

REPSOL Group

2019 Management Report
First Half



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



ABOUT THIS REPORT

The Repsol¹ Group's **Interim Management Report** must be read together with the 2018 Consolidated Management Report.² In conjunction with this report, Repsol publishes condensed interim consolidated financial statements³ for the first half of 2019 (hereinafter, "interim financial statements of the first half of 2019"). The Board of Directors of Repsol, S.A., at its meeting of July 23, 2019, has approved both reports.

The **financial information** contained in this document, unless otherwise indicated, has been produced in line with the Group's reporting model set out in Note 5 "*Segment reporting*" of the consolidated financial statements for 2018. Some of the financial indicators and ratios are classified as Alternative Performance Measures (APMs) in accordance with European Securities Markets Authority (ESMA) guidelines. Appendix II, "*Alternative Performance Measures*," sets out the reconciliation of the adjusted figures to IFRS-EU figures, also available on www.repsol.com.

The **non-financial information** corresponding to sustainability indicators contained in this document was calculated according to corporate rules that specify the criteria and common methods to be applied to each topic.

The **forward-looking information** contained in the sections of this document reflects the plans, forecasts or estimates of the Group's managers at the date of preparation. These are based on assumptions that are considered reasonable, but such forward-looking information should not be interpreted as an assurance of the entity's future performance. Such plans, forecasts or estimates are subject to risks and uncertainties that imply that the Group's future performance may not necessarily conform to forecasts.

MISSION, VISION AND PRINCIPLES:

The Group's principles "*Value Creation, Respect, Efficiency and Anticipation*" supplement the Company's **values** of "*Integrity, Responsibility, Flexibility, Transparency and Innovation*" set out in the Code of Ethics and Conduct. All of this is intended to fulfill the Company's Mission and make its Vision an achievable challenge.

Repsol's **mission** (its reason for being) is to be an energy company that is committed to a sustainable world.

Repsol's **vision** (where it is going) is to be a global energy company that uses innovation, efficiency and respect to create sustainable value for the community.

Additional information is available at <https://www.repsol.com>.

¹ In this report, the names "Repsol," "the Repsol Group" or "the Company" are used interchangeably to refer to the company group consisting of Repsol, S.A. and its subsidiaries, associates and joint arrangements.

² This Interim Management Report has been prepared solely for the purpose of updating the consolidated Management Report for 2018.

³ The interim financial statements of the first half of the year have been subject to a limited independent review by the Group's auditor.

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1. SUMMARY OF MAIN EVENTS

In the first half we made progress in the lines of action set out in the latest strategic update: enhanced shareholder remuneration, profitable management of businesses, including its international expansion, and development of new businesses tied to the energy transition.

RESULTS

Against a **backdrop** of a subdued economy and rising geopolitical instability, the financial performance of our businesses felt the pressure of volatile crude oil prices and weakening global indicators for heavy industries during first half of 2019 (1H 2019).

RESULTS FOR THE PERIOD (million euros)	1H 2019	1H 2018	Δ%
Upstream	646	647	-
Downstream	715	762	(6)%
Corporate and other	(246)	(277)	11%
Adjusted net income	1,115	1,132	(2)%
Inventory effect	63	202	(69)%
Special items	(45)	212	-
Net income	1,133	1,546	(27)%

€1,115 m
Adjusted net
income

Upstream results are in line with those of the first half of previous year (1H 2018). Lower realization prices of crude oil were offset by lower exploration and production costs and by the strengthening of the dollar against the euro.

Downstream results were lower than in 1H 2018 as a result of the weaker performance of Refining in Spain, which was hit by significant drop of margins and maintenance shutdowns, and of Wholesale and Gas Trading, due to a milder winter in North America. The decreases were partly offset by improved performance in Chemicals, Refining Peru and Trading.

Corporate and other continued to lower financing and corporate structure costs despite the impact of the application of IFRS 16 (see Note 2.2.1 to the Financial Statements for 1H 2019) and weaker performance in the management of positions (currency and treasury shares).

Adjusted net income, which is intended to reflect the ordinary profit arising from the businesses, came to €1,115 million, 2% less than in 2018.

The **inventory effect** amounted to €63 million vs €202 million in 1H 2018, due to the behavior of crude oil and petroleum product prices in the period.

Special items showed a decline owing to the absence of major divestments, whereas in 2018 this caption reflected a gain on disposal of the 20% stake in Naturgy.

In sum, the Group's **net income** in the first half of 2019 was €1,133 million, 27% lower than in 2018. Earnings per share came to €0.73.

EBITDA, at €3,712 million, was slightly lower than in 2018. **Cash flow from operations** in the first half (€2,530 million), which increased significantly compared to the same period last year (+47%) due to the improvement in working capital, covered investments, interest payments and shareholder remuneration; **free cash flow** (€1,093 million), is lower than in 2018 (€4,306 million), due to the disposal of our stake in Naturgy in May 2018 (€3,816 million).

Net debt with leases amounted to €7,464 million (€7,457 million in the first quarter), with **leverage** of 19.4%. **Net debt ex leases** came to €3,662 million (€3,686 million at the end of the first quarter and €3,439 million at year-end 2018) with leverage of 10.6%.

↑47%
Cash flow from
operations

Shareholder remuneration in the six-month period was equivalent to 0.411 euros per share in January¹, implying an increase of 6% over the previous year. At the Annual General Meeting of May 31, 2019, the shareholders resolved to reduce capital through redemption of treasury shares to offset the dilutive effect of bonus share issues arranged in 2019.

↑6%
Shareholder
remuneration

ACTIVITIES

In the **Upstream** segment, the highlights were the success of our exploration campaign, with discoveries in Indonesia (Sakakemang²), the United States (Alaska and Gulf of Mexico), Malaysia and Norway, the **start of production** at Buckskin in the Gulf of Mexico (USA) and at Angelin (Trinidad and Tobago), the acquisition of new **acreage** in Indonesia, Norway and Russia, and the **deal** struck to establish a joint venture with Shell and Gazprom Neft for the exploration of two blocks in the Gyudan Peninsula (North Russia-Siberia).

The **Downstream** segment continued its international expansion in Mobility and development of the Electricity and Gas businesses. In Mexico, the half-year ended with 195 service stations in operation, while Repsol Electricidad y Gas topped 890 thousand customers and acquired three renewable projects in Spain with a capacity of 794 MW. Building on **digitization** opportunities, Waylet reached 1.2 million users and signed an agreement with El Corte Inglés to add the department store's payment card to the platform.

REPLACEMENTS ON THE BOARD

At the Annual General Meeting of May 31, 2019, the shareholders resolved to re-elect Mr. Antonio Brufau Niubó (Chairman) and Mr. Josu Jon Imaz San Miguel (CEO) for the four-year term mandated by the bylaws, together with other re-elections and appointments, while reducing the number of Directors to fifteen.

SUSTAINABILITY AND DIGITIZATION

A new **Global Sustainability Plan** was approved in the first half of the year, setting long-term goals and targets (2025). Against the backdrop of an energy transition toward a low-emissions future to limit the effects of **climate change**, in 2019 Repsol implemented improvement actions at its facilities that prevented 99.6 thousand tons in CO₂ emissions, thereby reducing energy consumption.

As to **employee accidents**, there was no fatality among our own personnel, but a contractor in Marcellus, Canada, died in an accident. The **process safety** indicator is 0.47 (the same figure as in 2018).

Regarding gender diversity, following the renewal of the Board, the **percentage of women reached 33%**. This fulfills the target set out in the Global Sustainability Plan.

During the first half we launched more than 20 new **digital cases**. There are now over 150 initiatives underway, of which more than 50 are already in the process of being **scaled up to the entire organization**. In 2018, we created 10 hubs or expert centers; this year they have continued to grow in capabilities and experience, making forward strides toward a corporate data and **artificial intelligence** platform based on a **multi-cloud** strategy. In addition, more than 1,000 people took face-to-face training courses on new digital trends and ways of working, and we rolled out our *Digital for Leaders* program (seminars attended by more than 100 Repsol executives and leaders).

¹ It corresponds to the commitment to purchase of free-allocation rights assumed by Repsol (see Note 4.4).

² In July, Repsol signed a Memorandum of Understanding with the Indonesian gas distributor PT Perusahaan Gas Negara for the sale of natural gas to be produced in the Sakakemang Area. The final gas sales agreement is expected to be signed in the coming months. No further material events occurred after June 30, 2019.

MAIN FIGURES AND INDICATORS

Financial indicators ⁽¹⁾	1H 2019	1H 2018	Our business performance ⁽¹⁾	1H 2019	1H 2018
Results			Upstream		
Operating income ⁽²⁾	2,002	2,043	Net daily hydrocarbon production (kboe/d)	697	724
Adjusted net income	1,115	1,132	Net daily liquids production (kbb/d)	251	266
Net income	1,133	1,546	Net daily gas production (kboe/d)	446	458
Earnings per share (€/share)	0.73	0.93	Average crude oil price realization (\$/bbl)	59.6	64.2
EBITDA ⁽²⁾	3,712	3,811	Average gas price realization (\$/kscf)	3.2	3.3
Investments	1,468	1,245	EBITDA ⁽²⁾	2,213	2,289
Capital employed ⁽³⁾	34,697	33,864			
Capital employed (with leases)	38,391	-	Adjusted net income	646	647
ROACE (%) ⁽⁴⁾	7.6	8.2	Cash flow from operations ⁽²⁾	1,605	1,272
ROACE (with leases) (%) ⁽⁴⁾	7.0	-	Investments	961	900
Financial position and cash flows			Downstream		
Cash flow from operations ⁽²⁾	2,530	1,726	Distillation utilization Spanish Refining (%)	89.3	90.4
Free cash flow ⁽²⁾	1,093	4,306	Conversion utilization Spanish Refining (%)	102.0	103.9
Cash flow generated	(124)	3,373	Refining margin indicator Spain (\$/bbl)	4.4	6.9
Net debt	3,662	2,706	Sales of oil products (kt)	24,251	25,217
Net debt (with leases)	7,464	-	Sales of petrochemical products (kt)	1,458	1,313
			LPG sales (kt)	699	739
Shareholder remuneration			Gas sales in North America (TBtu)	287	258
Shareholder remuneration (€/share) ⁽⁵⁾	0.411	0.388	Generation (GWh)	2,185	-
			EBITDA ⁽²⁾	1,580	1,649
			Adjusted net income	715	762
			Cash flow from operations ⁽²⁾	1,093	547
			Investments	482	325
Sustainability indicators	1H 2019	2018	Macroeconomic environment	1H 2019	1H 2018
People			Average Brent price (\$/bbl)	66.0	70.6
No. of employees ⁽⁶⁾	25,797	25,288	Average WTI price (\$/bbl)	57.4	65.5
New employees ⁽⁷⁾	2,014	3,810	Average Henry Hub price (\$/MBtu)	2.9	2.9
Safety and environment			Electricity pool - OMIE (€/MWh)	51.8	50.2
Lost time injury rate ⁽⁸⁾	0.76	0.89	Average exchange rate (€/€)	1.13	1.21
Total recordable incident rate ⁽⁹⁾	1.18	1.59			
Annual CO ₂ emissions reduction (Mt) ⁽¹⁰⁾	0.09	0.31			
Stock market indicators	1H 2019	1H 2018			
Share price at year-end (€/share)	13.79	16.77			
Average share price (€/share)	14.81	15.44			
Market cap at period-end (million €)	21,489	26,094			

⁽¹⁾ Where applicable, figures shown in million euros.

⁽²⁾ In 2019, this includes the effects of application of IFRS 16 (see Note 2.2.1 to the condensed consolidated financial statements for the first half of 2019).

⁽³⁾ Capital employed from continuing operations.

⁽⁴⁾ ROACE has been annualized by straight extrapolation from data for the period. It does not include discontinued operations.

⁽⁵⁾ Fixed price guaranteed by Repsol for bonus share rights awarded under the "Repsol Flexible Dividend" program (see Note 4.1 to the interim financial statements for the first half of 2019).

⁽⁶⁾ Number of employees of companies at which Repsol establishes people management policies and guidelines, irrespective of the type of contract (fixed, temporary, partially retired, etc.). The figure for 2018 is the annual figure.

⁽⁷⁾ Only fixed or temporary employees with no prior working relationship with the company are treated as new hires. 37% of new employees in 2019 and 40% in 2018 were under permanent contracts. The 2018 figure is the full-year rate.

⁽⁸⁾ Lost time injury rate: number of cases with personal consequences (fatalities and lost time) over the year per million hours worked. The 2018 figure is the full-year rate.

⁽⁹⁾ Total recordable incident rate: total number of cases with personal consequences (fatalities, lost time, medical treatment and restricted work) over the period per million hours worked. The 2018 figure is the full-year rate.

⁽¹⁰⁾ Reduction of CO₂ compared with the 2010 baseline. The 2018 figure is the full-year amount.

2. CORPORATE GOVERNANCE

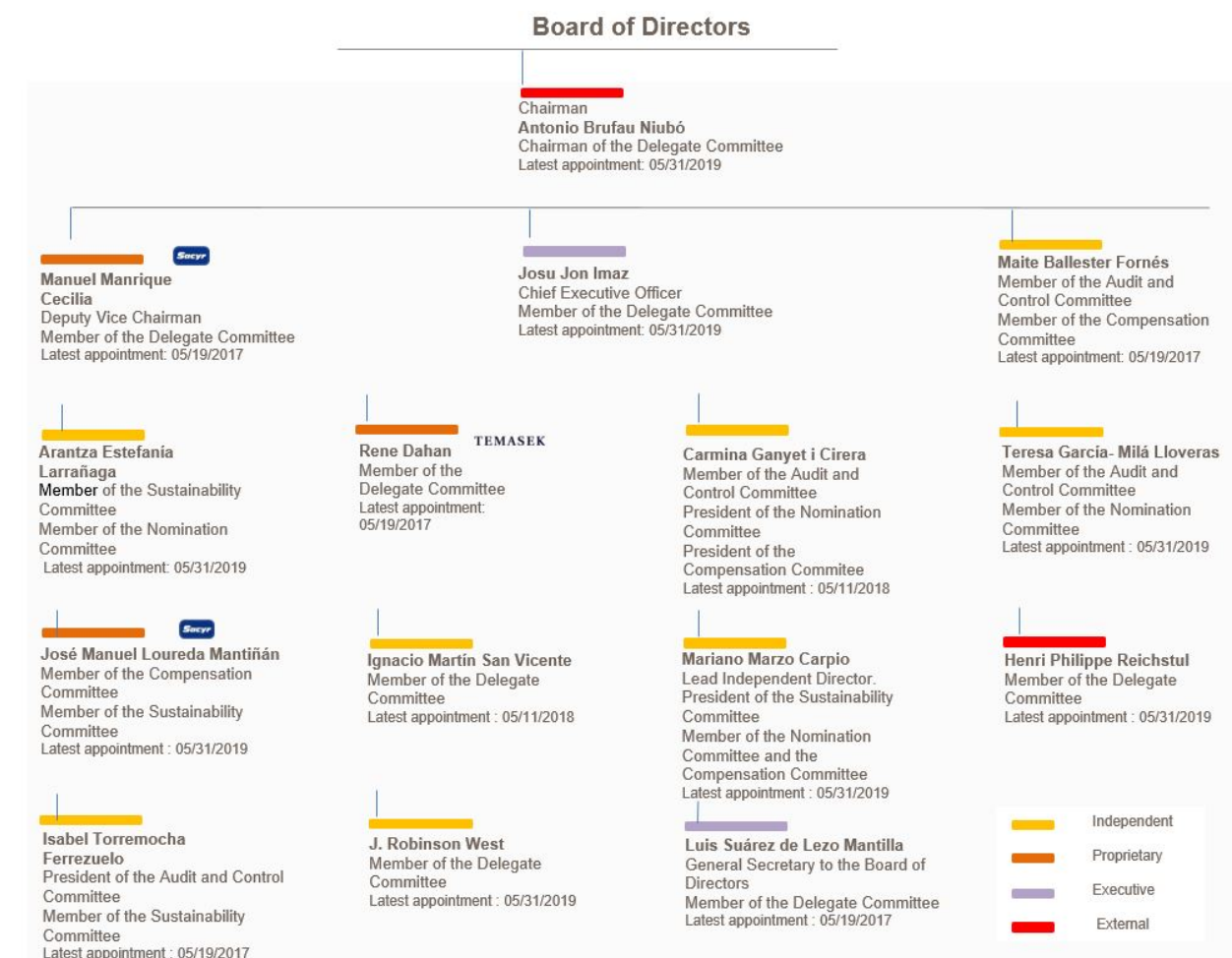
Changes in the Board of Directors

At the Annual General Meeting held on May 31, 2019, the shareholders of Repsol, S.A. resolved to **re-elect** as Directors Mr. Antonio Brufau, Mr. Josu Jon Imaz, Mr. José Manuel Loureda and Mr. John Robinson West, to ratify and re-elect as a Director Mr. Henri Philippe Reichstul, and to **appoint** as Directors Ms. Aránzazu Estefanía Larrañaga and Ms. María Teresa García-Milá Lloveras. All will serve a term of office of 4 years as mandated by the bylaws.

33%
 Women on the Board

In addition, at the Annual General Meeting the shareholders resolved to appoint Mr. Mariano Marzo Carpio as Lead Independent Director and to reduce the number of Directors to fifteen.

The composition of the Board and its Committees is now as follows:



3. ENVIRONMENT

3.1 MACROECONOMIC ENVIRONMENT

In 2019, the **global economy** has recovered to some extent from the slowdown in 2018, yet remains slack. According to International Monetary Fund (IMF) estimates (World Economic Outlook April 2019), global growth in 2019 will reach 3.3%.

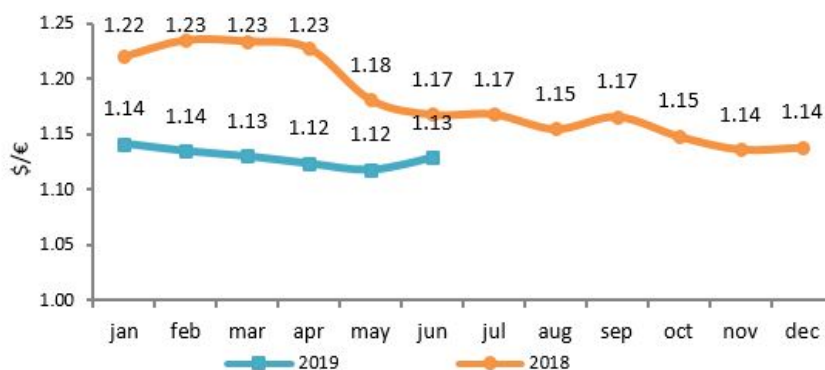
3.3%
Forecast world
growth in 2019

After the stagnation in activity and financial markets at the end of 2018, central banks in developed countries turned their monetary policy around. In 2018 the United States Federal Reserve (the Fed) raised benchmark rates four times and heralded further increases for 2019, while the European Central Bank ended its government debt purchase program (“quantitative easing”) and announced that in 2019 it would likewise start to raise rates. However, in early 2019 both central banks relaxed their stance and put monetary normalization on hold. In addition, since the risks of a trade war are still high, further stimulus measures have been rolled out, and both central banks are expected to cut rates soon.

This policy response may encourage a pick-up in activity in late 2019 and 2020. On balance, however, risks to growth are still on the rise, as any further upsurge in trade turbulence would be destructive and the leeway for policy response is narrow.

Given increasing uncertainty and lower growth in the Eurozone, during the first months of 2019 the **dollar strengthened**, with the euro/dollar pair reaching 1.11 in May. However, from that point onward the central banks’ change of approach has narrowed the interest rate differential and the U.S. has itself shown signs of a downtrend, so the exchange rate is tending to settle at around 1.13.

Average exchange rate (€/€) over time



€/€ 1.13
Average
exchange rate
first half

3.2 ENERGY LANDSCAPE

Brent crude

During the first half of 2019, oil prices displayed high volatility. Brent crude began the year trading at its lowest levels since 2017, at just above \$50 per barrel (\$/bbl); it then followed an upward path that led it to exceed \$75/bbl by the end of April. Subsequently, the price corrected to \$60/bbl in mid-June and ended the six-month period at \$65/bbl. At the end of the first half, the price of Brent crude stood at an average of \$66/bbl, 7% below the average for the same period in 2018. WTI crude averaged 57.4 \$/bbl, bringing the differential between the two to \$8.6/bbl in the period.

66 \$/bbl
Brent

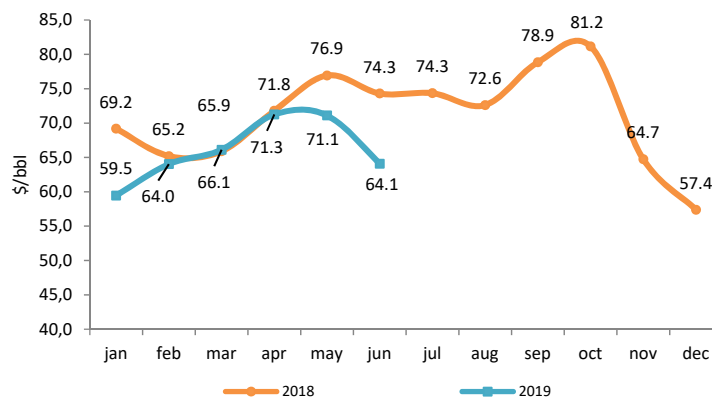
On the supply side, after prices fell in the fourth quarter of 2018, OPEC and several non-OPEC exporting countries decided in December to return to an output-cutting policy. OPEC+, as this group of countries is now known, undertook to withdraw about 1.2 million barrels per day from their combined output (-800 OPEC and -400 non-OPEC) from January 2019 onward. Compliance with the cuts has been significant; in fact, in the past few months the leaders on each side, Saudi Arabia for OPEC and Russia for non-OPEC,

cut output far more deeply even than originally agreed. OPEC+ containment of supply is the main reason behind the price increase to \$75/bbl at the end of April. Last year's December agreement had an original duration of six months; however, following the OPEC+ meeting of July 1 and 2 this year, cuts will be extended to March 2020.

Another factor influencing the supply side is the increase in U.S. output, although average growth in 2019 is expected to be less than last year's.

However, it is on the demand side that the greatest uncertainties lie. So far this year, most analysts and the major official energy agencies, such as the International Energy Agency (IEA) and the U.S. Energy Information Administration (EIA), have lowered their forecasts for global demand growth for this year and 2020. The revised forecast is a response to the worsening economic outlook, particularly in view of deteriorating confidence indices in the manufacturing sector in the context of the U.S.-China trade war.

Average Brent price over time



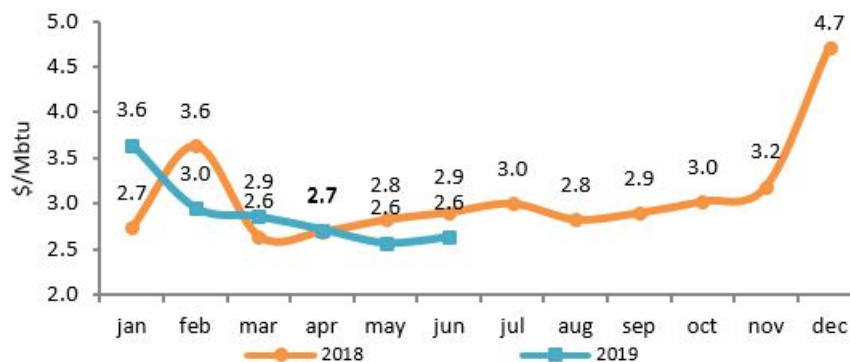
Natural Gas - Henry Hub

The Henry Hub price of U.S. natural gas averaged \$2.9/MBtu in the first half of 2019, unchanged from the same period in 2018, under heavy pressure from the existing situation of overproduction. Year-on-year and for the first half, dry gas production grew (+12%) far ahead of demand (+3%). A healthy rise in electricity demand was not enough to counteract the rapid growth of production. U.S. exports of liquefied natural gas increased (+56%), serving as support for the price of gas.

According to the latest data released in the United States, the balance adjustment seen in 2018 would not reoccur until 2020 if we see a slowdown in production growth, strong domestic demand and robustly expanding exports.

—
\$2.9/MBtu
 Henry Hub

Average Henry Hub price over time



4. FINANCIAL PERFORMANCE AND SHAREHOLDER REMUNERATION

4.1 INCOME

€ Million	1H 2019	1H 2018	Δ
Upstream	646	647	(1)
Downstream	715	762	(47)
Corporate and other	(246)	(277)	31
Adjusted net income	1,115	1,132	(17)
Inventory effect	63	202	(139)
Special items	(45)	212	(257)
Net income	1,133	1,546	(413)

Adjusted net income in line with previous year

Income for the first half of 2019 (1H 2019) arose in a **context** of considerable weakening of the Refining margin indicator in Spain (\$4.4/bbl vs. \$6.9/bbl in 1H 2018), lower crude oil prices (Brent 66.0 vs. 70.6 in 1H 2018) and a strengthening of the dollar against the euro (€/€ 1.13 vs. €/€ 1.21 in 1H 2018).

Repsol earned **adjusted net income** of €1,115 million (-2%), **net income** of €1,133 million (-27% vs. 2018, which included the gain on the disposal of Naturgy in that year) and **cash flow from operations** of €2,530 million (+47%). The half-year ended with **net debt** with leases standing at €7,464 million (€3,662 million ex leases).

EBITDA of €3,712 million was slightly lower (-3%) than in the same period of 2018.

EBITDA (€ Million)	TOTAL	
	1H 2019	1H 2018
Upstream	2,213	2,289
Downstream	1,580	1,649
Corporate and other	(81)	(127)
TOTAL	3,712	3,811

Upstream

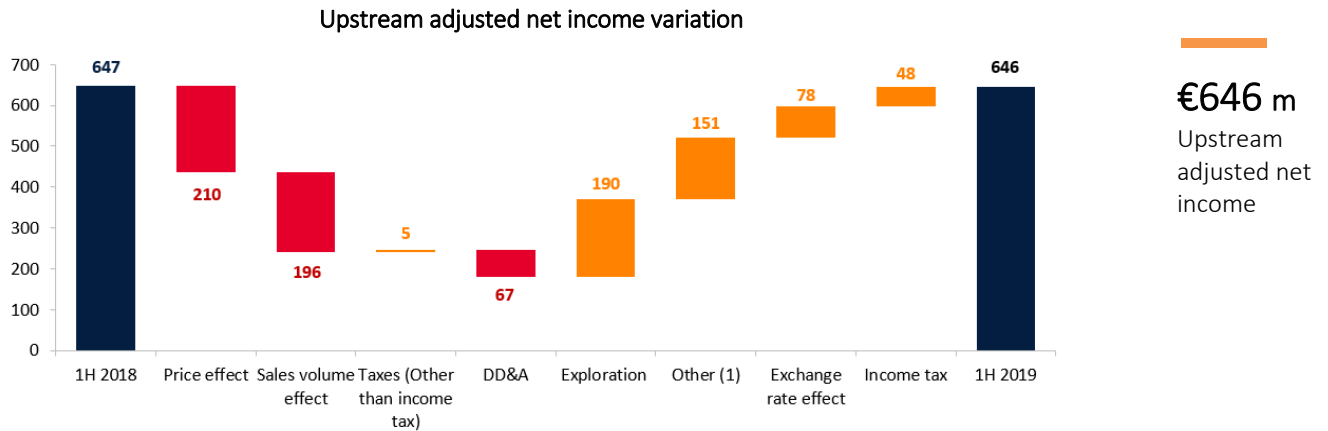
Average **production** in the first half of 2019 came to 697 kboe/d, 4% lower than in the same period of 2018. This decline occurred mainly in Libya, Venezuela, Trinidad and Tobago and the United States, and was partly offset by increases driven by new wells (Colombia and Canada), acquisitions (Norway) and the start of production at Buckskin (USA).

As to **exploration**, during the six-month period 10 exploration and 6 delineation/appraisal wells were drilled, 9 with positive results, 5 negative and 2 under evaluation.

For further information on the activities of the Upstream segment, see section 5.1.

Adjusted net income in Upstream businesses amounted to €646 million, in line with 1H 2018 (€647 million). Lower realization prices for crude oil (-7%) and lower marketed volumes were offset by lower exploration and production costs and decreased taxes, and by the strengthening of the dollar against the euro.

€1,133 m
Net income

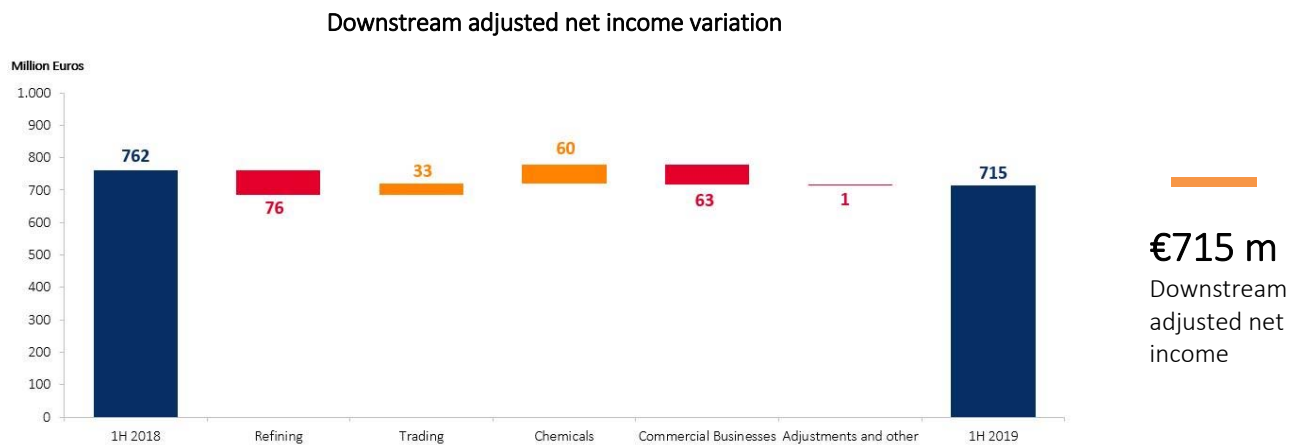


⁽¹⁾ Includes, inter alia, costs related to production and the results of investees and non-controlling interests.

Investments in the first half (€961 million) increased by 7% compared to 1H 2018, and were allocated primarily to production and/or development assets, mainly in the United States, Trinidad and Tobago, Norway, the UK, Algeria and Canada.

Downstream

Adjusted net income in the first half of 2019 was €715 million, compared to €762 million in the first half of 2018.



The change in income is mainly due to the following factors:

- In **Refining**, income decreased as a result of a sharp drop in margins due to the worst international environment (through narrowing of the heavy crudes spread and the fall in the middle distillates and naphtha spread) and maintenance shutdowns in Spain. This was partly offset by higher margins in Peru.
- In **Trading**, improved performance is mainly due to enhanced margins in LPG, middle distillates and crude oil operations.
- In **Chemicals**, the improvement in results is mainly due to increased sales, better margins and lower operating incidents in the period.

- In **Commercial Businesses**, the worst performance is mainly due to decreased income in Wholesale and Trading Gas, reflecting narrower margins brought on by a mild winter in North America.

Operating **investment** in the Downstream segment amounted to €482 million in the first half of 2019 (48% up on 1H 2018). The largest investments were undertaken to enhance energy efficiency, safety and the environment. Other highlights were the investments due to international expansion in Mexico and the new Electricity and Gas businesses.

Corporate and other

Income for the half-year period amounted to €-246 million (compared to €-277 million in 1H 2018). Corporate maintained its efforts to reduce corporate costs, despite of initiatives in digitization and technology. While financing costs continued to decrease, the financial result worsened as a result of application of IFRS 16 (see Note 2.2.1 to the 1H 2019 consolidated financial statements) and the weaker performance in the management of positions (currency and treasury shares).

Net income came to €1,133 million, 27% less than in 2018.

PERFORMANCE INDICATORS	2019	2018
Return on average capital employed (ROACE) (%)	7.6	8.2 ⁽¹⁾
Return on average capital employed (ROACE) (with leases) (%)	7.0	-
Earnings per share (€/share)	0.73	0.93

7.6%
ROACE

⁽¹⁾ Does not include discontinued operations (Naturgy). If included, ROACE would be 9%.

4.2 CASH FLOW

Free cash flow in 2019 came to €1,093 million, compared to €4,306 million in 2018, a figure mainly reflecting the proceeds of disposal of the stake in Naturgy (€3,816 million).

↑47%
Cash flow from operations

CASH FLOW (€ Million)	1H 2019	1H 2018
EBITDA	3,712	3,811
Changes in working capital	(659)	(1,414)
Dividends received	17	4
Income tax receipts/(payments)	(463)	(490)
Other receipts/(payments)	(77)	(185)
I. Cash flow from operations	2,530	1,726
Payments on investments	(1,503)	(1,258)
Proceeds from divestments	66	3,838
II. Cash flow from investments	(1,437)	2,580
FREE CASH FLOW (I+II)	1,093	4,306
Dividends and other equity instruments	(201)	(196)
Net interest and leasing	(287)	(280)
Treasury shares	(729)	(457)
CASH GENERATED⁽¹⁾	(124)	3,373

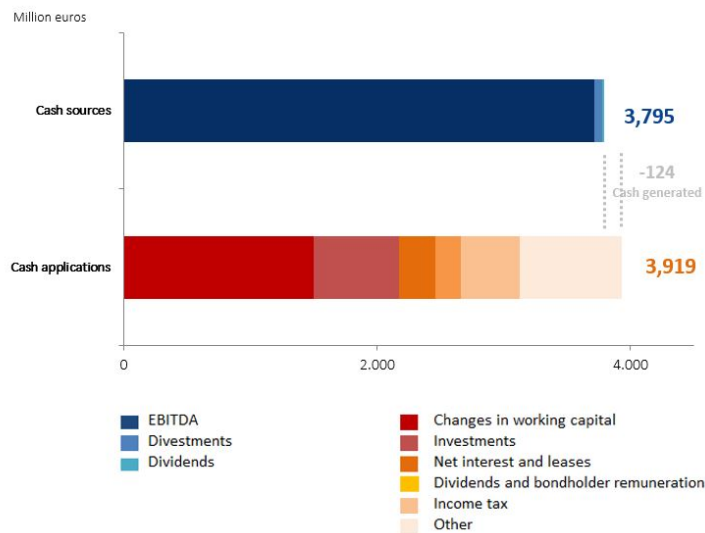
⁽¹⁾ Does not include derivatives on shares of Repsol, S.A. transacted with financial institutions, out of a total notional amount of 76 million shares, which form part of "cash flows from financing activities and other items" (+€695 million).

Cash flow from operations (€2,530 million) covered investments and payment of interest and dividends, and, partly, purchases of treasury shares. Improvement over 1H 2018: the maintenance of business EBITDA levels was positively impacted by less variation in working capital, mainly in the Downstream segment (impacted in 2018 by a considerable increase in the cost of inventories as a result of higher prices).

Cash flow from investments (€-1,437 million) reflects the international expansion in Mexico and the new businesses of Repsol Electricidad y Gas in Downstream segment, as well as the increased investment effort in productive assets in the Upstream segment. In 1H 2018, the highlight was the cash proceeds of disposal of the stake in Naturgy.

As a result of the foregoing, after satisfying financing costs (€-287 million), shareholder remuneration (€-201 million) and the acquisition of treasury shares (see section 4.4), cash generated amounted to €-124 million.

Cash sources and applications



4.3 FINANCIAL POSITION

During the first half of 2019, in line with the commitment to strengthen the Group’s financial structure, we continued to take effective steps toward achieving solid levels of debt and leverage.

€3,662 m
Net debt

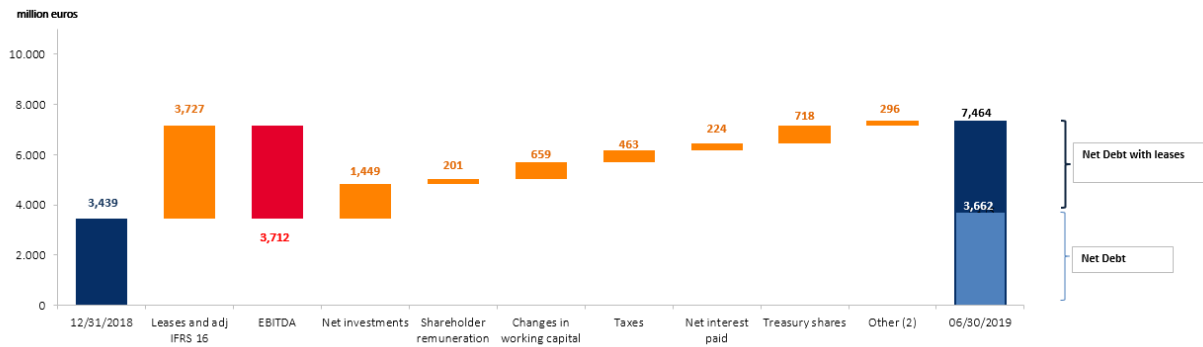
Following financial prudence and in order to maintain high liquidity, the Group’s liquid resources at year-end in the form of cash and available credit facilities far exceed the maturities of short-term debt.

A highlight of the first half was first application of IFRS 16, which led to changes in the Group’s debt metrics. For further information, see Note 2.2.1 to the interim consolidated financial statements for the first half of 2019 and Appendix II to this report.

Indebtedness

Net debt (€3,662 million) and **net debt with leases** (€7,464 million) remained at levels similar to 2018.

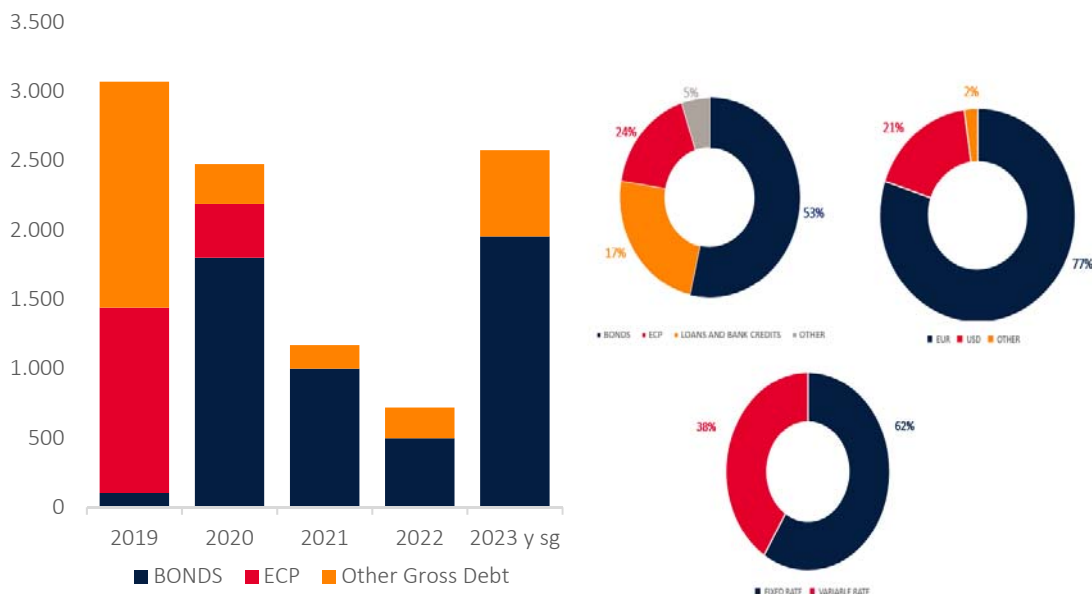
Change in net debt



- (1) Includes finance leases recognized under the previous accounting standard (€1,624 million) and leases recognized after the application of IFRS 16 (€2,103 million).
- (2) Includes, inter alia, new leases arranged in the period, other receipts/payments from operating activities and the exchange rate effect.

€10,000 m
Gross debt

The **breakdown and maturity of gross debt ex leases** (€10,000 million) at June 30, 2019 is as follows:



Main funding efforts

During the first six months of 2019, there have been no issues of bonds or debt securities. In February 2019 the bond issued by Repsol International Finance B.V. (RIF) was redeemed at maturity. This bond was issued in January 2012 under the EMTN Program for a nominal amount of €1,000 million and an annual fixed coupon of 4.875%.

Additionally, RIF runs a Euro Commercial Paper (ECP) Program guaranteed by Repsol, S.A., capped at €2,000 million; the outstanding balance at June 30, 2019 was €1,725 million.

For further information, see Note 4.1.5 to the interim consolidated financial statements for 1H 2019.

Financial prudence

Group liquidity, including committed undrawn credit facilities, stood at €7,832 million at June 30, 2019, which is enough to cover short-term debt maturities by a multiple of 1.63. Repsol had undrawn credit facilities amounting to €1,896 and €2,265 million at June 30, 2019 and December 31, 2018, respectively.

Liquidity
1.63 x
S/T debt
maturities

INDICATORS OF FINANCIAL POSITION	06/30/2019	06/30/2018
Net debt (€ million)	3,662	2,706
Net debt / Total capital employed - ex leases (%)	10.6	8.0
Debt interest ⁽¹⁾ / EBITDA (%)	3.1	3.8
Net financial debt - with leases (€ million)	7,464	-
Net debt – with leases / Total capital employed – with leases (%)	19.4	-

⁽¹⁾ Excludes finance cost of leases.

Credit rating

At present, the credit ratings assigned to Repsol, S.A. by the rating agencies are as follows:

PLAZO	STANDARD & POOR'S	MOODY'S	FITCH
	Repsol, S.A.	Repsol, S.A.	Repsol, S.A.
Long-term	BBB	Baa1	BBB
Short-term	A-2	P-2	F-3
Outlook	positive	stable	positive
Most recent change	12/12/2018	12/10/2018	10/19/2018

Treasury shares and own equity investments

At June 30, 2019, the balance of treasury shares stood at 79 million shares (including 76 million shares as the underlying of derivative contracts entered into by Repsol, S.A. with financial institutions) representing 5% of share capital as of that date. For further information, see Note 4.1 "Treasury shares and own equity investments" to the interim financial statements for the first half of 2019.

4.4 SHAREHOLDER REMUNERATION

Remuneration received by shareholders in the first half of 2019 as part of the “Repsol Flexible Dividend” scheme includes the amount of the irrevocable commitment to purchase bonus share rights undertaken by Repsol as part of the bonus issue concluded in January 2019 (€0.411 gross per right). Thus, in the first half of 2019, Repsol paid out a gross total of €175 million to shareholders and distributed 31,481,529 new shares, worth €453 million, to shareholders opting to take their dividend in the form of new company shares.

↑ 6%
Shareholder remuneration vs. 1H 2018

In addition, in July 2019, under the “Repsol Flexible Dividend” program, replacing what would have been the final dividend from 2018 profit, Repsol paid out €223 million in cash (€0.505 gross per right) to shareholders opting to sell their bonus share rights back to the Company and delivered 39,913,458 shares, worth €564 million, to shareholders opting to take their dividend in the form of new company shares (71.69% of shareholders).

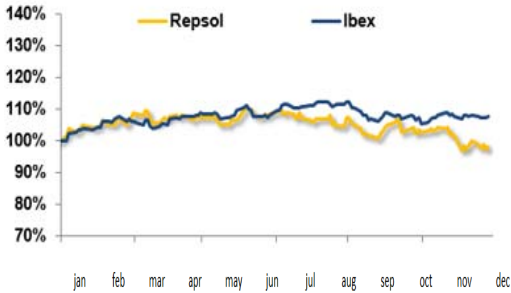
At the 2019 Annual General Meeting, the shareholders resolved to reduce capital through redemption of treasury shares¹ to offset the dilutive effect of bonus issues concluded in 2019 as part of the “Repsol Flexible Dividend” program described above. The main effect of the reduction in capital will be an increase in earnings per share, to the benefit of shareholders.

For additional information on the total remuneration received by shareholders and the bonus issues under the “Repsol Flexible Dividend” program, see Note 4.1 “Equity” to the interim financial statements for the first half of 2019.

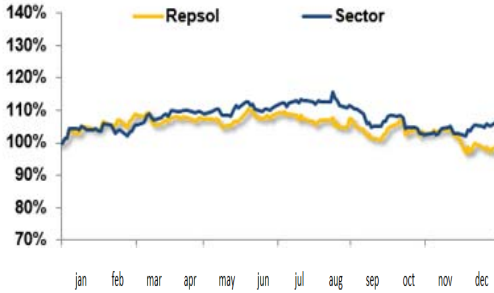
Our share price

The Repsol share price ended the first half of 2019 at levels similar to those at the beginning of the fiscal year.

Repsol share price vs. the Ibex 35



Repsol vs. the European oil sector¹



€14.81
Average share price

Source: Bloomberg

⁽¹⁾ European peers considered: BP, Shell, Total, Eni, Equinor, Galp and OMV.

¹ Through redemption of treasury shares available on March 27, 2019 and shares acquired through a share buyback program and, where appropriate, through settlement of derivatives arranged prior to March 27, 2019.

The Group's main stock market indicators in 2019 and 2018 are detailed below:

MAIN STOCK MARKET INDICATORS	1H 2019	1H 2018
Shareholder remuneration (€/share) ⁽¹⁾	0.411	0.388
Share price at period-end ⁽²⁾ (euros)	13.79	16.77
Period average share price (€)	14.81	15.44
High (€)	15.52	17.28
Low (€)	13.64	13.75
Number of shares outstanding at end of the period (million)	1,559	1,556
Market capitalization at period-end (million euros) ⁽³⁾	21,489	26,094
Book value per share (euros) ⁽⁴⁾	20.2	19.8

⁽¹⁾ For each period, shareholder remuneration includes dividends paid and the fixed price guaranteed by Repsol for the bonus share rights awarded under the "Repsol Flexible Dividend" program.

⁽²⁾ Share price at period-end in the continuous market of the Spanish stock exchanges.

⁽³⁾ Period-end closing market price per share, times the number of shares outstanding.

⁽⁴⁾ Equity attributed to the parent/Number of shares outstanding at period-end.

5. OUR BUSINESS PERFORMANCE

5.1 UPSTREAM

Main operating figures

Our performance in 1H 2019

	1H 2019	1H 2018
Total net production of liquids (kbb/d)	251	266
Total net daily gas production (kboe/d)	446	458
Total net daily hydrocarbon production (kboe/d)	697	724
Average crude oil price realization (\$/bbl)	59.6	64.2
Average gas realization price (\$/kscf)	3.2	3.3
Bonds, dry wells, and general and administration expenses (€Million) ⁽¹⁾	75	223

¹⁾ Only direct costs allocated to exploration projects.

€ Million	1H 2019	1H 2018	Δ
Operating income	1,174	1,236	(62)
Income tax	(547)	(594)	47
Investees and non-controlling interests	19	5	14
Adjusted net income ⁽¹⁾	646	647	(1)
Special items	75	(132)	207
Net income	721	515	206
Effective tax rate (%)	47	48	(1)
EBITDA	2,213	2,289	(76)
Investments	961	900	61

⁽¹⁾ Adjusted net income by geographical region:

Geographical region	1H 2019	1H 2018	Δ
Europe, Africa and Brazil	335	358	(23)
Latin America – Caribbean	217	260	(43)
North America	65	115	(50)
Asia and Russia	119	132	(13)
Exploration and other	(90)	(218)	128
Adjusted net income	646	647	(1)

Main events of the six-month period (1/3):

- Production** came to 697 kboe/d in the first half of 2019, representing a decrease of 4% (27 kboe/d) compared to the same period in 2018. The decrease is mainly due to the interruption of production in Libya in the first two months of the year for security reasons, lower demand for gas in Venezuela, maintenance shutdowns in Trinidad and Tobago and in the United States reflecting the decline of the Shenzi field, and disposal of the stake in Midcontinent. All this was partially offset by increasing production from the new wells in Akacias, Colombia, and Duvernay, Canada, the acquisition of Mikkell and Visund in Norway, and the start of production at Buckskin in the United States.
- Exploration campaign:** In the first half of the year, 10 exploration wells and 6 delineation/appraisal wells were drilled, 9 with positive results (5 exploration wells in the USA, Indonesia, Malaysia (2) and Norway and 4 appraisal wells in the USA), 5 with negative results (4 exploration wells in Bulgaria, Colombia (2) and Norway and 1 appraisal well in Algeria) and 2 with results under evaluation (1 exploration well in Bolivia and 1 appraisal well in Algeria). At the end of the period no exploration or appraisal drilling was underway.
- Acreage:** We acquired one block in Indonesia (exploration, operated), 6 blocks in Norway, including 4 in the 2018 APA Round (concessions in predefined areas) and two acquired (Mikkell Field), 5 blocks in Russia (1 exploration), 1 block in the USA (Moccasin field, Gulf of Mexico).

Main events of the six-month period (2/3):

NORTH AMERICA

United States: positive exploration campaign in Alaska and the Gulf of Mexico, start of production at Buckskin, and major asset exchange agreement

- The presence of hydrocarbons was confirmed in the southern sector of the Pikka unit in Alaska, where the first delineation well, known as Pikka-B, was completed in January and the Pikka-C appraisal drilling was completed in April, both with positive results.
- In June, hydrocarbon production began at the Buckskin deepwater project (in which Repsol holds a 22.5% stake, LLOG being the operator) in the Keathley Canyon area in the U.S. Gulf of Mexico.
- In late April, an important discovery was announced at the Blacktip exploration well, located in deep waters of the Gulf of Mexico (USA) 400 km south of Houston, with a net crude area more than 122 meters thick. Repsol has an 8.5% stake in this hydrocarbon discovery in the Alaminos Canyon basin, alongside Shell (operator), Chevron and Equinor. The project is at the stage of appraisal and delineation of reserves. The Blacktip-1 ST1 appraisal drilling was also positive in June.

LATIN AMERICA - CARIBBEAN

Trinidad and Tobago: start of gas production at Angelin

- In February, the BPTT consortium (30% Repsol) announced the start of gas production from its Angelin platform (West Block), which is remotely operated and located 60 km off the southeastern coast of the island of Trinidad, on a 65-meter sheet of water.

Colombia: record production at Akacias and signing of new contracts for two marine blocks

- In March, at the Akacias project (Colombia), in which Repsol holds a 45% stake, a record total production of 20 kbbl per day was achieved as a result of the drilling work in Phase I of the Development Plan approved in 2018. The final objective is to achieve in the medium term a total output of 50 kbbl per day.
- In April Repsol signed two contracts with Colombia's National Hydrocarbons Agency (ANH) for exploration and production in the marine blocks GUA OFF-1 and COL-4, located off the Colombian coast in the Caribbean Sea. Repsol is the operating company for block GUA-OFF-1 with a 50% stake (Ecopetrol owns the remaining 50%) and for block COL-4, also with a 50% stake (ExxonMobil owns the remaining 50%).

Venezuela: complex environment

In the first half, Repsol's average production in Venezuela reached 59 kboe per day (62 kboe in 2018). Political instability, economic recession and inflation continued throughout the period. For further information, see Note 5.3 to the interim consolidated financial statements for 1H 2019.

ASIA AND OCEANIA

Indonesia: the country's largest gas discovery in the Sakakemang block

- In February, the largest gas discovery in Indonesia in 18 years was announced; it is also one of the 10 largest in the world of the past 12 months. The well, called Kaliberau Dalam-2X (KBD-2X), is in the Sakakemang onshore block on the southern island of Sumatra. Repsol is the operator with a 45% stake. This discovery has a preliminary estimate of recoverable resources of at least 2 trillion cubic feet (TCF) of gas.

Russia: deal with Gazprom Neft and Shell for joint exploration of two blocks in Siberia

- In June Repsol signed a memorandum of understanding with Gazprom Neft and Shell to form a joint venture for the exploration of two adjoining license blocks, Leskinsky and Pukhutsyayakhsky, located in the Gyudan Peninsula on the coast of Siberia. Gazprom Neft will have a 50% stake and Repsol and Shell 25% each. The agreement is expected to be completed in 2020 when authorizations are in place.

Main events of the six-month period (3/3):

EUROPE

Norway: new awards, extensions, acquisitions and exploration discovery

- In January, the Norwegian Ministry of Petroleum and Energy announced that Repsol would be awarded stakes in three new exploration licenses and the extension of an existing one. The new licenses are in the large Egersund Basin (3) and the Barents Sea (1) and further strengthen Repsol's position in the country.
- In February Repsol announced a deal to acquire from Total 7.65% of the Mikkell field in Norway, which currently produces a total of 50 kbbl per day.
- In March, an exploration discovery was made with the Telesto well (7.7% Repsol) in the PL 120 production license in the Tampen area, in the North Sea (Norway). Repsol participated in the oil discovery together with Equinor (operator), Petoro and ConocoPhillips. The preliminary estimate is that recoverable resources could be between 12 million and 28 million barrels of oil.

Greece: signing of a new exploration contract

- In April, Repsol signed an exploration contract in Greece for the offshore Ionian block (located in the Ionian Sea north of Kefalonia and west of the islands of Lefkada and Corfu), thus increasing Repsol's presence in this country, where it already has two onshore blocks. The Ionian block has an area of 6,671 km². Repsol has a 50% stake (operator), while the Greek company Hellenic holds the remaining 50%. The agreement is pending ratification by the Greek Parliament.

Bulgaria: new exploration block acquired

- In April, Repsol announced that it had acquired 20% of the Khan Kubrat offshore exploration block in Bulgaria, with Shell participating as operator with 50% and Woodside Petroleum taking the remaining 30%.

AFRICA

Libya: complex environment

- In the first half, Repsol's average production in Libya reached 24 kbbl per day (36 kbbl per day in 2018). The situation of political uncertainty continues, affecting the security conditions of the country and the oil industry. For further information, see Note 5.3 to the interim consolidated financial statements for 1H 2019.

5.2 DOWNSTREAM

Main figures

	1H 2019	1H 2018
Refining capacity (kbb/d)	1,013	1,013
Europe (including the stake in ASES)	896	896
Rest of world	117	117
Conversion rate in Spain (%)	63	63
Conversion utilization Spanish Refining (%)	102.0	103.9
Distillation utilization Spanish Refining (%)	89.3	90.4
Processed crude oil (million t)	22.1	22.4
Europe	19.8	20.1
Rest of world	2.3	2.3
Refining margin indicator (\$/b)		
Spain	4.4	6.9
Peru	6.0	2.0
Number of service stations	4,871	4,759
Europe	4,113	4,182
Rest of world	758	577
Oil product sales (kt)	24,251	25,217
Europe	21,332	22,036
Rest of world	2,919	3,181
Petrochemical product sales (kt)	1,458	1,313
Europe	1,192	1,085
Rest of world	266	228
LPG sales (kt)	699	739
Europe	684	727
Rest of world	15	12
Gas sales in North America (Tbtu)	287	258
LNG regasified (100%) in Canaport (Tbtu)	17.6	12.5
Electricity generation (GWh) ⁽¹⁾	2,186	-
Installed electricity capacity (MWh)	2,952	600

⁽¹⁾ Electricity generation by Repsol Electricidad y Gas. Does not include energy produced at cogeneration plants (which is included in installed capacity).

Our performance in 2019

€ Million	1H 2019	1H 2018	Δ
Operating income	955	985	(30)
Income tax	(231)	(229)	(2)
Investees and non-controlling interests	(9)	6	(15)
Adjusted net income ⁽¹⁾	715	762	(47)
Inventory effect	63	202	(139)
Special items	(88)	(18)	(70)
Net income	690	946	(256)
Effective tax rate (%)	24	23	1
EBITDA	1,580	1,649	(69)
Investments	482	325	157

⁽¹⁾ Adjusted net income by geographical region:

Geographical region	1H 2019	1H 2018	Δ
Europe	680	723	(43)
Rest of the world	35	39	(4)
Adjusted net income	715	762	(47)

Main events of the six-month period (1/2):

Refining: high utilization levels and new bio ingredients in the formulation of fuels

- Utilization levels held constant and shutdowns were conducted at the refineries in La Coruña and Bilbao.
 - At La Coruña, multiple investments were made in technological innovation and safety aimed at improving the integrity, energy efficiency and operational effectiveness of the facilities. The coke unit concentrated most of the actions.
 - The Bilbao Refinery shut down its conversion facility for maintenance work and updating of production facilities, a highlight being the environmental improvements implemented in the Fluid Catalytic Cracking (FCC) unit, resulting in reduced particulate emissions. In addition, a shutdown has begun to implement modifications designed to improve the efficiency of the units.
- We started to use advanced bio ingredients in the formulation of our marketed fuels. These bio ingredients do not compete with food uses and are waste by-products of industrial and domestic processes.

Chemicals: higher product sales and new certifications

- Membership of the Circular Plastics Alliance (CPA), an initiative launched by the European Commission last December 11 to encourage the use of recycled plastic in the EU market.

Main events of the six-month period (2/2):

- Food Safety Certification (FSSC 22000) was obtained for the polyolefin centers in Puertollano and Sines. In 2018 the certificate was achieved at the Tarragona industrial complex and, with the addition of these two newly certified sites, Repsol became the first polyolefin producer holding this certification for all its industrial facilities, demonstrating its commitment and leadership in the field of food safety.
- Awarded “Best Producer of Low Density Polyethylene in Europe” prize by customers in recognition of our work as a reliable supplier.

Mobility: international expansion, electric mobility and digitization

- At the end of the half year Repsol operates 195 service stations out of 278 contracts signed in Mexico.
- The Waylet payment app topped 1.2 million registered users at the close of the first half. Users can use Waylet to pay for goods and services at all Repsol network service stations and more than 3,500 affiliated retailers.
- We signed an agreement with El Corte Inglés whereby from June 17 onward their department store customers can make payment using our Waylet smartphone app. There are now several deals in place between the two groups, in an increasingly close strategic alliance.
- Repsol unveiled the first ultra-fast charging point for electric vehicles on the Iberian Peninsula, with a maximum power of 700 kilowatts (kW). The facility, located at the Repsol service station in Lopidana (Alava), allows electric vehicles that can withstand that level of power to charge in five to ten minutes. Repsol's charging network, through our investee IBIL, now operates more than 200 public access charging points, of which 33 points of sale are located at Repsol service stations.
- Repsol and the Confortauto repair garage network (110 facilities throughout Spain) have formed an alliance to support the adaptation of gasoline vehicles to LPG. The DGT environmental label thus obtained allows drivers access to traffic-restricted areas in large cities.

Electricity and gas: new renewable energy projects and growth of the customer base

- The current portfolio of electricity subscribers comes to 890,000 (16% more than at the beginning of the marketing business eight months ago with the acquisition of Viesgo's unregulated low-emission electricity generation businesses and regulated and unregulated gas and electricity marketing businesses).
- A new deal was struck with the Corte Inglés for power and gas subscriptions to become available at 16 locations: Madrid, Valencia, Zaragoza, Alcorcón, Seville, Getafe, Huelva, Jerez de la Frontera, Malaga, Murcia, Alicante, Badajoz, Albacete, Santa Cruz de Tenerife and Las Palmas.
- Repsol announced its involvement in the construction of one of the world's largest floating wind farms off the north coast of Portugal, 20 kilometers from Viana do Castelo. The facility will have an installed capacity of 25 MW and is expected to be operational by the end of this year.
- Three renewable power generation projects were acquired in Spain, with a total capacity of 794 MW. The projects are at different stages of execution and consist of a 335 MW wind farm straddling the provinces of Zaragoza and Teruel, another wind farm located between Palencia and Valladolid with a total installed capacity of 255 MW, and a 204 MW solar project in Cadiz. The projects will come online over the next four years and will be operated by Repsol Electricidad y Gas.

These projects, together with the photovoltaic project in Valdesolar (Badajoz) and the floating wind farm on the coast of Portugal, add up to 1,083 MW under development, in addition to the 2,952 MW of installed operating capacity currently available to the Group.

6. SUSTAINABILITY

Main events of the half-year period:

- Global Sustainability Plan:** The Executive Committee approved a new, more cross-sectional Global Sustainability Plan, incorporating objectives in the supply chain, aiming at a broader horizon (up to 2025) and integrating the Safety and Environment objectives resulting from the strategic rethinking process carried out in 2018. The new plan sets 31 medium-term objectives and 35 annual lines of action, articulated around the six axes of the Sustainability Model, aimed at the business units, the supply chain, employees and the wider community. All actions in the plan are tied to the United Nations Sustainable Development Goals to which the Company is committed.



The Global Sustainability Plan is the Company’s roadmap from which Local Sustainability Plans are rolled out for each country or site, while remaining sensitive to the specific circumstances and needs of each location where the Group operates. In the first half, new plans were published in Canada, the UK and Algeria. These new additions mean there are now 16 countries and 6 industrial complexes with Sustainability commitments (more than 330 annual actions have been specified, distributed across the 6 axes of the model), which in the last two years makes for growth of more than 40% in the number of plans.

In addition, six consolidated documents were drawn up, one for each axis, setting out the actions established in the 2018 Local Sustainability Plans.

The Global Plan and the Local Sustainability Plans are available at www.repsol.com.

- Sustainable Development Goals.** With the involvement of the Group’s Executive Committee, the United Nations 2030 Agenda was made known among the Group’s employees, alongside our plan to help achieve those goals. In addition, a support plan has been set in motion that seeks to integrate commitment, awareness-raising and training in SDGs with the Company’s culture. The aim is to align with the needs of different stakeholders and identify metrics to measure contributions to the 2030 Agenda in those SDGs where as an energy company we can make a genuine difference.
- Climate change.** The scope of our annual verifications of the greenhouse gas (GHG) emissions inventory in the Upstream businesses has widened (99% of the Company’s emissions inventory now undergoes checks). In May, Repsol published the book “Towards a Low-Emission Future,” our roadmap for tackling climate change, setting out our policies and commitments facing the twofold challenge of supplying the energy that society needs while cutting greenhouse gas emissions in line with the aims of the Paris Agreement. In June we published the second report on our “green” bond issued in May 2017: the proceeds are used to fund or refinance projects aimed at preventing or reducing GHGs in the Company’s activities.

Further information is available at www.repsol.com.

- **People.** The 2020 target set in the Global Sustainability Plan is to increase the proportion of women on the Board and in leadership positions to 30%. The latest changes on the Board (see section 2) have increased the proportion of women to 33%.

During the first six months of 2019 there were 2,014 new hires (10% more than in 1H 2018), of which 37% were under permanent contracts. We reached a total headcount of 25,797 at the close of the six-month period.

- **Respect for Human Rights and Community Relations.** Human Rights and Community Relations Policy has been updated: (i) express mention of international human rights standards; (ii) reference to stakeholders within the scope of the policy; (iii) references to the right to water; and (iv) to non-obstruction of the activities of human rights advocates.
- **Safe operation.** During the first half there was a fatality in Marcellus, Canada, as a result of an accident involving a contractor's water transport truck.

Total Frequency Index -Personal safety performance indicator- (TFI) decreased by 21% with respect to the 2018 indicator, with a 10% decrease in the number of incidents involving lost days and a 4% reduction in hours worked. The process accident rate as measured by the PSIR indicator (TIER₁ + TIER₂) is similar to the 2018 indicator.

As to safety culture, a new Safety Leadership program was launched, named "Safety Leap," aimed at all the Company's leaders. The first session was attended by the Executive Committee. We published a "White Paper on Safety Culture," reflecting the Company's understanding of safety culture, the model it has designed, and the current areas of work. The second edition of the World Safety and Environment Days took place in June. Attended by more than 400 professionals, the event aimed to tackle the new challenges and lead the roll-out of strategic rethinking on safety and the environment through to 2025.

- **Innovation and technology.** Repsol acquired 28% of Begas Motor (a company with a strong research capability in alternative fuel engines, engine control electronics, communication buses and diagnostic systems, especially for LPG systems). In addition, Repsol acquired 8% of Ampere Power Energy, S.L., which designs, produces and markets stationary electricity storage systems. Both investments form part of the Venture Capital fund created for the period 2016-2020, whereby Repsol committed to a contribution of €85 million.
- **Responsible tax policy.** In the first half of 2019, Repsol paid more than €6,100 million in taxes and similar public charges, having filed more than 21,000 tax returns.

Repsol voluntarily partnered with the tax agencies of five OECD countries in an OECD-sponsored pilot program for multilateral joint research and assessment of tax risks at multinational companies (International Compliance Assurance program, ICAP). The tax agency partners rated Repsol as a Group with low tax non-compliance risk.

Repsol Petróleo, Repsol Trading and Petronor were licensed as Authorized Economic Operators (AEOs) for streamlined customs processing and for security and protection. The AEO license signals recognition as a reliable operator in foreign trade, proves compliance with key security measures and good practices in the international supply chain of goods and acknowledges willingness to cooperate with customs authorities.

For further information, see the *Responsible tax policy* section at www.repsol.com.

- **Ethics and compliance.** During the six-month period, work continued to disseminate the Code of Ethics and Conduct internally, with specific training courses for employees, and with further emphasis on personal data protection and anti-corruption.

APPENDIX I: RISKS

Information on the Group's risks is provided in Appendix II of the 2018 Management Report. The information is updated and supplemented by Note 5.1 — *"Litigation,"* Note 5.2 — *"Tax-related administrative acts"* and Note 5.3 — *"Geopolitical risks"* of the consolidated interim financial statements for the first half of fiscal year 2019. Information regarding the volatility of crude oil prices is available in section 3.2. — *"Energy landscape"* of this document.

APPENDIX II: ALTERNATIVE PERFORMANCE MEASURES

Repsol's financial information contains indicators and measures prepared in accordance with applicable financial reporting standards and regulations, as well as other measures prepared in accordance with the Group's Reporting Model,¹ defined as Alternative Performance Measures (APMs). APMs are measures that are "adjusted" compared to those presented in accordance with IFRS-EU or with Supplementary Information on Oil and Gas Exploration and Production Activities,² and the reader should therefore consider them in addition to, but not instead of, the latter.

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

Some of the APMs have been affected by the application of IFRS 16 (see Note 2.2.1 to the interim financial statements for the first half of 2019), which has meant that some of the comparative measures between periods are less representative.

For historical quarterly APM information see www.repsol.com.

1. Financial performance measures

Adjusted net income

Adjusted net income is the key financial performance measure which Management (the Executive Committee) consults when making decisions in accordance with IFRS 8 "Operating segments."

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 operational and economic indicators within the same perspective and degree of detail as those for companies consolidated under the full consolidation method. Thus, the Group considers that the nature of its businesses and the way in which results are analyzed for decision-making purposes is adequately reflected.

Adjusted net income is calculated as the **Net income from continuing operations at Current Cost of Supply** (or CCS)³ net of taxes and non-controlling interests. It excludes certain income and expenses (**Special Items**) and the **Inventory effect**. **Financial income/(expense)** is allocated to the adjusted net income of the "Corporate and other units" segment.

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 that use different inventory measurement methods (see the following section).

¹ See Note 2.3 "Segment reporting" of the financial statements for the first half of 2019.

² The hydrocarbon Exploration and Production information, which is compiled and disclosed by the Group annually, is prepared in accordance with the principles generally accepted in the oil and gas industry and, specifically, the disclosure criteria outlined in Topic 932 issued by the Financial Accounting Standards Board (FASB).

³ Current Cost of Supply (CCS), though commonly used in the oil and gas industry to present the results of Downstream businesses which must work with huge inventories subject to continual price fluctuations, is not a metric accepted by EU accounting standards. However, it does enable comparability with industry peers and the monitoring of businesses independently of the impact of price variations on their inventories. As a result, Adjusted Net Income does not include the "Inventory Effect." This measure is equivalent to EBIT at CCS.

Inventory effect

This is the difference between the **Net income from continuing operations at CCS** and the result calculated as the weighted average cost (WAC, which is an inventory valuation method used by the company to determine its results in accordance with EU accounting regulations). It only affects the Downstream segment, such that for **Net income from continuing operations at CCS** the cost of volume sold during the period is determined in accordance with supply costs and production costs 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 non-controlling interests. Repsol Management believes that this measure is useful for investors, considering the significant variations arising in the prices of inventory between periods.

WAC is a generally accepted EU accounting method that measures inventories based on purchase prices and historic production costs: inventory is carried at the lower of said cost and market value.

Special items

These are significant items that are presented separately to aid understanding of the ordinary course of business. They include gains/losses arising from divestments, workforce restructuring charges, impairment, and provisions for risks and expenses and others. Special items are presented net of taxes and non-controlling interests.

Special items for the first half and second quarter of 2019 and 2018 are presented below:

<i>Million euros</i>	H1		Q2	
	2019	2018	2019	2018
Divestments	31	7	1	5
Workforce restructuring charges	(29)	(17)	(24)	(15)
Impairment	(3)	(123)	(1)	(121)
Provisions and other	(44)	(67)	(8)	(37)
Discontinued operations	-	412	-	344
TOTAL	(45)	212	(32)	176

The following is a reconciliation of Adjusted Net Income under the Group's reporting model to profit as stated under IFRS-EU:

Million euros	First half											
	Adjusted net income		ADJUSTMENTS								IFRS-EU profit/loss	
			Joint ventures reclassification		Special items		Inventory effect ⁽²⁾		Total adjustments			
2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	
Operating income	2,002 ⁽¹⁾	2,043 ⁽¹⁾	(478)	(286)	18	(242)	90	282	(370)	(246)	1,632	1,797
Financial income/(expense)	(228)	(175)	68	60	(9)	146	-	-	59	206	(169)	31
Profit from entities accounted for using the equity method	17	21	220	172	-	-	-	-	220	172	237	193
Profit before tax	1,791	1,889	(190)	(54)	9	(96)	90	282	(91)	132	1,700	2,021
Income tax	(668)	(746)	190	54	(54)	(104)	(23)	(72)	113	(122)	(555)	(868)
Profit from continuing operations	1,123	1,143	-	-	(45)	(200)	67	210	22	10	1,145	1,153
Profit attributed to non-controlling interests	(8)	(11)	-	-	-	-	(4)	(8)	(4)	(8)	(12)	(19)
Profit from continuing operations attributable to the parent	1,115	1,132	-	-	(45)	(200)	63	202	18	2	1,133	1,134
Profit from discontinued operations	-	-	-	-	-	412	-	-	-	412	-	412
TOTAL PROFIT ATTRIBUTABLE TO THE PARENT COMPANY	1,115	1,132	-	-	(45)	212	63	202	18	414	1,133	1,546

⁽¹⁾ Income from continuing operations at current cost of supply (CCS).

⁽²⁾ The inventory effect represents an adjustment to "Supplies" and "Changes in inventory of finished goods and work in progress" in the income statement under IFRS-EU.

Million euros	Second quarter											
	Adjusted net income		ADJUSTMENTS								IFRS-EU profit/loss	
			Joint ventures reclassification		Special items		Inventory effect ⁽²⁾		Total adjustments			
2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	
Operating income	977 ⁽¹⁾	986 ⁽¹⁾	(238)	(106)	20	(173)	83	294	(135)	15	842	1,001
Financial result	(131)	(61)	37	20	6	153	-	-	43	173	(88)	112
Net income from equity affiliates using the equity method	11	10	94	45	-	-	-	-	94	45	105	55
Earnings before tax	857	935	(107)	(41)	26	(20)	83	294	2	233	859	1,168
Income tax	(359)	(380)	107	41	(58)	(148)	(21)	(75)	28	(182)	(331)	(562)
Profit from continuing operations	498	555	-	-	(32)	(168)	62	219	30	51	528	606
Income attributed to non-controlling interests	(1)	(6)	-	-	-	-	(2)	(8)	(2)	(8)	(3)	(14)
Net income from continuing operations attributable to the parent	497	549	-	-	(32)	(168)	60	211	28	43	525	592
Profit from discontinued operations	-	-	-	-	-	344	-	-	-	344	-	344
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT COMPANY	497	549	-	-	(32)	176	60	211	28	387	525	936

⁽¹⁾ Net income from continuing operations at current cost of supply (CCS)

⁽²⁾ The inventory effect represents an adjustment to "Supplies" and "Changes in inventory of finished goods and work in progress" in the income statement under IFRS-EU.

EBITDA:

EBITDA, “Earnings Before Interest, Taxes, Depreciation, and Amortization,” is a financial indicator which determines the operating profit of a company prior to deducting interest, taxes, impairments, depreciation and amortization. Since it excludes financial and tax items and accounting expenses not involving cash outflows, it is used by Management to evaluate the Company’s performance over time and compare it with other Oil & Gas sector companies.

EBITDA is calculated as Operating Income + Depreciation/Amortization + Impairments + and other items which do not represent cash inflows or outflows from operations (restructuring costs, gains/losses from divestments, provisions, etc.). Operating income is the result from continuing operations at weighted average cost (WAC). In cases in which **Net income from continuing operations at Current Cost of Supply (CCS)** is used, it is called **EBITDA at CCS**.

	First half							
	Group Reporting Model		Joint ventures reclassification and others		Inventory effect		IFRS-EU ⁽¹⁾	
	2019	2018	2019	2018	2019	2018	2019	2018
Upstream	2,213	2,289	(918)	(858)	-	-	1,295	1,431
Downstream	1,580	1,649	(24)	(4)	-	-	1,556	1,645
Corporate and other units	(81)	(127)	(2)	54	-	-	(83)	(73)
EBITDA	3,712	3,811	(944)	(808)	-	-	2,768	3,003
EBITDA CCS	3,622	3,529	(944)	(808)	90	282	2,768	3,003

⁽¹⁾ Corresponds to “Profit before tax” and “Adjustments to profit” in the consolidated Statement of Cash Flows prepared under IFRS-EU.

	Second quarter							
	Group Reporting Model		Joint ventures reclassification and others		Inventory effect		IFRS-EU ⁽¹⁾	
	2019	2018	2019	2018	2019	2018	2019	2018
Upstream	1,149	1,188	(459)	(424)	-	-	690	764
Downstream	780	916	(13)	(3)	-	-	767	913
Corporate and other units	(27)	(97)	(22)	41	-	-	(49)	(56)
EBITDA	1,902	2,007	(494)	(386)	-	-	1,408	1,621
EBITDA CCS	1,819	1,713	(494)	(386)	83	294	1,408	1,621

⁽¹⁾ Corresponds to “Profit before tax” and “Adjustments to profit” in the consolidated Statement of Cash Flows 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 the efficiency of capital employed (equity and debt).

ROACE (“Return on average capital employed”) is calculated as: (Adjusted Net Income—taking the expense for operating leases as the instalments specified in the contracts, instead of the amortization of the right of use recognized under IFRS 16—excluding Finance Income + Inventory Effect + Special Items) / (**Average capital employed** for the period in continuing operations, which measures own and external capital employed by the company, and comprises Total Equity + **Net debt**). This includes capital employed in joint ventures or other companies managed operationally as joint ventures.

NUMERATOR (€ Million)	1H 2019	1H 2018	
Operating profit IFRS-EU	1,632	1,797	
Reclassification of joint ventures	478	286	
Income tax ⁽¹⁾	(802)	(852)	
Net income from companies accounted for using the equity method, net of taxes	17	21	
IFRS 16 impact	(27)	-	
I. ROACE result at average weighted cost	1,298	2,636 ⁽³⁾	2,752 ⁽³⁾
<hr/>			
DENOMINATOR (€ Million)	1H 2019	1H 2018	
Total equity	31,035	31,158	
Net financial debt	3,662	2,706	
Capital employed at year end	34,697	33,864	
<hr/>			
II. Average capital employed ⁽²⁾	34,525	33,485	
ROACE (I/II)	7.6%	8.2%	

⁽¹⁾ Does not include income tax corresponding to financial results.

⁽²⁾ This is the average balance of capital employed in continuing operations at the beginning and end of the period.

⁽³⁾ Annualized figure except for the Special Items.

ROACE with leases is calculated as: (Adjusted Net Income, excluding Financial Result + Inventory Effect + Special Items) / (Average capital employed in continuing operations during the period, which equals Total Equity + **Net Debt with leases**). This includes joint ventures and other companies operationally managed as joint ventures.

NUMERATOR (Million euros)	1H 2019	
Operating profit IFRS-EU	1,632	
Reclassification of joint ventures	478	
Income tax ⁽¹⁾	(802)	
Net income from companies accounted for using the equity method, net of taxes	17	
I. ROACE result at weighted average cost	1,325	2,690⁽³⁾
<hr/>		
DENOMINATOR (Million euros)	1H 2019	
Total equity	30,927	
Net debt with leases	7,464	
Capital employed at period-end (with leases)	38,391	
<hr/>		
II. Average capital employed ⁽²⁾	38,158	
ROACE with leases (I/II)	7.0	

⁽¹⁾ Does not include income tax corresponding to financial results.

⁽²⁾ This is the average balance of capital employed in continuing operations at the beginning and end of the period.

⁽³⁾ Annualized figure (except for the Special Items).

2. Cash flow measures

Cash flow from operations, free cash flow, cash generated and liquidity:

The three main measures used by Group Management to evaluate cash flow in the period are **cash flow from operations**, **free cash flow** and **cash generated**.

Cash flow from operations measures the generation of cash flow corresponding to operations and is calculated as: EBITDA +/- Changes in working capital + Receipt of dividends + Receipt/-payment of income tax + Other receipts/-payments relating to operating activities.

Free cash flow measures cash flow generation from operating and investment activities, and is useful for evaluating the funds available for paying shareholder dividends and servicing debt.

Cash generated is **free cash flow** less dividend payments, payment of remuneration for other equity instruments, net interest payments, and payments for leases and treasury shares. This APM measures the funds generated by the Company before financial transactions (mainly debt issuance and repayments).

The following is a reconciliation of *free cash flow* and *cash generated* to the consolidated statements of cash flow prepared under IFRS-EU:

	First half					
	Adjusted cash flow		Joint ventures reclassification and others		IFRS-EU cash flow statement	
	2019	2018	2019	2018	2019	2018
I. Cash flows from / (used in) operating activities	2,530	1,726	(658)	(357)	1,872	1,369
II. Cash flows from / (used in) investing activities	(1,437)	2,580	372	(1,185)	(1,065)	1,395
Free cash flow (I+II)	1,093	4,306	(286)	(1,542)	807	2,764
Cash generated	(124)	3,373	(266)	(1,538)	(390)	1,835
III. Cash flows from / (used in) financing activities and others ⁽¹⁾	(1,560)	(3,215)	269	1,572	(1,291)	(1,643)
Net increase / (decrease) in cash and cash equivalents (I+II+III)	(467)	1,091	(17)	30	(484)	1,121
Cash and cash equivalents at the beginning of the period	5,021	4,820	(235)	(219)	(4,786)	4,601
Cash and cash equivalents at the end of the period	4,554	5,911	(252)	(189)	(4,302)	5,722

	Second quarter					
	Adjusted cash flow		Joint ventures reclassification and others		IFRS-EU cash flow statement	
	2019	2018	2019	2018	2019	2018
I. Cash flows from / (used in) operating activities	1,369	807	(258)	(217)	1,111	590
II. Cash flows from / (used in) investing activities	(869)	3,180	(105)	(1,227)	(974)	1,953
Free cash flow (I+II)	500	3,987	(363)	(1,444)	137	2,543
Cash generated	111	3,839	(342)	(1,440)	(231)	2,399
III. Cash flows from / (used in) financing activities and others ⁽¹⁾	(775)	(2,122)	467	1,477	(308)	(645)
Net increase / (decrease) in cash and cash equivalents (I+II+III)	(275)	1,865	104	33	(171)	1,898
Cash and cash equivalents at the beginning of the period	4,829	4,046	(356)	(222)	4,473	3,824
Cash and cash equivalents at the end of the period	4,554	5,911	(252)	(189)	4,302	5,722

⁽¹⁾ Includes dividends paid out 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) issuance/(redemption) of financial liabilities and the effect of exchange rate fluctuations.

The Group measures **liquidity** as the sum of “Cash and cash equivalents,” on-demand cash deposits at financial institutions, and short and long-term credit facilities that remain undrawn at the end of the period, i.e., credit facilities granted by financial institutions that may be drawn on by the company on the terms, in the amount and subject to the other conditions agreed in the contract.

	First half					
	Group Reporting Model		Joint ventures reclassification and others		IFRS-EU	
	Jun - 2019	Dec - 2018	Jun - 2019	Dec - 2018	Jun - 2019	Dec - 2018
Cash and cash equivalents	4,554	5,021	(252)	(235)	4,302	4,786
Undrawn credit facilities	1,896	2,265	(9)	(16)	1,887	2,249
On-demand cash deposits ⁽¹⁾	1,382	1,456	-	-	1,382	1,456
Liquidity	7,832	8,742	(261)	(251)	7,571	8,491

⁽¹⁾ Repsol enters into contracts for time deposits that are nonetheless drawable on demand which are recorded in “Other current financial assets” (see Note 4.1.3 to the interim financial statements for 1H 2019) insofar as they are not classifiable for accounting purposes as cash and cash equivalents.

Operating investments:

Group Management uses this APM to measure each period’s investment effort and allocation by business segment, reflecting operating investments by the various Group business units. The figure includes joint ventures or other companies managed operationally as joint ventures.

	First half					
	Operating investments		Joint ventures reclassification and others		IFRS-EU ⁽¹⁾	
	2019	2018	2019	2018	2019	2018
Upstream	961	900	(253)	(130)	708	770
Downstream	482	325	(16)	1	466	326
Corporate and other units	25	20	5	-	30	20
TOTAL	1,468	1,245	(264)	(129)	1,204	1,116

	Second quarter					
	Operating investments		Joint ventures reclassification and others		IFRS-EU ⁽¹⁾	
	2019	2018	2019	2018	2019	2018
Upstream	562	448	(136)	(67)	426	381
Downstream	293	187	(3)	-	290	187
Corporate and other units	15	12	4	-	19	12
TOTAL	870	647	(135)	(67)	735	580

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

3. Financial position measures

Debt and financial position ratios

Net Debt and **Net Debt with leases** are the main APMs used by Management to measure the Company's level of debt. The figure is made up of financial liabilities (including lease liabilities as the case may be) less financial assets, cash and cash equivalents, and the effect arising from the marking to market of financial derivatives (ex exchange rate derivatives). It also includes the net debt of joint ventures and other companies operationally managed as such.

	Net Debt	Joint ventures reclassification and others ⁽¹⁾	Figures according to IFRS-EU balance sheet
	Jun-19	Jun-19	Jun-19
Non-current assets			
Non-current financial instruments ⁽²⁾	76	907	983
Current assets			
Other current financial assets	1,498	10	1,508
Cash and cash equivalents	4,554	(252)	4,302
Non-current liabilities ⁽³⁾			
Non-current financial liabilities	(5,257)	(2,829)	(8,086)
Current liabilities ⁽³⁾			
Current financial liabilities	(4,834)	(697)	(5,531)
Off-balance sheet items			
Marked to market financial derivatives (ex exchange rate derivatives) ⁽⁴⁾	301	(237)	64
NET DEBT ⁽⁵⁾	(3,662)		(6,760)
Non-current lease liabilities (net) ⁽⁶⁾	(3,279)	650	(2,629)
Current lease liabilities (net) ⁽⁶⁾	(523)	111	(412)
NET DEBT with leases	(7,464)		(9,801)

⁽¹⁾ Mainly includes the net financing of the Repsol Sinopec Brazil Group, broken down into: Cash and cash equivalents of €39 million and current financial liabilities as a result of an intra-group loan of €2,857 million, less €53 million for third-party loans and €653 million for leases.

⁽²⁾ Corresponds to "Non-current financial assets" on the consolidated balance sheet, excluding equity instruments.

⁽³⁾ Excludes lease liabilities.

⁽⁴⁾ The mark-to-market value of financial derivatives other than exchange rate derivatives is eliminated from this caption.

⁽⁵⁾ The reconciliations of this figure for previous half-year periods are available at www.repsol.com

⁽⁶⁾ Includes collection rights for subleases amounting to €33 million (€22 million long-term and €11 million short-term).

Gross Debt and **Gross Debt with leases** are measures used to analyze the Group's solvency and include financial liabilities (including lease liabilities as the case may be) and the mark-to-market value of exchange rate derivatives. It also includes the net debt of joint ventures and other companies operationally managed as such.

	Gross Debt	Reclassification of joint ventures and others	IFRS - EU balance sheet
	Jun-19	Jun-19	Jun-19
Current financial liabilities ⁽²⁾	(4,798)	(696)	(5,494)
Marked to market current exchange rate derivatives	(17)	-	(17)
Current gross debt	(4,815)	(696)	(5,511)
Non-current financial liabilities ⁽²⁾	(5,185)	(2,829)	(8,014)
Non-current gross debt	(5,185)	(2,829)	(8,014)
GROSS DEBT ⁽¹⁾	(10,000)		(13,525)
Current lease liabilities	(3,301)	650	(2,651)
Non-current lease liabilities	(533)	111	(422)
GROSS DEBT with leases	(13,834)		(16,598)

⁽¹⁾ The reconciliations of this figure for previous periods are available at www.repsol.com

⁽²⁾ Lease liabilities not included.

The following ratios are used by Group Management to evaluate leverage ratios and Group solvency.

The **leverage ratio** is **net debt** divided by **capital employed** at the end of the period. This ratio can be used to examine financial structure and degree of indebtedness in relation to capital contributed by shareholders and financing entities. Leverage is the chief measure used to evaluate and compare the Company's financial position with respect to its peers in the Oil & Gas industry.

The **debt coverage ratio** is **net debt** divided by **EBITDA** and is used to evaluate the company's ability to repay external financing over a number of years (x times) and to compare it to industry peers.

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 service its current debt using its existing liquidity.

The **interest coverage ratio** is calculated in the same way as debt interest (which comprises finance income and expense, see Note 21 "Finance income and expense" of the 2018 consolidated financial statements) divided by EBITDA. This ratio is used to examine the company's ability to cover interest payments with its EBITDA.

	First half					
	Group Reporting Model		Joint ventures reclassification		Figures according to IFRS - EU balance sheet	
	2019	2018	2019	2018	2019	2018
<i>Million euros</i>						
Interest ⁽¹⁾	114	144	10	(30)	124	114
EBITDA	3,712	3,811	(944)	(808)	2,768	3,003
Interest coverage	3.1%	3.8%			4.5%	3.8%

⁽¹⁾ Lease effect is not included.

	Second quarter					
	Group Reporting Model		Joint ventures reclassification		Figures according to IFRS - EU balance sheet	
	2019	2018	2019	2018	2019	2018
<i>Million euros</i>						
Interest ⁽¹⁾	49	72	9	(15)	58	58
EBITDA	1,902	2,007	(494)	(386)	1,408	1,621
Interest coverage	2.6%	3.6%			4.1%	3.6%

⁽¹⁾ Lease effect is not included.

APPENDIX III: TABLE OF CONVERSIONS AND ABBREVIATIONS

			OIL				GAS		ELECTRICITY
			Liters	Barrels	Cubic meters	toe	Cubic meters	Cubic feet	kWh
OIL	1 barrel ⁽¹⁾	bbl	158.99	1	0.16	0.14	162.60	5,615	1.7x10 ³
	1 cubic meter ⁽¹⁾	m ³	1,000	6.29	1	0.86	1,033	36,481	10,691.5
	1 ton of oil equivalent ⁽¹⁾	toe	1,160.49	7.30	1.16	1	1,187	41,911	12,407.4
GAS	1 cubic meter	m ³	0.98	0.01	0,001	0,001	1	35.32	10.35
	1,000 cubic feet=1.04x10 ⁶ Btu	ft ³	27.64	0.18	0.03	0.02	28.3	1,000	293.1
	1 megawatt hour	MWh	93.53	0.59	0.10	0.08	96.62	3,412.14	1,000

⁽¹⁾ Benchmark: 32.35° API and relative density of 0.8636.

			Meter	Inch	Foot	Yard
LENGTH	Meter	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	Liter	Cubic meter
VOLUME	Cubic foot	ft ³	1	0.1781	28.32	0.0283
	Barrel	bbl	5.615	1	158.984	0.1590
	Liter	l	0.0353	0.0063	1	0.001
	Cubic meter	m ³	35.3147	6.2898	1,000	1

Term	Description	Term	Description	Term	Description
bbl / bbl/d	Barrel/ Barrels per day	kbbbl	Thousand barrels of oil	Mm ³ /d	Million cubic meters per day
bcf	Billion cubic feet	kbbbl/d	Thousand barrels per day	Mscf/d	Million standard cubic feet per day
Bm ³	Billion cubic meters	kboe	Thousand barrels of oil equivalent	kscf/d	Thousand standard cubic feet per day
Boe	Barrel of oil equivalent	kboe/d	Thousand barrels of oil equivalent per day	MW	Megawatts
Btu/MBtu	British thermal unit/ Btu/millions of Btu	km ²	Square kilometer	MWh	Megawatt hour
LPG	Liquefied petroleum gas	kt/Mt	Thousand tons/Million tons	Tcf	Trillion cubic feet
LNG	Liquefied natural gas	Mbbl	Million barrels	toe	Tons of oil equivalent
GWh	Gigawatts per hour	Mboe	Million barrels of oil equivalent	USD / Dollar / \$	US dollar