam Nasional Berhad (Petronas) and Vietnam Oil and Gas Group (PetroVietnam). After signing the extension, Repsol and Petronas will each own 35%, and PetroVietnam the

remaining 30%. Repsol will continue as the operator of the PM3 CAA block until the extension is terminated in 2027.

- On April 14, 2016, it was announced that the **Perla 9 offshore** well (located in the Cardón block in Venezuela) **began production**. Repsol and Eni hold 50% each in the Cardón IV block.
- On April 18, 2016, Repsol Sinopec Brasil announced that the **Gavea A1 evaluation/appraisal** well drilled in the ultra-deep waters of the BM-C-33 **block located in the Brazil Campos basin found a 175-meter hydrocarbons column**. Repsol Sinopec Brasil owns 35% of the BM-C-33 block with Statoil (35%) and Petrobras (30%). The well reached a total depth of 6,230 meters, satisfactorily passing production tests, and producing around 16Mscf/d and 4,000bbl/d. The consortium also drilled and carried out tests on the Seat-2, PdA-A1, and PdA-A2 evaluation wells in recent years. The potential resources for the three discoveries are currently under analysis.
- In April, once the **transportation capacity** of the 1,230 million daily cubic feet **TGP pipe** was increased to 1,540 Mscfd, gas delivery **from Block 57 to Block 56 was increased** from 85 Mscfd to 160 Mscfd. Block 56 and 57 gas is solely used for export.
- During April, **operation of the US Eagle Ford productive asset** in the Eastern area **was ceded to Statoil**, which will now operate all the asset it. This cession falls under the framework agreement with Statoil which was announced in December of 2015, by virtue of which Repsol cedes 13% of its share in Eagle Ford in exchange for 15% of Norway's Gudrun oil field. Repsol now owns 37% of the Eagle Ford project.
- During the month of May, the Cidade de Caraguatatuba FPSO (Floating Production Storage and Offloading) which will be used for starting up production at the Lapa field at BM-S-9 block in the deep waters of Brazil reached the country. Early production at the Lapa field should begin during the final quarter of 2016.
- On June 1, 2016 in Norway, **operations at the Varg-operated field shut down**. It is expected that the Teekay-operated FPSO for the Varg production will abandon the field in August. These works all fall under the first phase of the Varg decommissioning project.
- In the UK, under the **MonArb production area re-development project**, in June of 2016, **the project had progressed 77%** which is in line with initial plans. It is expected that an increase in production from this project will start in 2017.
- During June, **the Strickland-2 exploratory well** finished in Papua New Guinea **with a negative outcome**.
- During the second quarter of the year, drilling took place and was completed in another production field, Perla 10, in the Cardón IV well. **The Perla 10 well has a production potential of over 100 Mscfd**.
- During the second quarter of 2016, within the Development Program in Block 57 in Peru, to start production at the Sagari discovery, the Sagari 8D development well finished, with work ongoing on the Sagari 7D development well. The campaign should conclude in 2017, with the completion of the Sagari 4X well (the discovery well)
- During the second quarter of the year, drilling at WI-7 development well in the Senzhi production asset in the deep waters of the Gulf of Mexican finished. This is an injection well for **increasing production levels** in the Southern Area of the field.
- During the second quarter of the year, Repsol provided the necessary documentation to the US government authorities to pave the way for its **relinquishment of all the exploratory blocks** in which Repsol participated in the **Alaskan Chuckchi Sea**.
- During the first half of the year, with the effective date of January 1, 2016, **the project for divesting 10% of the 148 license, Campo Brynhild, in Norway**, in favor of CapeOmega was completed.
- During the first half of 2016, **in the exploratory Sud Estblock in Illizi (Algeria)** the exploratory and appraisal drill campaign finished, **with the TAOR-1 exploratory well (under evaluation) as well as the TIHS 2 (positive) evaluation/appraisal well**.
- **Four new development wells in the Duvernay project** in Canada were drilled during the first half of 2016.

## 4.2 DOWNSTREAM

Figures and indicators			Results and investments			
	H1 2016	H1 2015	€ Million	H1 2016	H1 2015	Variation
<b>Refining capacity (kbbbl/d)</b>	<b>998</b>	<b>998</b>	Operating income	1,229	1,373	(10%)
Europe (including stake at ASESAs)	896	896	Income tax	(281)	(372)	24%
Rest of the world	102	102	Income from equity affiliates and non-controlling interests	(14)	(28)	50%
<b>Conversion index (%)</b>	<b>59</b>	<b>59</b>	<b>Adjusted Net Income <sup>(1)</sup></b>	<b>934</b>	<b>973</b>	<b>(4%)</b>
<b>Crude processed (million t)</b>	<b>19.8</b>	<b>20.9</b>	Inventory effect	2	(57)	104%
Europe	18.1	19.1	Special items	108	29	272%
Rest of the world	1.7	1.8	<b>Net Income</b>	<b>1,044</b>	<b>945</b>	<b>10%</b>
<b>Refining margin indicator (\$/Bbl)</b>			<b>EBITDA CCS</b>	<b>1,577</b>	<b>1,743</b>	<b>(10%)</b>
Spain	6.4	8.9	<b>Net investments <sup>(2)(3)</sup></b>	<b>(258)</b>	<b>283</b>	<b>(191%)</b>
Peru	2.7	5.7	<b>Effective Tax Rate (%)</b>	<b>23</b>	<b>27</b>	<b>(4)</b>
<b>Number of service stations</b>	<b>4,724</b>	<b>4,698</b>	<sup>(1)</sup> Breakdown of Net Adjusted Income by geographic area:			
Europe	4,299	4,312	<b>Geographical Area</b>	<b>H1 2016</b>	<b>H1 2015</b>	<b>Variation</b>
Rest of the world	425	386	Europe	940	951	(1%)
<b>Oil product sales (kt)</b>	<b>22,051</b>	<b>22,721</b>	Rest of the world	(6)	22	(127%)
Europe	19,737	20,488	<b>Adjusted net Income</b>	<b>934</b>	<b>973</b>	<b>(4%)</b>
Rest of the world	2,314	2,233	<sup>(2)</sup> Gross investments less divestments during the period.			
<b>Petrochemical product sales (kt)</b>	<b>1,477</b>	<b>1,424</b>	<sup>(3)</sup> In 2016 and 2015, most of investments for the period were used for operating improvements at facilities and to fuel quality, in addition to safety and the respect of the environment.			
Europe	1,255	1,214				
Rest of the world	222	210				
<b>LPG sales (kt)</b>	<b>1,052</b>	<b>1,230</b>				
Europe	682	726				
Rest of the world	370	504				
<b>LNG sold in North America (Tbtu)</b>	<b>220.8</b>	<b>164.2</b>				
<b>LNG regasified (100%) in Canaport (Tbtu)</b>	<b>11.7</b>	<b>19.1</b>				

### Main events of the first half of 2016

- In January, an agreement was **signed with Pertamina** (the Indonesian national oil company) in Jakarta, to study the technical and economic feasibility of producing extensor oils for the rubber industry at the Pertamina refinery in Cilacap (Indonesia).
- In January, an agreement was reached to sell the piped **gas business located in the North of Spain and Extremadura**, respectively, for €136 million.
- In February, **25% of the Finnish firm Rocsole OY was acquired**, which has a technology making possible to visualize the flow of multiphasic fluids (water, crude oil, air) through the inside of tubes, to therefore be able to foresee signs of dirt while also optimizing maintenance costs, to thereby avoid non-programmed shutdowns as well as the reduction of operating gas. This technology may be applied to Upstream and Downstream assets.
- In February, the sale of the wind **power business located in the UK** was agreed upon with the Chinese group SDIC Power for €238 million. The sale included 100% of the Inch Cape project, the the investment in 25% of the Beatrice project; both are located on the East coast of Scotland.
- In February, the government **approved the first Mobility plan for alternative energy vehicles (MOVEA)** regulating the direct concession of assistance for acquiring alternative energy vehicles. This Plan will provide LPG the impetus to the AutoGas plan, and also support the availability of supply points at our Service Stations, with a total of 362 supply points in Spain and other 57 in Portugal.
- In March, **AENOR granted approval to Repsol's ISO-50001 energy management system**, which will assist in being more efficient while reducing energy consumption and CO<sub>2</sub> emissions.

- In April, an agreement was **signed with Correos** to develop the “Package drop-off stop in 1,500 Repsol service stations”. This is the first stage of the strategic alliance which will permit Repsol to strengthen ties with cutting-edge tendencies linked to electronic commerce.
- In April, the **COPC** (Customer operations performance center) certification was granted to the Repsol Customer Relationship Center, making it the only company in IBEX with that certification.
- In April, a **new line of lubricants called “Repsol Elite”** was launched, in order to gain top performance from the engine with improved efficiency, adapted to the new and more demanding environmental standards.
- During the year, **works in La Pampilla Refinery** have progressed to adapt the plant to the new Peruvian quality standards. In September of this year, low-sulfur diesel production will commence as part of the first phase of the project.
- On April 20, the **sale of the LPG business** was agreed in Peru and Ecuador. On June the LPG business has been sold in Ecuador for \$236 million.
- In April an **agreement was reached with the Korean firm Yujin Sangsafor the distribution of our lubricants** there through its online channel.
- In May, **Repsol Neotech fuels** were selected by “Actualidad Económica” as one of the **best ideas of 2015**.
- In May, Repsol began production of a **new line of metallocene-based polyethylene using Chevron Phillips** technology. This new line will be sold **under the Repsol Resistex brand**, and offers a great deal of value to the final product, thereby confirming Repsol’s approach towards differentiating products.
- This past May 5, the **Catalonian government announced a new decree to encourage public administrations to acquire clean vehicles**: electric, hybrid, LPG, or CNG in order to contribute to improving air quality. Other measures include the modification of tollroad bonuses to cease favoring diesel vehicles.
- On June 3, in Lyon (France), during the main conference of the European Plastics Converters (EuPC) meeting, Repsol was **awarded the prize for being the best high density polyethylene (PEAD) producer** in Europa, and the **global innovation award** for all types of polymers.
- During the first half of the year, taking advantage of programmed shutdowns in the **Cartagena and Tarragona refineries**, the following improvements were made:
  - In Cartagena, the ejectors and condensers of the vacuum column of the Vacuum 5 unit were modified in order to improve their operating conditions, avoid accelerated fouling in the condensation system, while also improving the boiling point between the vacuum diesel and vacuum residue.
  - In Tarragona, the reactors in the Isomax Unit were replaced, with a new hydrogen compressor installed, which in conjunction with the new reactors, will increase the conversion of heavy feeding 10 points (from 75% to 85%), thereby generating more desulfurized products such as gasoline, kerosene, and diesel. Finally, new heat exchangers were installed to improve the energy consumption index (a saving of 720 t fuel gas/year) and reduce emissions (1,910 t CO<sub>2</sub>/year).

### 4.3 GAS NATURAL FENOSA

#### Main events of the first half of 2016

- The Shareholders' Meeting held on May 4, 2016 approved the distribution of income, **consisting of allocating €1,001 million to dividends out of 2015 income, which is 10.1% more than in the previous year**, raising Gas Natural Fenosa's pay-out to 66.6%.
- The Board of Directors approved a **dividend policy for 2016-2018** that entails a pay-out of 70% and at least € per share, including the possibility of a scrip dividend, and bringing the interim dividend, which will amount to approximately 33% of the total dividend, forward to the month of September of the current year.
- On May 11, the new **2016-2020 Strategic Plan** was presented, designed to protect current businesses while establishing bases for growth through investments of over €4,000 million during 2016-2020. The forecasted generation of cash flow will make it possible to finance investments, considering the new dividend policy while maintaining the level of net debt set for the period.

### 4.4 CORPORATION

#### Main events of the first half of 2016

- In March, a number of **changes in the management team** were approved, in order to move forward in handling the challenges and opportunities arising as a result of the Talisman integration as well as sector. This evolution included the exit of 41 directors, including the General Managers Cristina Sanz Mendiola and Pedro Fernández Frial.
- On May 20, 2016, Repsol's Annual General Meeting agreed on the **reappointment of Isidro Fainé Casas** as member of the Board, and ratified the appointment and **reelection of Gonzalo Gortázar Rotaeche** as Board member.
- On June 8, the Commission agreement for monitoring the progress of the VII Framework Agreement was signed between the union representatives and Repsol's management (ratified during July for all companies involved) for **adjusting 871 positions in Spain**. The criteria adopted for designating the affected individuals contemplates their proximity to retirement age, depending on the company and work center to which they belong.
- Other **workforce adjustment processes** took place during the year **outside Spain** (mainly in US and Canada).

*For the main events affecting financial position and with regard to the effect of workforce adjustment processes on results, see Section 3.*



## 5. RISK MANAGEMENT

Repsol's operations and earnings are subject to risks as a result of changes in competitive, economic, political, legal, regulatory, social, industrial, business and financial conditions.

The risks faced by the Group in the second half of 2016 are the same as those detailed in the management report accompanying the condensed consolidated financial statements for the year-end 2015. Therefore, this information should be read in conjunction with the description of the risk factors included in the Consolidated Management Report for the year-end 2015, as well as with Note 16 "*Financial risk and capital management*" of the Consolidated Financial Statements for the said year.

Below are shown, in summary form, the existing risks at December 31, 2015, that remain valid as risks for the second half of 2016, and any other new risk factor identified the first half of the year 2016.

### 5.1. STRATEGIC AND OPERATIONAL RISKS

#### Uncertainty in the current economic context

The latest International Monetary Fund (IMF) forecasts (WEO July 2016) estimate that the global economy in 2016 will grow by 3.1%, the same rate than previous year and lower than the 3.4% seen 2014. They also forecast that the global economy will be slightly higher in 2017, increasing up to 3.4%. Even though advanced economies are experiencing moderate but stable growth, developing and emerging economies are still experiencing the consequences of declining commodity prices, China's economic deceleration and the monetary policy normalisation in the US. These factors may in turn lead to low inflation for a more prolonged period of time.

From a financial perspective, the principal risks to the global economy are China and the divergence in economic policy between the main central banks. Since June 2015, there has been a growing risk for a more acute economic slow-down in China and a possible higher depreciation in its currency, have increased the instability in the global financial markets. On the other hand, whilst the US Federal Reserve (FED) has begun a normalisation of its monetary policy, both the European Central Bank (ECB) and the Bank of Japan (BoJ) continue with an expansive monetary policy. This divergence has allowed the US dollar to appreciate, putting the solvency of many governments and businesses with dollar debt at risk. Furthermore, the euro and the yen having a short term interest rate curve with negative rates affects the margin obtained by banks, who already find themselves in a delicate position because of an increase in non performing loans. Some of these loans are exposure to the energy sector and commodities.

With regard to the geopolitical risks, terrorist attacks, including those in Paris and Belgium, as well as the refugee crisis have had an impact on the markets due to the political instability in Europe. The increase in the political risk threatens the stability of European markets. The UK vote in favor of leaving the EU and the use of the Article 50 of the Treaty of Lisbon imply an end to the irreversibility of participation in the EU. While the British case is very particular, in the short term it creates uncertainty about potential referendums in other countries. In a few years, if there are negative economic effects in the UK, these kind of risks could reduce. Besides, the vote of UK to leave the EU is a relevant volatility factor. In the short term, it creates uncertainty that affects both the stock, commodities and foreign exchange markets. However, the Central Banks reaction it is expected to cushion the negative effects. In the long term, the possibility that other members also leave the EU threatens economic stability and the existence of the Euro. Finally, further details about the rupture process are needed to better assess the impact on the real economy.

So far in 2016, the oversupply of petroleum, which has caused the decrease in crude oil prices since the second half of 2014, is being reduced and close to disappear as a consequence of both: the effect of low prices on investment and the recent increase of unplanned outages (Nigeria, Canada, etc.), that have

accelerated the rebalance of the market. The International Energy Agency forecasts a supply/demand balance in equilibrium during the second half of 2016. Low oil prices have had a positive effect on demand in 2015 that persists in 2016, and a negative effect on supply, especially in non-OPEC (Organization of Petroleum Exporting Countries) countries where production has been reduced dramatically, even not considering the effect of the outages. Nevertheless, the petroleum market balance is weak and the high inventory levels act as an important cushion for the market.

Analysts no longer expect an OPEC crude oil production cut this year. Therefore, the adjustment is coming from both sustained demand growth and significant Non-OPEC supply decline. The principal negative risk factors for market price adjustment are: (i) a slower than expected demand growth, especially in the developing and emerging economies; (ii) a Non-OPEC supply more elastic to low prices than expected; and (iii) a higher recovery than expected in Iran and Libya production, or a new upturn in Iraqi supply. On the supply side, the resume of the outages is not a major risk given the bigger effect of the production declines as a consequence of divestment in Non-OPEC and the geopolitical uncertainties in the OPEC region.

### **Fluctuations in international prices of crude oil and reference products and in demand, due to factors beyond Repsol's control**

World oil prices have experienced significant changes over the last 10 years, in addition to being subject to international supply and demand fluctuations, over which Repsol has no control.

International product prices are influenced by the price of oil and the demand for said products. Also, international prices of crude oil and products affect the refining margin. International oil prices and demand for crude oil may fluctuate significantly during economic cycles as well.

Reductions in oil prices negatively affect Repsol's profitability, the value of its assets and its plans for capital investment may be changed to the delay, renegotiation or cancellation of projects. Likewise, any significant drop in capital investment could have an adverse effect on Repsol's ability to replace its crude oil reserves.

### **Regulatory and tax framework of Repsol's operations**

The oil industry is subject to extensive regulation and intervention by governments in *Upstream* activities in matters such as the award of exploration and production permits, the imposition of specific drilling and exploration obligations, restrictions on production, price controls, divestments of assets, foreign currency controls, and the nationalisation, expropriation or cancellation of contractual rights.

Likewise, in *Downstream* activities, oil refining and petrochemical activities, in general, are subject to extensive government regulation and intervention in matters such as safety and environmental controls.

Finally, the energy sector, and particularly the oil industry, is subject to a singular fiscal framework. In *Upstream* activities it is common to see specific taxes on profit and production, and with respect to *Downstream* activities, the existence of taxes on product consumption is also common.

### **Repsol is subject to extensive environmental and safety legislations and risks**

Repsol is subject to extensive environmental and safety regulations in all the countries in which it operates. These regulations govern, among various matters, those concerning the Group's environmental operations concerning their producers, air emissions and climate change, energy efficiency, extraction technologies, water discharges, remediation of soil and groundwater and the generation, storage, transportation, treatment and final disposal of waste materials and safety.

Specifically, considering the importance of Climate Change, we must stress that one of the risks the Company faces is the exposure to possible changes in the greenhouse gas emissions regulatory framework as a result of our industrial activities and associated to the use of our products.

Finally, after the acquisition of Repsol Oil & Gas Canada Inc., the Company increased its activities in non-conventional oil and gas resources. From an environmental and social perspective, concern for the impact of exploration and operation of this type of resource could lead governments to approve new legislation or demand further requirements for its development, with the related impact on the Company.

### **Operating risks related to exploration and exploitation of hydrocarbons and reliance on the cost-effective acquisition or discovery of, and, thereafter, development of, new oil and gas reserves**

Oil and gas exploration and production activities are subject to particular risks, many of which are beyond Repsol's control. These activities are exposed to the production, equipment and transportation risks, mistakes or inefficiencies in operations management and purchasing and supplier processes, natural hazards and other uncertainties relating to the physical characteristics of oil and gas fields, and their decommissioning. In addition to this, some of the Group's development projects are located in deep waters, mature areas and other difficult environments such as of Gulf of Mexico, Alaska, the North Sea, Brazil and the Amazon rainforest, or in complex oilfields, which could aggravate these risk further.

Moreover, any mean of transport of hydrocarbons implies inherent risks: during road, rail, maritime or pipe transportation, hydrocarbons or other hazardous substances may be spilled.

Additionally, Repsol depends on replacing depleted oil and gas reserves with new proven reserves profitably, in a way that enables subsequent production to be economically viable.

### **Operational risks related to industrial businesses and the sale of oil derivative products**

The Refining, Chemicals, Trading and production, and distribution activities related to oil derivatives and LPG are exposed to the risk inherent to their activities, and are related to the products' specific characteristics (flammability and toxicity), their use (including that of clients), emissions resulting from the production process (such as greenhouse gas effects), as well as the materials and waste used (dangerous waste, as well as water and energy management), which might impact health, safety, and the environment. Repsol's industrial assets (refineries, regassing plants, warehouses, ports, ducts, sea vessels, cistern trucks, service stations, etc.) are exposed to accidents such as fire, explosions, leaks of toxic products, as well as large-scale contaminating environmental incidents. These accidents may cause death and injury to employees, contractors, residents in surrounding areas, as well as damage to the assets and property owned by Repsol as well as third parties.

On the other hand, commercialization and industrial activities take place in a highly competitive environment.

### **Location of reserves**

Part of Repsol's oil and gas reserves are located in countries that are or could be economically or politically unstable.

### **Oil and gas reserves estimation**

To estimate proved and unproved oil and gas reserves, Repsol uses criteria established by "SPE/WPC/AAPG/SPEE *Petroleum Resources Management System*", generally referred to as SPE-PRMS (SPE—*Society of Petroleum Engineers*)".

Measures of reserves are not precise and are subject to revision. The estimated proven and unproven oil and gas reserves are also subject to corrections due to errors in the implementation and/or changes of the standards published.

### **Projects and operations carried out through joint arrangements and associate companies**

Many of the Repsol Group's projects and operations are conducted through joint arrangements and associates. If Repsol does not act as the operator on those projects or operations, its ability to control and influence the performance and management of the operations and to identify and manage risk is limited. Additionally, there is a possibility that if any of Repsol's partners or members of a joint venture or associated company fails to comply with their financial obligations or incur any other breach, that could affect the viability of the whole project.

### **Repsol may engage in acquisitions, investments and disposals as part of its strategy**

As part of Repsol's strategy, the company may engage in acquisitions, investments and disposals of interests. Acquisitions and investments involve a number of risks, including possible adverse effects on Repsol's operating result, risks associated with unanticipated events or liabilities relating to the acquired assets or businesses which may not have been disclosed during due diligence investigations, difficulties in the assimilation of the acquired operations, technologies, systems, services and products, and risks arising from contractual conditions that are triggered by a change of control of an acquired company.

Any failure to successfully integrate such acquisitions could have a material adverse effect upon the business, results of operations or financial conditions of Repsol. Any disposal of interest may also adversely affect Repsol's financial condition, if such disposal results in a loss to Repsol.

On May 8, 2015, Repsol acquired 100% of the shares ROGCI, a Canadian company devoted to the exploration and production of gas and oil. As is the case for any business combination, Repsol's capacity to reach its strategic goals for entering into the acquisition will depend on its capacity to integrate teams, processes, and procedures, as well as to maintain its relationships with clients and partners.

### **Repsol's current insurance coverage may not be sufficient for all the operational risks**

Repsol holds insurance coverage against certain risks inherent in the oil and gas industry, in line with industry practice. Insurance coverage is subject to deductibles and limits that in certain cases may be materially exceeded by the liabilities and/or losses incurred. In addition, Repsol's insurance policies contain exclusions that could leave the Group with limited coverage in certain circumstances. Furthermore, Repsol may not be able to maintain adequate insurance at rates or on terms considered reasonable or acceptable, or be able to obtain insurance against certain risks that could materialise in the future. If Repsol were to experience an incident against which it is not insured, or the costs of which materially exceed its coverage, it could have an adverse effect on its business, financial position and results of operations.

### **Repsol's natural gas operations are subject to particular operational and market risks**

Natural gas prices tend to vary between the different regions in which Repsol operates, as a result of the significant differences between the supply, demand and regulation conditions and such prices may be lower than prevailing prices in other regions of the world.

In addition, Repsol has entered into long-term contracts to purchase and supply natural gas in various parts of the world. These contracts have different price formulas, which could result in higher purchase prices than the price at which such gas could be sold in increasingly liberalised markets. Furthermore, gas availability could be subject to the risk of counterparties breaching their contractual obligations, thus necessitating searching for other sources of natural gas, potentially at higher prices than those envisaged under the breached contracts.

Repsol has long term contracts in place for the sale of gas to clients which, in the event of there being insufficient reserves in countries envisaged under them, Repsol would not be able to meet its contractual obligations, some of which may lead to sanctions being imposed.

### **Cyclical nature of the petrochemical activity**

The petrochemicals industry is subject to wide fluctuations in supply and demand arising from a number of economic factors, which are the cause of the cyclical nature of the petrochemicals market on a regional and global scale.

### **Repsol Group's strategy requires efficiency and innovation in a highly competitive market**

The oil, gas and petrochemical industry operates in the context of a highly competitive energy sector. This competition influences the conditions for accessing markets or following new business leads, the costs of licenses and the pricing and marketing of products.

The implementation of the Group's strategy requires a significant ability to anticipate and adapt to the market and continuous investment in technological advances and innovation.

### **The Repsol Group is subject to the effects of administrative, judicial and arbitration proceedings**

The Repsol Group is subject to the effects of administrative, judicial and arbitration proceedings arising in the ordinary course of business. In addition, Repsol could become involved in other possible future lawsuits over which Repsol is unable to predict the scope, subject-matter or outcome. Any current or future dispute inevitably involves a high degree of uncertainty, and therefore any outcome could affect the business, results or financial position of the Repsol Group.

### **Information technology and its reliability and robustness are key factors in maintaining our operations**

The reliability and security of Repsol Group's information technology systems are critical to maintaining the availability of its business processes and the confidentiality and integrity of the data belonging to the Company and third parties. Given that cyber-attacks are constantly evolving, the Repsol Group cannot guarantee that it will not suffer economic and/or material losses in the future caused by such attacks.

### **Misconduct or violations of applicable legislation by our employees can damage the reputation of the Repsol Group**

The existence of management misconduct or breach of applicable legislation, when occurring, could cause harm to the Company's reputation, in addition to incurring sanctions and legal liability.

### **Repsol is exposed to negative opinion trends which could have an adverse impact on its image and reputation, thereby affecting its business opportunities**

The Repsol Group carries out its transactions in a multiple environments with diverse interest groups, which are mainly local communities in the influence areas in which it operates, as well as local and national civil, political, labor, and consumer organizations, among others.

Should the interests of the above groups be contrary to the Company's activities, and attempts to reach agreements be unsuccessful, Repsol is in a position to be affected by the publication of negative or manipulated information which generates opinion contrary to the Group's activities.

## 5.2. FINANCIAL RISKS

Repsol has in place a structure and systems that enable it to identify, measure and control the financial risks to which the Group is exposed. The main financial risks are described below:

### **Liquidity risk**

Liquidity risk is associated with the Group's ability to finance its obligations at reasonable market prices, as well as its ability to carry out its business plans with stable financing sources.

### **Credit risk**

Credit risk is the risk of a third party failing to carry out its contractual obligations, resulting in loss for the Group.

The exposure of the Group to credit risk is mainly attributable, among others, to commercial debts from trading transactions, which are measured and controlled in relation to the customer or individual third parties. Additionally, the Group is also exposed to counterparty risk derived from non-commercial contractual transactions that may lead to defaults. In these cases, the Group analyses the solvency of counterparties with which the Group has or may have non-commercial contractual transactions.

### **Market risk**

**Exchange rate fluctuation risk:** Repsol is exposed to fluctuations in currency exchange rates since revenues and cash flows generated by oil, natural gas and refined product sales are generally denominated in US dollars or are otherwise affected by dollar exchange rates. Operating income is also exposed to fluctuations in currency exchange rates in countries where Repsol conducts its activities. Repsol is also exposed to exchange risk in relation to the value of its assets and financial investments.

**Commodity price risk:** as a result of performing operations and trading activities, the earnings of the Repsol Group are exposed to volatility in the price of oil, natural gas, and related derivative products.

**Interest rate risk:** the market value of the Group's net financing and net interest expenses could be affected as a consequence of interest rate fluctuations.

**Credit rating risk:** credit ratings affect the pricing and other conditions under which the Repsol Group is able to obtain financing. Any downgrade in the credit rating of Repsol, S.A. could restrict or limit the Group's access to financial markets, increase its new borrowing costs and have a negative effect on its liquidity.

## **ABOUT THIS REPORT**

This report, it must be read in conjunction with the interim condensed consolidated financial statements of the Repsol Group for the first half of 2016. Users of this report should be aware that the forward-looking information contained in this document reflects the plans, forecasts or estimates of the Group's managers, which are based on assumptions that are considered reasonable, and that cannot be considered as a guarantee of the entity's future performance, in the sense that such plans, forecasts or estimates are subject to numerous risks and uncertainties, meaning that the future development of the Group will not necessarily coincide with what was initially planned. Such risks and main uncertainties are described in section 5 "*Risk Management*".

For the preparation of this report consideration was given to the recommendations contained in the "*Guidelines for the preparation of listed company Management Reports*" by the National Commission on Markets and Competition ("Comisión Nacional del Mercado de Valores", CNMV) published in 2013.

## APPENDIX I: ALTERNATIVE PERFORMANCE MEASURES

Repsol's financial information contains indicators and measures prepared in accordance with applicable financial information, as well as other measures prepared in accordance with the Group's<sup>1</sup> Reporting Model defined as Alternative Performance Measures (APMs). APMs are measures which are "adjusted" compared to those presented as IFRS-EU or with Supplementary Information on Oil and Gas Exploration and Production Activities (hereinafter, "E&P<sup>2</sup> Information"), and therefore should be considered by the reader in addition to, but not instead of the GAAP information.

APM are highly useful for users of financial information as they are the measures employed by Repsol's Management to evaluate its financial performance, cash flows, or or its financial position when making operational or strategic decisions for the Group.

### 1. Financial performance measures

#### Adjusted net income

Adjusted net income is the key financial performance measure which Management (the E&P Corporate Executive Committee, and Downstream Executive Committee) consults when making decisions in accordance with IFRS 8 "Operating segments"<sup>1</sup>.

Repsol presents its segment results including joint ventures or other companies which are jointly managed, in accordance with the Group's investment percentage, considering its operationing and economic indicators within the same perspective and degree of detail as those for companies consolidated under the full consolidation method. In this manner, the Group considers that the nature of its businesses and the manner results are analyzed as part of the decision-making process are correctly reflected.

Adjusted net income is calculated as the **Result from continuing operations at Current Cost of Supply** (*Current Cost of Supply*, or CCS<sup>3</sup>), net of taxes and the result from investments minority interests. It does not include certain income and losses ("**Special items**") and the **Inventory effect**. **Financial income** corresponds to the Corporation's Adjusted net income.

Adjusted net income is a useful APM for investors in order to be able to evaluate the performance of operating segments while permitting increased comparability with Oil & Gas sector companies using different inventory measurement methods (see the following section).

#### Inventory effect

This is the difference between **the Result from continuing operations at Current Cost of Supply (CCS)** and the result calculated as the Average Weighted Cost (AWC, which is an inventory valuation method used by the Company to determine its results in accordance with European accounting regulations). It only affects the *Downstream* segment, in that for the **Current Cost of Supply**, the cost of volume sold during the period is determined in accordance with supply costs, and production during the year. Apart from the above effect, the **Inventory effect** includes other adjustments to the valuation of inventories (write-offs, economic hedges) and is presented net of taxes and minority interests. Repsol management considers that this measure is useful for investors, considering the significant variations arising in the prices of inventory between periods.

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<sup>1</sup> See Note 3 "Segment Results" in the interim condensed consolidated financial statements corresponding to the first half of 2016.

<sup>2</sup> The E&P Information, which the Group performs and publishes annually, is prepared in accordance with the general accepted principles applied in the oil and gas industry and the benchmark principles used to prepare the information herein by Topic 932 in the Financial Accounting Standards Board (FASB).

<sup>3</sup> 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 is not a commonly-accepted European accounting regulation, yet does enable the comparability with other sector companies as well as monitoring businesses independently of the impact of price variations on their inventories. Due to the above, the adjusted net income does not include the Equity Effect.



The AWC is a generally-accepted European accounting method which measures inventories, in that it contemplates purchase prices and historic production costs, valuing inventory at the lower between said cost and its market value.

### **Special items**

Significant items of which separate presentation is considered convenient to easily monitor the ordinary management of business operation. It includes capital gains/losses arising from divestitures, restructuring costs, impairments, and provisions for risks and expenses. Special items are presented net of taxes and minority interests.

Section 3.1 “Results” includes the Special items for the first half of 2015 and 2016. The following are the Special items for the first and second quarter of 2015 and 2016.

<i>€ Million</i>	Second Quarter							
	Upstream		Downstream		Corporation		TOTAL	
	Q2 2016	Q2 2015	Q2 2016	Q2 2015	Q2 2016	Q2 2015	Q2 2016	Q2 2015
Divestments	(10)	-	201	27	-	(15)	191	(12)
Workforce restructuring	(37)	(4)	(129)	(1)	(150)	(11)	(316)	(16)
Impairment	(9)	(66)	-	(4)	-	-	(9)	(70)
Provisions and other	(116)	(7)	(12)	12	(37)	(34)	(165)	(29)
<b>TOTAL</b>	<b>(172)</b>	<b>(77)</b>	<b>60</b>	<b>34</b>	<b>(187)</b>	<b>(60)</b>	<b>(299)</b>	<b>(103)</b>

<i>€ Million</i>	First Quarter							
	Upstream		Downstream		Corporation		TOTAL	
	Q1 2016	Q1 2015	Q1 2016	Q1 2015	Q1 2016	Q1 2015	Q1 2016	Q1 2015
Divestments	(1)	(2)	60	1	-	-	59	(1)
Workforce restructuring	(16)	(2)	(1)	-	(12)	(16)	(29)	(18)
Impairment	2	-	(2)	(6)	-	(7)	-	(13)
Provisions and other	(23)	(24)	(9)	-	21	29	(11)	5
<b>TOTAL</b>	<b>(38)</b>	<b>(28)</b>	<b>48</b>	<b>(5)</b>	<b>9</b>	<b>6</b>	<b>19</b>	<b>(27)</b>

The following is a reconciliation of the Adjusted Income under the Group's reporting model under IFRS-EU.

€ Million	First Half Results											
	ADJUSTMENTS										Profit/loss under EU-IFRS	
	Adjusted Result		Joint arrangements reclassification		Special items		Inventory effect <sup>(2)</sup>		Total adjustments			
2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	
Operating income	997	1,109 <sup>(1)</sup>	(108)	(102)	(219)	(236)	8	(88)	(319)	(426)	678	683
Financial result	(262)	456	84	(37)	(18)	22	-	-	66	(15)	(196)	441
Income from equity affiliates	206	235	6	23	-	-	-	-	6	23	212	258
<b>Net income before tax</b>	<b>941</b>	<b>1,800</b>	<b>(18)</b>	<b>(116)</b>	<b>(237)</b>	<b>(214)</b>	<b>8</b>	<b>(88)</b>	<b>(247)</b>	<b>(418)</b>	<b>694</b>	<b>1,382</b>
Income tax	(4)	(524)	18	116	(45)	84	(3)	25	(30)	225	(34)	(299)
<b>Net income from continuing operations</b>	<b>937</b>	<b>1,276</b>	-	-	<b>(282)</b>	<b>(130)</b>	<b>5</b>	<b>(63)</b>	<b>(277)</b>	<b>(193)</b>	<b>660</b>	<b>1,083</b>
Income attributed to minority interests	(20)	(36)	-	-	2	-	(3)	6	(1)	6	(21)	(30)
<b>TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT</b>	<b>917</b>	<b>1,240</b>	-	-	<b>(280)</b>	<b>(130)</b>	<b>2</b>	<b>(57)</b>	<b>(278)</b>	<b>(187)</b>	<b>639</b>	<b>1,053</b>

<sup>(1)</sup> Result from continuing operations at replacement cost.

<sup>(2)</sup> The inventory effect represents an adjustment to "Consumption of raw materials and other consumables" and "Changes in inventory of finished goods and work in progress" on the income statement under IFRS-EU.

€ Million	Second Quarter Results											
	ADJUSTMENTS										Profit/loss under EU-IFRS	
	Adjusted Result		Joint arrangements reclassification		Special items		Inventory effect <sup>(2)</sup>		Total adjustments			
2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	
Operating income	437	522 <sup>(1)</sup>	(83)	(99)	(241)	(159)	223	124	(101)	(134)	336	388
Financial result	(185)	(199)	87	7	(40)	(1)	-	-	47	6	(138)	(193)
Income from equity affiliates	95	109	(42)	76	-	-	-	-	(42)	76	53	185
<b>Net income before tax</b>	<b>347</b>	<b>432</b>	<b>(38)</b>	<b>(16)</b>	<b>(281)</b>	<b>(160)</b>	<b>223</b>	<b>124</b>	<b>(96)</b>	<b>(52)</b>	<b>251</b>	<b>380</b>
Income tax	6	(101)	38	16	(20)	57	(56)	(35)	(38)	38	(32)	(63)
<b>Net income from continuing operations</b>	<b>353</b>	<b>331</b>	-	-	<b>(301)</b>	<b>(103)</b>	<b>167</b>	<b>89</b>	<b>(134)</b>	<b>(14)</b>	<b>219</b>	<b>317</b>
Income attributed to minority interests	(8)	(19)	-	-	2	-	(8)	(6)	(6)	(6)	(14)	(25)
<b>TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT</b>	<b>345</b>	<b>312</b>	-	-	<b>(299)</b>	<b>(103)</b>	<b>159</b>	<b>83</b>	<b>(140)</b>	<b>(20)</b>	<b>205</b>	<b>292</b>

<sup>(1)</sup> Result from continuing operations at replacement cost.

<sup>(2)</sup> The inventory effect represents an adjustment to "Consumption of raw materials and other consumables" and "Changes in inventory of finished goods and work in progress" on the income statement under IFRS-EU.

	First Quarter Results											
	ADJUSTMENTS											
	Adjusted Result		Joint arrangements reclassification		Special items		Inventory effect <sup>(2)</sup>		Total adjustments		Profit/loss under EU-IFRS	
€ Million	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Operating income	560 <sup>(1)</sup>	587 <sup>(1)</sup>	(25)	(3)	22	(77)	(215)	(212)	(218)	(292)	342	295
Financial result	(77)	655	(3)	(44)	22	23	-	-	19	(21)	(58)	634
Income from equity affiliates	111	126	48	(53)	-	-	-	-	48	(53)	159	73
<b>Net income before tax</b>	<b>594</b>	<b>1,368</b>	<b>20</b>	<b>(100)</b>	<b>44</b>	<b>(54)</b>	<b>(215)</b>	<b>(212)</b>	<b>(151)</b>	<b>(366)</b>	<b>443</b>	<b>1,002</b>
Income tax	(10)	(423)	(20)	100	(25)	27	53	60	8	187	(2)	(236)
<b>Net income from continuing operations</b>	<b>584</b>	<b>945</b>	-	-	<b>19</b>	<b>(27)</b>	<b>(162)</b>	<b>(152)</b>	<b>(143)</b>	<b>(179)</b>	<b>441</b>	<b>766</b>
Income attributed to minority interests	(12)	(17)	-	-	-	-	5	12	5	12	(7)	(5)
<b>TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT</b>	<b>572</b>	<b>928</b>	-	-	<b>19</b>	<b>(27)</b>	<b>(157)</b>	<b>(140)</b>	<b>(138)</b>	<b>(167)</b>	<b>434</b>	<b>761</b>

<sup>(1)</sup> Result from continuing operations at replacement cost.

<sup>(2)</sup> The inventory effect represents an adjustment to "Consumption of raw materials and other consumables" and "Changes in inventory of finished goods and work in progress" on the income statement under IFRS-EU.

### EBITDA:

EBITDA is defined as "Earnings Before Interest, Taxes, Depreciation, and Amortization", and is a financial indicator which determines the operating margin of a company prior to deducting interest, taxes, impairments, restructuring costs, and amortization. Since it does not include financial and tax indicators or accounting expenses not involving cash outflow, it is used by Management to evaluate the company's results over time, thereby making comparisons with other Oil & Gas sector companies a more straightforward exercise.

EBITDA is calculated as Operating Income + Amortization + Impairments + Restructuring costs as well as other items which do not represent cash entry or outflows from transactions (capital gains/losses from divestitures, provisions, etc.). Operating income corresponds to the result from continuing operations at average weighted average costs (AWC). In cases in which *the Result from continuing operations at Current Cost of Supply* (CCS) is used, it is considered *EBITDA CCS*.

	First Half							
	Group reporting model		Joint arrangements reclassification		Inventory effect		Cash Flow Statement IFRS –EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015	2016	2015
EBITDA	2,417	2,383	(421)	(394)	-	-	1,996	1,989
EBITDA CCS	2,409	2,471	(421)	(394)	8	(88)	1,996	1,989

	Second Quarter							
	Group reporting model		Joint arrangements reclassification		Inventory effect		Cash Flow Statement IFRS –EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015	2016	2015
EBITDA	1,390	1,421	(234)	(261)	-	-	1,156	1,160
EBITDA CCS	1,167	1,297	(234)	(261)	223	124	1,156	1,160

	First Quarter							
	Group reporting model		Joint arrangements reclassification		Inventory effect		Cash Flow Statement IFRS –EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015	2016	2015
EBITDA	1,027	962	(187)	(133)	-	-	840	829
EBITDA CCS	1,242	1,174	(187)	(133)	(215)	(212)	840	829

<sup>(1)</sup> Corresponds to “Pre-tax profit” and “*Result adjustments*” on the consolidated Cash Flow Statement prepared under IFRS-EU.

### ROACE:

This APM is used by Repsol Management to evaluate the capacity of its operating assets to generate profit, and therefore measures invested capital (equity and debt).

ROACE is calculated as: (operating results adjusted for joint ventures outcomes excluding “*Special items*” + Income taxes + Recurrent results from investees) / (Capital employed during the continuing operations period). *Capital employed* measures own and external capital invested in the company, and corresponds to Total Equity + *Net debt*. It includes that which corresponds to joint ventures or other companies whose operations are generated as such.

The operating result corresponds to the result from *continuing operations at average weighted costs (AWC)*.

NUMERATOR	2015 <sup>(1)</sup>	H1 2016	
<b>Operating profit EU-IFRS</b>	<b>(2,697)</b>	<b>678</b>	
Adjustment joint ventures	(441)	108	
Adjustment special items	4,219	219	
Income tax <sup>(2)</sup>	(304)	(108)	
Share of profit (loss) of entities accounted for using the equity method - net of dividends	475	206	
<b>I. ROACE result at average weighted cost</b>	<b>1,251</b>	<b>1,103</b>	<b>2,142<sup>(3)</sup></b>
Inventory effect	502	(5)	(10) <sup>(3)</sup>
<b>II. ROACE result at Current Cost of Supply (CCS)</b>	<b>1,753</b>	<b>1,098</b>	<b>2,132<sup>(3)</sup></b>
<b>DENOMINATOR</b>			
Total equity	28,768		28,822
Net financial debt <sup>(3)</sup>	11,934		11,709
<b>Capital employed at year end</b>	<b>40,702</b>		<b>40,531</b>
<b>III. Average capital employed <sup>(4)</sup></b>	<b>41,079</b>		<b>40,617</b>
<b>ROACE (I/III)</b>	<b>3.0</b>		<b>5.3</b>
<b>ROACE CCS (II/III)</b>	<b>4.2</b>		<b>5.3</b>

<sup>(1)</sup> Real figure for 2015.

<sup>(2)</sup> Does not include income tax corresponding to financial results.

<sup>(3)</sup> Figure annualized by extrapolating data for the year.

<sup>(4)</sup> Corresponds to the average balance of capital employed at the beginning and end of the year.

## 2. Cash flow measures

### Adjusted cash flow, free cash flow, and liquidity:

This APM measures cash entries and outflows during the year. *Adjusted Cash Flow* is the net accumulation of liquid assets during a certain period, including that which corresponds to joint ventures or other jointly-controlled entities, and as such, is the key indicator used for evaluating cash flow generation for the year by Group Management. It is calculated as the sum of cash flows from operating activities, from investments, and financing arrangements.

*Free Cash Flow* measures cash flow generation from operating and investment activities, and is quite useful for evaluating the funds available for paying shareholder dividends, and debt service payments.

The following is a reconciliation of *Adjusted Cash Flow* and *Free Cash Flow* with the consolidated statements of cash flow prepared under IFRS-EU.

	First Half					
	Adjusted Cash Flow		Reclass, Joint Ventures and Others		Cash Flow Statement IFRS –EU	
	2016	2015	2016	2015	2016	2015
I. Cash flows from/(used in) operating activities	1,772	1,477	(171)	(179)	1,601	1,298
II. Cash flows from/(used in) investments activities	(997)	(9,500)	255	1,449	(742)	(8,051)
<b>Free cash flow (I+II)</b>	<b>775</b>	<b>(8,023)</b>	<b>84</b>	<b>1,270</b>	<b>859</b>	<b>(6,753)</b>
III. Cash flows from/(used in) financing activities and others <sup>(1)</sup>	(1,099)	5,511	17	(1,304)	(1,082)	4,207
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b>(324)</b>	<b>(2,512)</b>	<b>101</b>	<b>(34)</b>	<b>(223)</b>	<b>(2,546)</b>
Cash and cash equivalents at the beginning of the period	2,769	5,027	(321)	(389)	2,448	4,638
Cash and cash equivalents at the end of the period	2,445	2,515	(220)	(423)	2,225	2,092

<sup>(1)</sup> Includes payments for dividends and payments on other equity instruments, interest payments, other proceeds from/ (payments for) financing activities, proceeds from / (payments for) equity instruments , proceeds from / (payments for) financial liabilities and the exchange rate fluctuations effect.

	Second Quarter					
	Adjusted Cash Flow		Reclass, Joint Ventures and Others		Cash Flow Statement IFRS –EU	
	2016	2015	2016	2015	2016	2015
I. Cash flows from/(used in) operating activities	829	253	(130)	(49)	699	204
II. Cash flows from/(used in) investments activities	(255)	(8,561)	128	884	(127)	(7,677)
<b>Free cash flow (I+II)</b>	<b>574</b>	<b>(8,308)</b>	<b>(2)</b>	<b>835</b>	<b>572</b>	<b>(7,473)</b>
III. Cash flows from/(used in) financing activities and others <sup>(1)</sup>	(894)	1,830	39	(862)	(855)	968
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b>(320)</b>	<b>(6,478)</b>	<b>37</b>	<b>(27)</b>	<b>(283)</b>	<b>(6,505)</b>
Cash and cash equivalents at the beginning of the period	2,765	8,993	(257)	(396)	2,508	8,597
Cash and cash equivalents at the end of the period	2,445	2,515	(220)	(423)	2,225	2,092

<sup>(1)</sup> Includes payments for dividends and payments on other equity instruments, interest payments, other proceeds from/ (payments for) financing activities, proceeds from / (payments for) equity instruments , proceeds from / (payments for) financial liabilities and the exchange rate fluctuations effect.

	First Quarter					
	Adjusted Cash Flow		Reclass. Joint Ventures and Others		Cash Flow Statement IFRS –EU	
	2016	2015	2016	2015	2016	2015
I. Cash flows from/(used in) operating activities	943	1,224	(41)	(130)	902	1,094
II. Cash flows from/(used in) investments	(742)	(939)	127	565	(615)	(374)
<b>Free cash flow (I+II)</b>	<b>201</b>	<b>285</b>	<b>86</b>	<b>435</b>	<b>287</b>	<b>720</b>
III. Cash flows from/(used in) financing and others <sup>(1)</sup>	(205)	3,681	(22)	(442)	(227)	3,239
<b>Net increase/(decrease) in cash and cash equivalents</b>	<b>(4)</b>	<b>3,966</b>	<b>64</b>	<b>(7)</b>	<b>60</b>	<b>3,959</b>
Cash and cash equivalents at the beginning of the period	2,769	5,027	(321)	(389)	2,448	4,638
Cash and cash equivalents at the end of the period	2,765	8,993	(257)	(396)	2,508	8,597

<sup>(1)</sup> Includes payments for dividends and payments on other equity instruments, interest payments, other proceeds from/ (payments for) financing activities, proceeds from / (payments for) equity instruments , proceeds from / (payments for) financial liabilities and the exchange rate fluctuations effect.

The Group measures liquidity as the total of “Cash and cash equivalents” and undrawn committed lines of credit at year end which correspond to loans granted by financial institutions which may be drawn down by the company in instalments, the amount, and the remaining terms of the agreement.

	First Half					
	Group Reporting Model		Joint arrangements reclassification		IFRS -EU	
	2016	2015	2016	2015	2016	2015
Cash and cash equivalents	2,445	2,514	(220)	(422)	2,225	2,092
Undrawn credit lines	4,214	5,755	-	-	4,214	5,755
<b>Liquidity</b>	<b>6,659</b>	<b>8,269</b>	<b>(220)</b>	<b>(422)</b>	<b>6,439</b>	<b>7,847</b>

	Second Quarter					
	Group Reporting Model		Joint arrangements reclassification		IFRS -EU	
	2016	2015	2016	2015	2016	2015
Cash and cash equivalents	2,445	2,514	(220)	(422)	2,225	2,092
Undrawn credit lines	4,214	5,755	-	-	4,214	5,755
<b>Liquidity</b>	<b>6,659</b>	<b>8,269</b>	<b>(220)</b>	<b>(422)</b>	<b>6,439</b>	<b>7,847</b>

	First Quarter					
	Group Reporting Model		Joint arrangements reclassification		IFRS -EU	
	2016	2015	2016	2015	2016	2015
Cash and cash equivalents	2,765	8,993	(257)	(396)	2,508	8,597
Undrawn credit lines	6,175	2,886	-	-	6,175	2,886
<b>Liquidity</b>	<b>8,940</b>	<b>11,879</b>	<b>(257)</b>	<b>(396)</b>	<b>8,683</b>	<b>11,483</b>

### Net operating investments

Group management uses this APM to measure each period's investing effort, as well as its assignment by businesses segment, and corresponds to net investments of divestments made by different Group businesses. It includes that which corresponds to joint ventures or other companies whose operations are generated as such.

	First Half					
	Net Operating Investments		Reclass. Joint Ventures and Others		Cash Flow Statement IFRS -EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015
Upstream	1,281	9,649	(376)	(569)	905	9,080
Downstream	(258)	283	(1)	41	(259)	324
Corporation and adjustments	15	69	(20)	(4)	(5)	65
<b>TOTAL</b>	<b>1,038 <sup>(2)</sup></b>	<b>10,001</b>	<b>(397)</b>	<b>(532)</b>	<b>641</b>	<b>9,469</b>

	Second Quarter					
	Net Operating Investments		Reclass. Joint Ventures and Others		Cash Flow Statement IFRS -EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015
Upstream	643	8,896	(198)	(239)	445	8,657
Downstream	(344)	149	1	43	(343)	192
Corporation and adjustments	30	24	(11)	(4)	19	20
<b>TOTAL</b>	<b>329</b>	<b>9,069</b>	<b>(208)</b>	<b>(200)</b>	<b>121</b>	<b>8,869</b>

	First Quarter					
	Net Operating Investments		Reclass. Joint Ventures and Others		Cash Flow Statement IFRS –EU <sup>(1)</sup>	
	2016	2015	2016	2015	2016	2015
Upstream	638	753	(178)	(330)	460	423
Downstream	86	134	(2)	(2)	84	132
Corporation and adjustments	(15)	45	(9)	-	(24)	45
<b>TOTAL</b>	<b>709</b>	<b>932</b>	<b>(189)</b>	<b>(332)</b>	<b>520</b>	<b>600</b>

<sup>(1)</sup> This corresponds to “Proceeds from divestments” and “Payments on investments” on the consolidated statement of cash flows prepared under IFRS-EU, and does not include items corresponding to “Other financial assets.”

<sup>(2)</sup> Gross Operating Investments for the first half of 2016 amounted to €1,668 million.

On certain occasions, operating investments are known as CAPEX (“Capital Expenditures”), which is the case of the Upstream segment, and may therefore be presented including general and administration expenses (G&A).

### 3. Financial position measures

#### Debt and financial position ratios:

**Net Debt** is the main APM used by management to measure the Company’s level of debt. It is comprised of financial liabilities less financial assets, cash and cash equivalents, and the effect arising from net market valuation of financial derivative (ex - exchange rates). It also includes the net debt corresponding to joint ventures and other companies operationally managed as such, except for Gas Natural Fenosa.

	Net debt			Joint arrangements reclassification <sup>(1)</sup>			Figure accord. to IFRS-EU Balance Sheet		
	H1 2016	Q1 2016	2015	H1 2016	Q1 2016	2015	H1 2016	Q1 2016	2015
<b>Non-current assets</b>									
Non-current financial instruments <sup>(2)</sup>	98	93	121	609	545	512	707	638	633
<b>Current assets</b>									
Other current financial assets	30	62	118	1,231	1,143	1,119	1,261	1,205	1,237
Cash and cash equivalents	2,447	2,765	2,771	(222)	(257)	(323)	2,225	2,508	2,448
<b>Non-current liabilities<sup>(3)</sup></b>									
Non-current financial debt	(10,688)	(11,130)	(10,716)	54	129	135	(10,634)	(11,001)	(10,581)
<b>Non-current liabilities<sup>(3)</sup></b>									
Current financial liabilities	(3,719)	(3,879)	(4,320)	(2,707)	(2,675)	(2,753)	(6,426)	(6,554)	(7,073)
<b>Items not included on the balance sheet</b>									
Net mark to market valuation of financial derivatives (ex: exchange rate) <sup>(4)</sup>	123	111	92	-	-	-	123	111	92
<b>NET DEBT</b>	<b>(11,709)</b>	<b>(11,978)</b>	<b>(11,934)</b>				<b>(12,744)</b>	<b>(13,093)</b>	<b>(13,244)</b>

<sup>(1)</sup>Mainly includes the net financing of Grupo Repsol Sinopec Brasil broken down in the following sections:  
*December 2015* (Cash and cash equivalents amounting to €11 million, and Current financial liabilities from intra-group loans amounting to €2,819 million, less €300 million for third-party loans).

*March 2016* (Cash and cash equivalents amounting to €17 million, and Current financial liabilities from intra-group loans amounting to €2,699 million, less €29 million for third-party loans).

*June 2016*: (Cash and cash equivalents amounting to €16 million, and Current financial liabilities from intra-group loans amounting to €2,780 million, less €366 million for third-party loans).

<sup>(2)</sup> Corresponds to “Non-current financial assets” on the consolidated balance sheet without taking financial assets available for sale into account.

<sup>(3)</sup> Does not include financial leases amounts.

<sup>(4)</sup> The net mark to market value of financial derivatives different from exchange rate derivatives has been eliminated from this section.



**Gross debt** is an indicator used to analyze the Group's solvency, and includes financial liabilities and the net market measurement of exchange rate derivatives.

	Deuda Bruta			Reclasif. negocios conjuntos			Magnitud según balance NIIF-UE		
	H1 2016	Q1 2016	2015	H1 2016	Q1 2016	2015	H1 2016	Q1 2016	2015
Current financial liabilities	(3,675)	(3,820)	(4,252)	(2,708)	(2,672)	(2,752)	(6,383)	(6,492)	(7,004)
Net valuation at the market rates of financial derivative, such as current exchange rate <sup>(1)</sup>	(22)	(7)	(1)	-	-	-	(22)	(7)	(1)
<b>Current gross debt</b>	<b>(3,697)</b>	<b>(3,828)</b>	<b>(4,253)</b>	<b>(2,708)</b>	<b>(2,672)</b>	<b>(2,752)</b>	<b>(6,405)</b>	<b>(6,500)</b>	<b>(7,005)</b>
Non-current financial liabilities	(10,567)	(11,020)	(10,626)	55	128	135	(10,512)	(10,892)	(10,491)
<b>Non-current gross debt</b>	<b>(10,567)</b>	<b>(11,020)</b>	<b>(10,626)</b>	<b>55</b>	<b>128</b>	<b>135</b>	<b>(10,512)</b>	<b>(10,892)</b>	<b>(10,491)</b>
<b>TOTAL GROSS DEBT</b>	<b>(14,264)</b>	<b>(14,847)</b>	<b>(14,879)</b>	<b>(2,653)</b>	<b>(2,544)</b>	<b>(2,617)</b>	<b>(16,917)</b>	<b>(17,392)</b>	<b>(17,497)</b>

<sup>(1)</sup> The heading eliminates the net current market value of financial derivatives which differ from exchange rate derivatives.

The following ratios are based on **Debt** and are used by Group management to evaluate leverage ratios as well as Group solvency.

The **Leverage ratio** corresponds to **Net Debt** divided by **Capital employed** at year end. This ratio can be used to determine the financial structure and degree of indebtedness with regard to capital contributed by shareholders and entities which provide financing. It is the chief measure used to evaluate and compare the Company's financial position with others in the Oil & Gas sector

**Hedging instruments** correspond to **Net debt** divided by **EBITDA CCS**, and makes it possible to evaluate the company's capacity for repaying external financing over a number of years (x times), as well as to compare it to similar sector companies.

The **Solvency ratio** is calculated as **Liquidity** (section 2 of this Appendix) divided by **Current Gross debt**, and is used to determine the number of times the Group may handle its current debt using its existing liquidity.

## CONVERSION TABLE AND GLOSSARY

			OIL				GAS		ELECTRICITY
			Litres	Barrels	Cubic metres	toe	Cubic metres	Cubic feet	kWh
OIL	1 barrel <sup>(1)</sup>	bbl	158.99	1	0.16	0.14	162.60	5,615	1.7x10 <sup>6</sup>
	1 cubic metre <sup>(1)</sup>	m <sup>3</sup>	1,000	6.29	1	0.86	1,033	36,481	10,691.5
	1 ton of oil equivalent <sup>(1)</sup>	tep	1,160.49	7.30	1.16	1	1,187	41,911	12,407.4
GAS	1 cubic metre	m <sup>3</sup>	0.98	0.01	0.001	0.001	1	35.32	10.35
	1,000 feet=1.04x10 <sup>6</sup> Btu	ft <sup>3</sup>	27.64	0.18	0.03	0.02	28.3	1,000	293.1
ELECTRICITY	1 megawatt hour	MWh	93.53	0.59	0.10	0.08	96.62	3,412.14	1,000

<sup>(1)</sup> Reference measurement: 32.35 °API and relative density 0.8636

Term	Description	Term	Description	Term	Description
<b>bbl/bbl/d</b>	Barrel/Barrel per day	<b>kbbl</b>	Thousand barrels of oil	<b>Mm<sup>3</sup>/d</b>	Million cubic metres per day
<b>bcf</b>	Billion cubic feet	<b>kbbl/d</b>	Thousand barrels of oil per day	<b>Mscf/d</b>	Million standard cubic feet per day
<b>bcm</b>	Billion cubic meters	<b>kboe</b>	Thousand barrels of oil equivalent	<b>kscf/d</b>	Thousands of cubic standard feet per day
<b>boe</b>	Barrels of oil equivalent	<b>kboe/d</b>	Thousand barrels of oil equivalent per day	<b>MW</b>	Million watts
<b>Btu/MBTu/MMBTu</b>	British thermal unit/ thousand of Btu/millions of Btu	<b>km<sup>2</sup></b>	Square kilometre	<b>MWh</b>	Million watts per hour
<b>LPG</b>	Liquefied Petroleum Gas.	<b>Kt/Mt</b>	Thousand tons	<b>TCF</b>	Trillion cubic feet
<b>LNG</b>	Liquefied Natural Gas.	<b>Mbbl</b>	Million barrels	<b>toe</b>	ton of oil equivalent
<b>Gwh</b>	Gigawatts per hour	<b>Mboe</b>	Million barrels of oil equivalent	<b>USD/Dollar</b>	US dollar

			Metre	Inch	Foot	Yard
LENGTH	metre	m	1	39.37	3.281	1.093
	inch	in	0.025	1	0.083	0.028
	foot	ft	0.305	12	1	0.333
	yard	yd	0.914	36	3	1

			Kilogram	Pound	Ton
MASS	kilogram	kg	1	2.2046	0.001
	pound	lb	0.45	1	0.00045
	ton	t	1,000	22.046	1

			Cubic feet	Barrel	Litre	Cubic metres
VOLUME	cubic foot	ft <sup>3</sup>	1	0.1781	28.32	0.0283
	barrel	bbl	5,615	1	158.984	0.1590
	litre	l	0.0353	0.0063	1	0.001
	cubic metre	m <sup>3</sup>	35.3147	6.2898	1,000	1