

Repsol	
Ticker Site BiG	REP
Ticker BiGlobal Trade	REP
Ticker BT24	REP
Ticker BiG Power Trade	REP
P/E Ratio 2019E	8.17
P/BV Ratio	0.69
EV/EBITDA	7.51

Source: BiG Research;

Price and Performance (Values in EUR)	
Price	13.67
52 week high	17.51
52 week low	13.58
YTD	-2.9%
Average daily volume (un)	7,490,452
Market Capitalization (mn)	22,074
Beta	0.90
Dividend	0.87
EPS	1.45

Source: BiG Research;

Analysts Consensus (last 3 months)	
Buy	23
Hold	11
Sell	2

Source: Bloomberg;

Financial Data	
Sales (USD mn)	49,873
EBITDA (USD mn)	4,593
Number of Employees	24,506
ROA	3.9%
ROE	7.8%
D/E	0.44
Dividend Yield	6.70%

Source: BiG Research;

Notes:

All quotes were updated in Bloomberg at 15h23 of July 9th, 2019.

Relevant Information:

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www.big.pt/InformacaoMercados/TradingIdeas/Index/-1

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www.big.pt/pdf/Newsletters/nld.pdf

Analyst:
João Calado, CFA

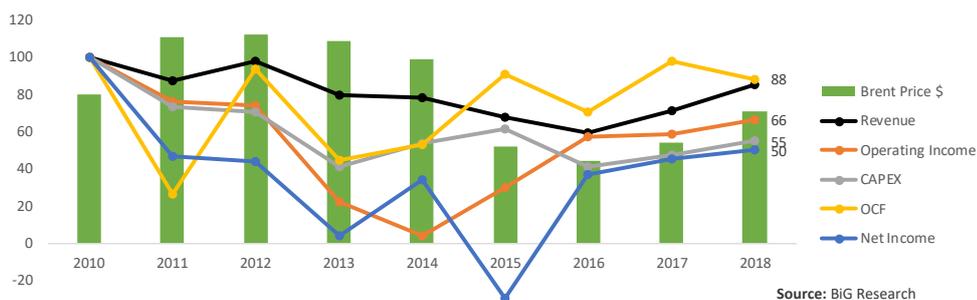
With the contribution of:
Nuno Vaz

Research:
research@big.pt

Repsol (Ticker: REP)

Description

Repsol is a Spanish, fully integrated, oil and gas company that is based in Madrid. It has more than 24000 employees. Its main areas of operation are the exploration and production of oil and gas, refining of crude inputs into value added derivatives, power generation and supply of natural gas. The company was created in 1927. In 1999, the company bought practically all of the shares of Argentine oil and gas company, YPF, which, at the time, was the largest South American company in the oil and gas business.



Source: BiG Research

Investment Thesis

We find Repsol to be an interesting company. It is a company that carries a significant amount of risk, where we would highlight its proximity and dependence on countries such as Venezuela, Libya, Algeria or Vietnam (Venezuela, for example, represents around 11% of production) and its high levels of correlation and dependence on oil and gas industry prices (which has been above 0.8 for the last 3 years). Nonetheless, there is also significant upside in its strong dividend (which has averaged more than 8% since 2010 and is expected to remain above 6% with the current industry prices) and in a cash flow break-even profile averaging around the USD 52 per barrel (which, however, is in line with its European peers). Also significant is that the company has no large non-organic capex needs planned for the future (which might contract cash flows) leading to a potential cumulative cash return to shareholders above 20% of market cap by 2022. The fact that the company's stock has not increased similarly to other oil and gas peers (due to concerns regarding Libya and Venezuela) gives it also some potential major upside in capital gains. There is also upside in its diversification of cash flows between upstream and downstream businesses which, although decreasing in recent years towards a heavier weight to upstream, gives it the ability to soften losses from decreases in oil prices with increases in refining margins. Also relevant, for the refining business, is the strong efficiency in Spain (where Repsol has 58% of total capacity) with refineries being fully integrated, by a pipeline network, which gives flexibility in choosing crude oil deliveries and price and having strong refining margins, averaging around USD 5 per barrel (although the current decrease in European margins, as a whole, is reason for concern). It is also very well exposed to IMO 2020 since it has a high level of refining complexity and a high percentage of middle distillates yield (55% of output) as well as holding close to 25% of Europe's cooking capacity. In regards to its upstream portfolio, its large focus on natural gas (which currently comprises 65% of production) gives it significant exposure to the expected increase in demand for this resource. It has also significant number of interesting prospects that could add 50 kboe/d by 2020 to its present-day production of 700 kboe/d. In spite of this, its low reserve life will likely require large investments in the future as will the slowing down production levels (which decreased in the first 2 quarters of 2019). Moreover, its relative valuation is not yet particularly attractive (see comparables section) particularly in terms of price to cash flows (although Repsol claims a potential 30% increase in CFO/boe until 2020). Overall, we would not yet invest in Repsol but we do not see it as a bad business.

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Income Statement (EUR mn.)	2016	2017	2018
Revenues	34,689	41,668	49,873
COGS	(23,615)	(30,251)	(38,056)
Personal Expenses	(1,874)	(1,892)	(2,501)
Research & Development	(73)	(65)	(75)
Depreciation & Amortization	(2,529)	(2,399)	(2,140)
Impairments	(282)	(99)	(1,066)
Marketing	(1,166)	(1,072)	(605)
Other expenses	(3,239)	(3,101)	(2,977)
Operating Income	1,911	2,789	2,453
Financial Result	(234)	(312)	(173)
Net income (loss) from subsidiaries	194	630	1,053
Taxes	(391)	(1,220)	(1,386)
Others	256	234	394
Net Income	1,736	2,121	2,341

Source: Company Data; BiG Research

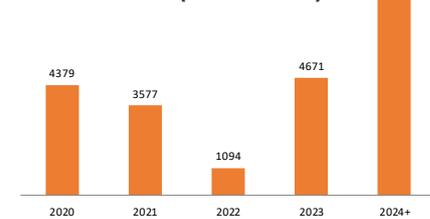
Balance Sheet (EUR mn.)	2016	2017	2018
Cash & Equivalents	4,687	4,601	4,786
Financial assets	2,628	2,317	2,013
Receivables	4,136	5,847	4,679
Inventories	3,605	3,796	4,390
Intangible assets, net	5,109	4,584	5,096
Goodwill	3,115	2,764	3,011
Property Plant & Equipment	27,297	24,600	25,431
Other Assets	14,272	11,348	11,372
Total Assets	64,849	59,857	60,778
Short term Debt	7,093	4,373	4,436
Long term Debt	9,396	10,012	9,318
Payables	2,128	2,738	3,244
Others	15,121	12,671	12,866
Total Liabilities	33,738	29,794	29,864
Common Shares	25,728	27,097	27,453
Retained Earnings	1,736	2,121	2,341
Treasury Stock	1	45	350
Other	3,404	620	1,184
Total Equity	31,111	30,063	30,914
Equity + Liabilities	64,849	59,857	60,778

Source: Company Data; BiG Research

Free Cash Flow (USD mn.)	2016	2017	2018
Operational Cash Flow	3,890	5,113	4,579
Net Income	1,736	2,121	2,341
D&A	2,529	2,399	2,140
Non-cash	(449)	166	33
Change in WC	(517)	(110)	(389)
Others	591	537	454
Investment Cash Flow	391	(2,789)	(1,359)
Capex & Intangibles Acquisitions	(3,649)	(3,094)	(5,501)
Capex & Intangibles Disposals	4056	254	4074
Other	(16)	51	68
Financial Cash Flow	(2,053)	(2,361)	(3,032)
Proceeds from Debt (repayment)	(910)	(1,163)	(796)
Proceeds from Equity (buybacks)	(92)	(293)	(1,595)
Dividends	(420)	(332)	(297)
Others	(631)	(573)	(344)
Effect of FX	11	(49)	(3)
Change in free cash flow	2,239	(86)	185

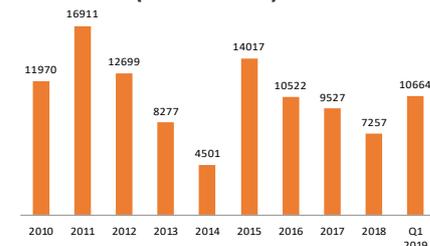
Source: Company Data; BiG Research

Debt Schedule (EUR million)



Source: BiG Research

Net Debt (EUR million)



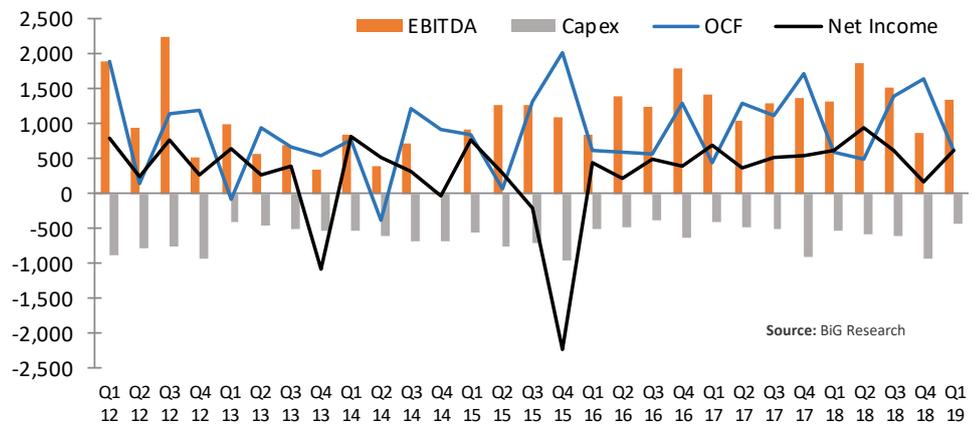
Analyst:
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Income Statement and Guidance

In 2018, Repsol grew revenues quite significantly, almost 20% YoY and 25% since 2015. Most of this growth is coming from the upstream segment (from improved oil and gas production, 3% growth YoY although still not at 2010 levels, and higher industry prices). Operating income increased even further, 13% YoY and 123% from 2015 due to a strong reduction in the cost of goods sold. However, these values are still not at 2010 levels, when oil prices were at the highest point. The company managed to maintain strong net financial income ending the year at EUR 2.3 billion of net income, a 10% growth from last year and a 35% growth when compared to 2 years ago. Regardless, similarly to revenues and net income, it has still not recovered from 2010 levels. Net income is typically much more fluctuating than EBITDA but has still not seen a negative quarter since 2015. For 2019, Repsol expects an adjusted EBITDA of USD 8.8 billion. Revenues are estimated to end slightly above 2018 levels, at USD 50 billion, and net income at around USD 2.5 billion.



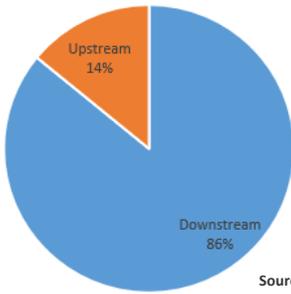
Cash Flow Statement

In regards to cash flows, Repsol has not seen a clear trend, cash flows fluctuate a lot, typically due to the relationship with industry prices and have averaged at around USD 4 billion in the last 3 years. Nonetheless, cash flows from operations have not seen a negative value since early 2014 and have remained somewhat stable and sufficient to pay for capex needs (which have averaged around USD 2.5 billion in the last years). Repsol has been a net repayer of debt for the last 3 years and this is expected to continue until net debt is at more reasonable levels (currently it stands at a net debt to EBITDA of 2). Repsol has also done a significant number of disposals so it can free up some of its capital to reinvest into its core strategy. For 2019, company expects free cash flows in the order of USD 1.9 billion with USD 4 billion being spent in capex.

Balance Sheet

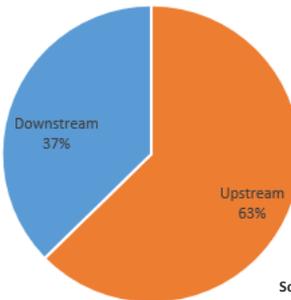
Repsol liabilities are approximately divided into EUR 5 billion in bonds and obligations, EUR 2.7 billion in loans and EUR 1.2 billion in bank borrowings. Repsol's debt is spread out and is not too overbearing. The average interest rate is 2.7% with around 80% being at fixed rates. Repsol estimates that a 0.5% change in interest rates will have a positive or negative (if interest rates drop) in net income of EUR 4 million and EUR 12 million in equity. Around EUR 4 billion will already have to be paid in 2020. A EUR 1 billion bond matured in February 2019 but Repsol decided not to roll it over but instead repay. As of the latest filing, total long-term debt amounts to close to EUR 12 billion. Repsol has close to EUR 5 billion in receivables, with the maximum net exposure to a specific third party being 2.6% (and with Repsol having EUR 3 billion insured with banks).

Revenue by Segment (in %)



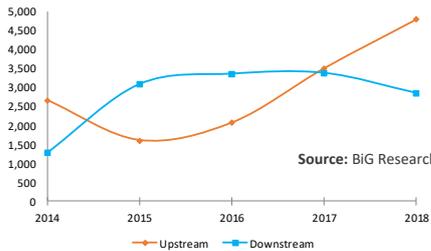
Source: BiG Research

EBITDA by Segment (in %)



Source: BiG Research

EBITDA by Segment (in EUR million)



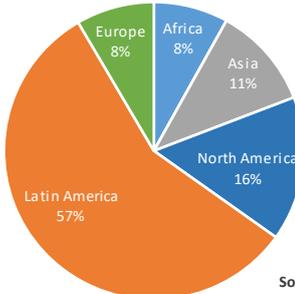
Source: BiG Research

Key performance factors per barrel



Source: BiG Research

Oil production by Region (in %)



Source: BiG Research

Segments

Upstream: This segment comprises the exploration of oil and gas blocks to find commercial reserves and the development and production of the reserves that are deemed commercial. For bigger prospects, this is usually done as a consortium of companies, which share income and costs. Repsol is widely diversified with production in 5 different continents and 28 different countries. The upstream business grew significantly since 2015 due to better prices and increases in volumes sold and produced. Repsol gas realisation prices, in 2018, averaged at USD 0.3 above Henry Hub gas prices.

Repsol produced around 705 kboe/d, in the first quarter of 2019, including oil and gas. During 2018, the number of productive wells decreased 5% to around 5500 but still has increased 11% since 2015. Repsol's currently highest producing regions are concentrated in the Americas, in particular, South America with the most important countries, by order, being Venezuela (where around 11% of total upstream production comes from and which suffered with the country's ongoing crisis), Brazil, Bolivia, Peru and others. As for North America, the US region is the highest producing of all with Canada as also significant. Interesting prospects for this segment are the US region (where some of the largest onshore discoveries of oil in the last 30 years, estimated at 1.2 billion boe, have been, found in Alaska, and where a production of 120 kboe/d is expected for 2020), Canada (with 1.8 billion boe in prospective resources and a potential 100kboe/d start in 2020), Trinidad and Tobago, Peru, Algeria and Malaysia. Overall, for 2019, 37k per day new barrels will come from North American, 21k from Europe and Africa and 9k from Latin America and Asia.

Repsol has one of the highest natural gas to oil production ratios among its peers, at currently near 65%, and its reserve portfolio is similar with 75% being natural gas (2.34 billion boe). In the next years, this production ratio will increase even further with the ramp-up of key natural gas projects such as "Reggane" in Algeria or "Sagari" in Peru. This is a very interesting position as it makes Repsol one of the best companies to gain from the growth in natural gas demand for the next years and the search for low emission fuels. Repsol expects a 2.5% annual production growth in natural gas, where it aims to prioritize projects that focus on profitability and efficiency, and to increase total production to 720 kboe/d until the end of 2019 and 750 kboe/d by 2020. As for 2019, results in this segment have been highly positive with, nonetheless income still suffering from the shutdown of fields in Libya, due to security reasons, and lower Venezuela outputs. EBITDA was flat, vs. 2018's 1st quarter, at EUR 1810 million. Net income was also flat at EUR 608 million. CFO, however, increased 25% to EUR 1161 million. Finally, capex, in the upstream segment, increased by 15% compared to the same period in 2018.



Source: Company Data

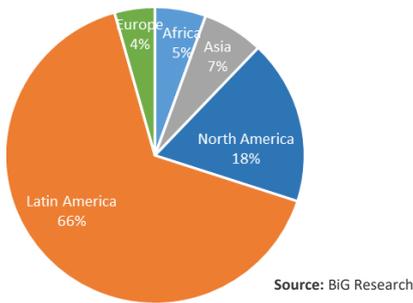
Analyst:
João Calado, CFA

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Nuno Vaz

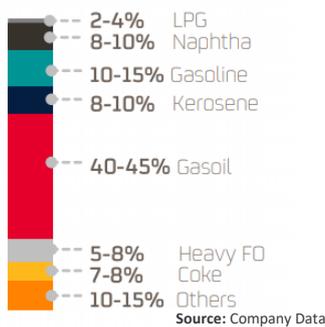
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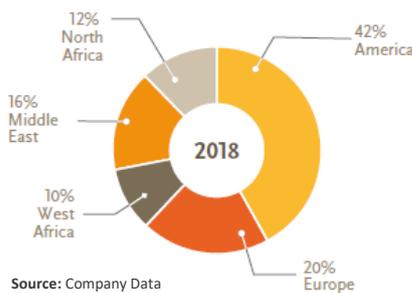
Oil reserves by Region (in %)



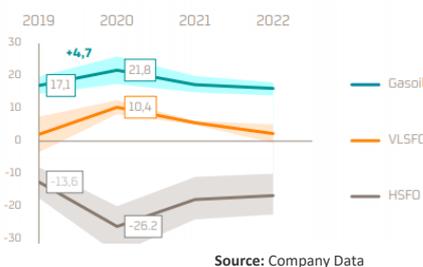
Refinery Output Categories (in %)



Refinery Crude Source (in %)



Margins on marine fuels (USD/boe)



Downstream: This segment includes the refining, chemicals, trading and marketing businesses. For refining, Repsol uses its own crude production or supply from the market and produces value added derivatives such as gasoline, jet fuel, marine fuel, diesel, etc. Repsol total installed refining capacity is 1013 kboe/d with more than 80% of this capacity being located in Spain (representing close to 60% of the country’s production) (see appendix). As for chemicals, this business area produces high value petrochemicals (such as Benzene, Ethylene or Styrene) which are used in various applications such as synthetic fibres, plastics, resins, dyes, synthetic rubber, shoe soles, tyres, etc. production is concentrated in 3 petrochemical complexes (1 in Portugal and 2 in Spain). The trading area generates profits by transporting and supplying crude oil and other products from cheaper areas to more expensive ones. The marketing segment uses Repsol’s network of service stations to provide vehicle fuel to final customers (primarily in Spain, Portugal, Peru, Italy and Mexico) but also other service channels to supply aviation, marine and more industrial fuels. Until 2017, downstream represented most of Repsol’s profits, however, recently, the downstream segment has suffered with the rising oil prices and the contraction of overall spreads for European markets. In 2019, net income for the segment was EUR 404 million vs. 425 in the same period of 2018. Similarly, EBITDA was EUR 1064 million vs. 1101. Refining margins for the first quarter were USD 5.3 per barrel vs. a 6.6 value in 2018’s same quarter (and, as of the latest trade update, margins should be around USD 3.5 for the second quarter).

With the release of IMO 2020 regulation (imposing lower sulphur contents in marine fuels), Repsol expects an increase in its bottom line for the end of 2019 due to increased demand for its very low diesel and marine gasoil options (Repsol has a middle distillate yield above 50%). However, most suppliers are already prepared for this event and questions remain as to how much impact it may have (Repsol estimates a USD 1/boe increase in its margin).

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Margin per Barrel	2.6	0.6	2.2	2.2	3.3	6.6	4.0	5.8	5.0

Source: BiG Research; Values are in USD per Barrel

Projects and M&A

Repsol management plans to spend EUR 12.5 billion to improve oil and gas production and downstream assets until 2020 with EUR 3.8 billion used in 2019. International expansion of service stations to Mexico and Peru. Plans also exist to invest in a trading business of crude oil throughout the world (where oil is bought cheaper and then carried to higher price areas). Investments in low carbon alternatives, such as the renewable power segment, are also a possibility with the company saying it would prefer investing in Spain.

Ampere Energy (2019, Undisclosed): Repsol bought a stake in a maker of residential energy storage cells in Spain that uses AI technology to manage the energy generated by solar panels and analyse consumer spending. Part of the company’s strategy of moving into alternative energies.

Valdesolar Hive (2018, EUR 200 million): Acquired a firm developing one of the most ambitious solar projects in Spain a 260 MW project in Badajoz that will become one of the biggest in Spain once it starts operations in 2020.

Sold 20% stake of Naturgy (2018, EUR 3.82 billion): Formerly known as Gas Natural Fenosa, Repsol decided to sell what it felt was a non-strategic asset in this natural gas distributor with a capital gain of EUR 400 million.

Sold Natural Gas pipelines in Portugal (2018, undisclosed): Sold to Rubis SA which now controls the Azores and Madeira gas business with only one other competitor.

Analyst:
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Josu Jon Imaz (CEO of Repsol):



Source: Company Data

Management & ESG

Josu Jon Imaz has been the CEO of Repsol since April, 2014. He joined Repsol in 2008 when he became the chairman of one of its subsidiaries. He has a doctorate in Chemical Sciences from the University of the Basque Country. He was a visiting scholar at Harvard Kennedy School. Most of his prominence came from his role in politics as he served as a European Deputy from 1994 to 1999 and as president of Basque Political Party from 2004 to 2007. Compensation, for executives, is more or less split in 3 axes (each holding 33%): base salary, target annual bonus, long-term targets. Targets are split between value (improvements in upstream and downstream results) at 15%, efficiency (cash flow improvements, digitalization, etc.) at 35%, operations (net profit, production) at 35% and sustainability 15%.

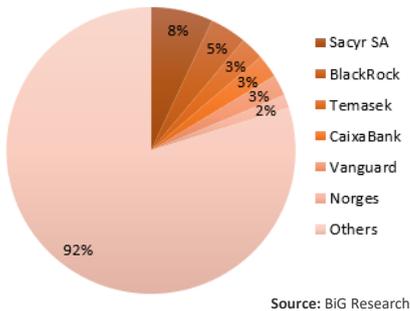
Repsol supports the Paris agreement and has a strategy to reduce 2.1 million tons of CO2 emissions in 2020. It has also committed to energy reduction and just in 2018 decreased its fuel consumption by 3%. 50% of the board of directors is independent and is composed of 15 people, with average duration on the board being 4 years. 9 out of 15 directors have prior energy sector experience. Women represent 37% of the workforce (vs. 27% in 2010). As for unions, around 60% of its workers are unionized.

Management is focused on 3 core objectives: increasing shareholder returns, profitable business growth and development of new businesses associated with energy transition. The board has also committed to increasing dividend to 7% (to EUR 0.95 per share) and potentially implementing a share buyback to reduce the impact of a scrip dividend they offered last year (where shareholders get the option of receiving payment in cash or shares, 70% choose shares).

Calendar

July 24th 2019 – Q2 Earnings
October 31st 2019 – Q3 Earnings

Shareholders



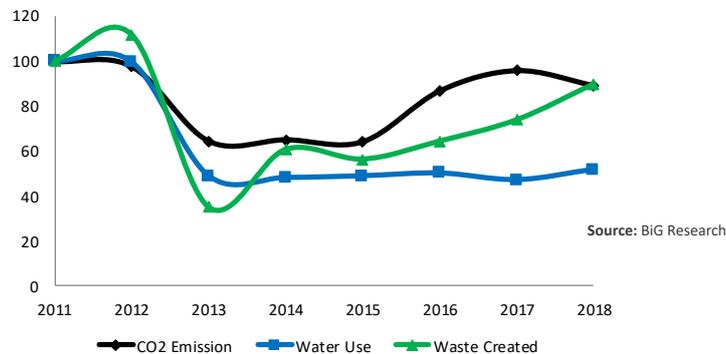
Source: BiG Research

Ratings

Rating		
Agency	Rating	Outlook
S&P	BBB	POS
Moody's	Baa1	STABLE
Fitch	BBB	POS

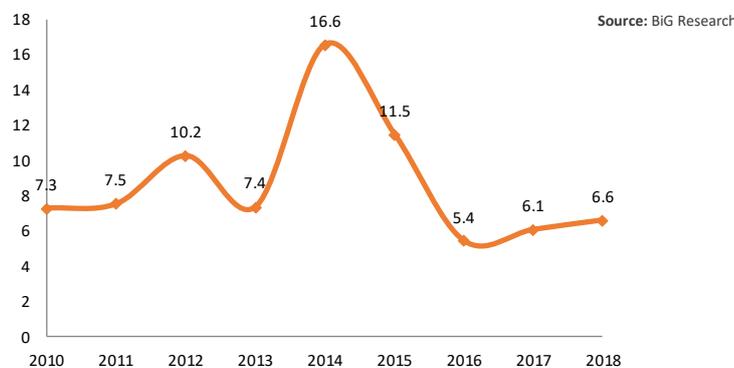
Source: BiG Research

Key Environmental Performance (in 2011 base years = 100)



Source: BiG Research

Dividend Yield (in %)



Source: BiG Research

Analyst:
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Risks

Red Emperor location

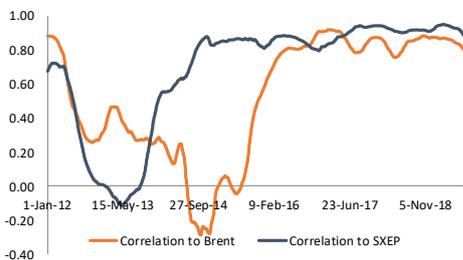


Source: Unclos and CIA

Geopolitical Risk: Repsol is one of the oil and gas companies that operates in more areas that are strongly exposed to macroeconomic and geopolitical risk and this creates an obvious line of problems because of the need to often work with governments and state-owned companies and the likelihood of operations being stopped. As an example, 11% of Repsol’s production is in Venezuela (a country suffering from a massive political and economic crisis) and this causes obvious exposure risk to the country (especially when Venezuela’s state-run oil company, which collaborates with Repsol, has already defaulted on its debt). Recently, Repsol was forced to suspend its swap agreement (for oil to use in its refineries) with this same company, because of US sanctions. Other companies operating in Venezuela (such as Chevron or Eni) have much smaller exposures, typically less than 3% of total production. Another example of this geopolitical risk happened in 2018 when the Red Emperor oil/gas block, which Repsol owned 40% and located in the South China Sea (although belonging to Vietnam), was under heavy pressure from China. Repsol and its consortium partners were forced to stop production due to Chinese interference on a block that could produce at close to 40kboe/d and which had 45 million boe in reserves. It is uncertain if this block will ever be allowed to operate again. Other countries that are especially problematic for Repsol are Libya (where 35 kboe are produced daily and where Repsol was forced to close facilities for short periods of time because of danger of militia attacks) and Algeria (where militant Islamic groups are still present).

Exchange rate risk: Added to the geopolitical risk of working in emerging countries, there is also the risk of severe currency volatility which directly harms Repsol. Repsol typically hedges its exposure to foreign currency or demands payments in EUR or USD (it does not disclose much about specific currencies). Regardless, it still gives a negative effect of EUR 30 million in net income for every 5% drop in the EUR/USD exchange rate.

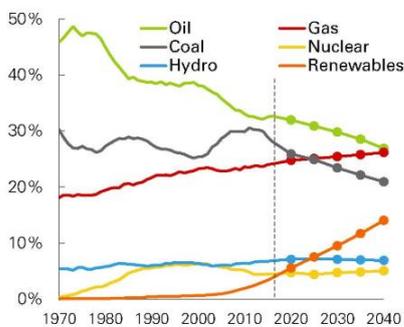
Correlation of Repsol to Brent and SXEP



Source: BiG Research

Exposure to commodity prices: Due to its business model (and especially since, in the last years, the significance of its upstream segment has increased versus downstream) the company holds significant exposure to international oil and gas prices. Repsol estimates that a 10% increase in oil prices would have a net effect of negative 39 million in net profit. Nonetheless, Repsol holds, among the major oil and gas companies, one of the most balanced portfolios, between upstream and downstream, which somewhat protects it against this risk (since when prices fall Repsol loses in upstream but gains in downstream due to higher refining margins and vice-versa). As can be seen from the figure in the left, Repsol’s stock price has a great deal of correlation to Brent and, similarly, to SXEP (the Stoxx 600 Oil & Gas).

Primary energy sources estimate (in %)



Source: BP estimates

Energy Transition: With the risk of oil demand peaking in the next years, most oil and gas companies are focusing on acquisitions in low-carbon alternatives such as gas or renewables. While Repsol’s production portfolio is heavily focused on gas, in the upstream segment, which protects it more from this change (since natural gas is a cleaner energy source and demand for it is expected to increase). This is not the case for its downstream segment, however, since Repsol has been divesting from assets it held in this business (mostly in the sales of Tangguh LNG, Naturgy and its wind portfolio in the UK). Repsol has declared its intention to invest in renewables, mostly in Iberia, but it may be the case it may not find good prices on which to enter the business due to other oil and gas companies acquiring these businesses which are limited in number due to their monopolistic tendencies.

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Comparables

Source: BiG Research

Name	Country	Market Cap (mn)	P/E 2019E	Div. Yield (%)	Shareholder Yield (%)	YTD (%)	Production Growth YTD (%)	Production Growth 3Y (%)	Production MBOE/d	EV/EBITDA	EV/FCFF	EV/FCFE	EV/Sales	EV/DACF	NetDebt/EBITDA
CHEVRON CORP	UNITED STATES	239,826	17.0	3.7%	3.7%	15.7%	7.4%	4%	2,930	7.4	15.2	18.0	1.7	7.9	0.8
BP PLC	BRITAIN	138,781	12.7	5.8%	5.8%	9.6%	3.7%	4%	3,683	6.2	27.5	19.9	0.7	6.1	1.7
TOTAL SA	FRANCE	150,686	10.8	5.1%	5.1%	8.7%	8.1%	6%	2,775	5.4	20.8	-70.4	1.0	7.2	0.9
PETROCHINA CO	CHINA	167,835	20.8	2.7%	2.7%	-7.5%	2.3%	0%	4,087	5.6	22.9	177.9	0.8	-	1.4
PETROBRAS	BRAZIL	104,490	11.7	1.0%	1.0%	22.8%	-5.0%	-2%	2,628	7.0	10.9	-15.3	2.1	6.8	3.5
CHINA PETRO & CHEMICAL	CHINA	90,032	10.0	8.0%	8.0%	4.2%	-	-	1,237	-	11.5	15.2	0.3	-	-
ENI SPA	ITALY	60,211	11.9	5.6%	5.6%	7.0%	1.9%	2%	1,851	4.2	13.9	11.4	0.9	5.0	0.8
SUNCOR ENERGY INC	CANADA	50,832	12.6	3.7%	3.7%	11.0%	6.8%	8%	732	6.9	15.1	14.4	2.2	7.5	1.4
ECOPETROL SA	COLOMBIA	39,478	9.7	7.3%	7.3%	17.9%	-	-	-	5.7	12.7	51.3	2.5	-	1.0
SASOL LTD	SOUTH AFRICA	14,691	8.1	4.2%	4.2%	-23.1%	-	-	-	9.7	-20.8	-240.7	2.0	-	2.9
CENOVUS ENERGY INC	CANADA	11,777	15.4	1.6%	1.6%	30.3%	2.7%	21%	483	13.2	-	36.0	1.1	5.3	5.3
YPF S.A.	ARGENTINA	7,221	20.0	0.7%	0.7%	37.1%	-4.5%	-3%	530	4.2	24.9	-121.4	1.2	5.0	2.5
NESTE OYJ	FINLAND	26,556	17.8	2.2%	2.2%	36.5%	-	-	-	16.8	21.4	23.8	1.6	-	0.1
OMV AG	AUSTRIA	16,266	8.9	4.0%	4.0%	15.4%	22.7%	12%	427	5.1	18.5	77.5	1.1	5.1	0.7
GALP ENERGIA	PORTUGAL	13,119	17.0	4.5%	4.5%	1.8%	14.9%	33%	107	7.4	24.3	25.0	0.9	8.0	1.3
MOL HUNGARIAN OIL	HUNGARY	8,441	8.3	4.4%	4.4%	-1.8%	3.4%	1%	102	4.0	12.6	12.6	0.6	4.5	0.8
EQUINOR ASA	NORWAY	66,880	11.1	4.8%	4.8%	-6.9%	1.5%	2%	2,111	2.9	9.8	10.9	1.1	4.0	0.4
ROYAL DUTCH SHELL	NETHERLANDS	262,138	11.9	5.6%	5.6%	12.5%	0.1%	7%	3,666	6.0	11.3	14.1	0.9	6.7	1.3
EXXON MOBIL CORP	UNITED STATES	327,973	21.2	4.3%	4.3%	13.7%	-3.8%	-2%	3,833	9.5	22.9	24.8	1.4	9.5	1.0
REPSOL SA	SPAIN	25,339	8.5	6.6%	6.6%	-1.0%	2.9%	9%	715	7.5	20.4	44.1	0.7	5.5	2.3
Average exc. Repsol	-	94,591	13.5	4.2%	4.2%	10.8%	4.2%	6%	1,949	7.1	15.3	4.5	1.3	6.3	1.5

Name	Recycle Ratio	CFO/Capex	CFO/boe	CFO-Capex/Price	Netback/boe	Refining Margin	Proven Reserves	Reserve Replacement Cost	Reserves remaining in years	Lifting cost per boe	DD&A per boe	OPEX per boe	EBITDAX per boe	oil/gas mix (%)	analyst target price vs. current (%)
CHEVRON CORP	3.0	2.2	30.5	7%	37.3	-	12,053	12.3	10.4	10	15	13	32	60.8	-9%
BP PLC	2.4	1.4	22.4	6%	28.2	13.1	19,945	12.0	15.0	13	11	7	24	56.8	-16%
TOTAL SA	1.9	1.4	30.3	6%	36.5	4.4	12,050	19.3	9.1	5	11	6	31	56.4	-18%
PETROCHINA CO	-	1.3	33.0	1%	36.7	-	20,389	-	8.6	13	16	-	38	59.7	-3%
PETROBRAS	2.3	2.2	27.6	4%	34.0	-	9,598	14.1	10.8	21	9	-	31	79.9	-10%
CHINA PETRO & CHEMICAL	-	1.8	33.3	2%	33.6	-	2,499	-	4.7	16	21	-	68	63.9	-22%
ENI SPA	4.0	1.6	25.6	11%	35.4	3.7	7,153	8.6	10.9	9	12	7	31	47.9	-21%
SUNCOR ENERGY INC	1.5	2.0	24.5	6%	26.8	-	4,687	16.8	17.5	27	14	-	36	100.0	-26%
ECOPETROL SA	-	2.4	-	0%	-	-	-	-	-	-	-	-	-	-	-4%
SASOL LTD	-	0.6	-	-1%	-	-	-	-	-	-	-	-	-	-	-32%
CENOVUS ENERGY INC	13.4	1.6	-	4%	13.0	-	5,167	0.9	36.5	32	8	-	13	76.3	-19%
YPF S.A.	-	1.1	-	6%	-	-	1,052	-	7.7	-	-	-	27	42.8	-11%
NESTE OYJ	-	4.2	-	6%	-	11.2	-	-	-	-	-	-	-	-	-13%
OMV AG	1.0	1.4	26.5	10%	35.2	5.2	1,270	35.8	9.7	7	10	7	40	42.6	-27%
GALP ENERGIA	5.3	1.7	36.6	6%	56.0	5.0	389	10.2	8.6	6	10	8	71	88.4	-17%
MOL HUNGARIAN OIL	-	1.6	47.4	0%	46.6	5.4	210	-	8.0	8	21	7	72	43.5	-24%
EQUINOR ASA	3.0	1.7	25.6	1%	40.0	5.3	6,175	13.3	7.1	5	12	5	40	53.6	-24%
ROYAL DUTCH SHELL	4.3	2.2	29.0	13%	37.7	-	11,373	8.8	8.3	9	13	10	41	49.2	-9%
EXXON MOBIL CORP	2.1	1.8	20.6	5%	28.8	-	24,293	13.8	21.3	17	11	11	29	52.6	-8%
REPSOL SA	2.7	1.6	17.0	8%	21.5	6.7	2,339	7.7	6.7	13	12	-	24	36.5	-30%
Average exc. Repsol	3.7	1.8	29.5	5%	35.1	6.7	8,644	13.8	12.1	13.2	12.9	8.1	39.0	60.9	-17%

Repsol is one of the cheapest oil and gas companies in terms of P/E, at 8.5, and with an above average dividend yield of 6.6%. Its 1-year production growth may be below average but its 3-year growth is 9% vs. 6% for average peers. Its EV/EBITDA metrics are not particularly attractive but are within a reasonable band. Refining margin is above average but still not comparable to companies such as BP which have margins greater than 10. EV to cash flow metrics, however, show a less attractive picture with Repsol more expensive than average, in particular, for cash flows to equity (FCFE). Its cash flow per barrel of oil equivalent is also low and so is its netback. Its reserves remaining, at current production, are only 6 years which implies need for spending in new acquisitions or discoveries.

Graph

Source: BiG Research



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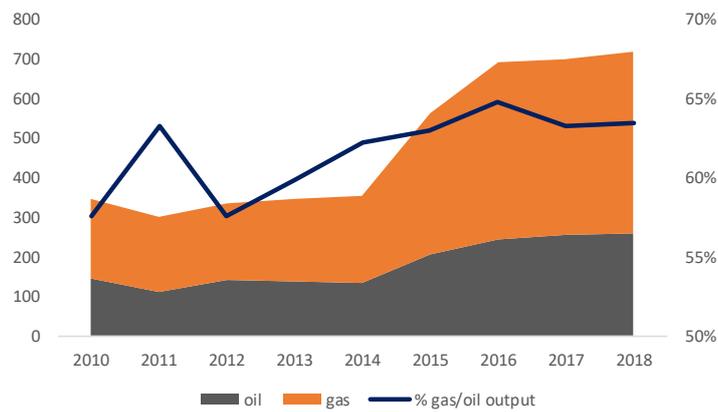
Appendix

Repsol Map of Refineries in Spain

Source: Company Data



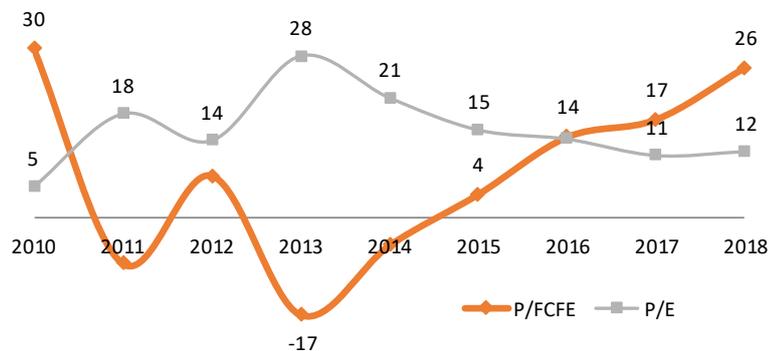
Repsol Development in Oil and Gas production (in mmBOE)



Source: BiG Research

Repsol Valuation Ratios

Source: BiG Research



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Repsol Production/Results Oil and Gas overview

REPSOL (million BOE reserves)	2010	2011	2012	2013	2014	2015	2016	2017	2018
Worldwide									
Start of Year	2084	2091	2179	1294	1515	1539	2373	2381	2355
Revisions	222	141	80	123	97	258	168	147	150
Improved Recovery	32	19	0	—	—	—	21	0	1
Extensions & Discoveries	72	219	156	238	57	66	124	88	76
Purchases	38	—	24	0	0	735	4	5	28
Sales	-34	-1	-1023	-14	-1	-22	-55	-12	-9
Production	-323	-290	-122	-126	-129	-204	-252	-254	-261
Other	—	—	—	—	—	—	—	—	—
End of year	2091	2179	1294	1515	1539	2373	2381	2355	2339
Developed Reserves	1410	1358	635	594	666	1430	1485	1536	1585
% Reserves Developed	67	62	49	39	43	60	62	65	68
Reserve Production Ratio	17	20	11	12	12	12	9	9	9
Reserves Per Share BOE	2	2	1	1	1	2	2	2	2
Reserve Replacement Cost	12	11	8	9	8	34	6	4	7
Reserves Growth	0	4	-41	17	2	54	0	-1	-1
Crude Oil % of Total Reserves	43	45	33	28	29	25	25	26	27
Production Mix Oil Percent	42	37	42	40	38	37	35	37	37
Lifting Cost	25	29	10	10	9	14	10	11	11
Finding Cost	11	6	5	10	9	14	10	11	11
North America									
Start of Year	69	60	51	53	45	60	390	370	384
Revisions	3	1	2	4	28	-5	-4	-21	36
Extensions & Discoveries	0	—	12	—	—	45	25	77	45
Sales	—	—	-1	—	—	-21	—	-1	-9
Production	-12	-11	-11	-11	-13	-37	-44	-41	-41
Other	—	—	—	—	—	—	—	—	—
End of year	60	51	53	45	60	390	370	384	419
Latin America									
Start of Year	1865	1889	1978	1033	1287	1311	1609	1652	1611
Revisions	210	142	54	104	68	256	94	98	42
Improved Recovery	32	19	—	8	—	—	21	—	1
Extensions & Discoveries	70	200	113	237	57	21	93	11	30
Purchases	-34	—	—	—	—	146	1	1	—
Sales	38	—	-1022	—	-1	—	-20	-2	-1
Production	-292	-272	-90	-94	-101	-107	-148	-150	-148
Other	—	—	—	—	—	—	—	—	—
End of year	1888	1978	1033	1287	1310	1609	1652	1611	1536
Europe									
Start of Year	7	7	6	6	4	3	51	62	58
Revisions	1	0	1	1	1	-1	31	16	42
Extensions & Discoveries	—	—	—	—	—	—	—	—	—
Sales	—	-1	—	—	—	—	—	—	1
Production	-1	-1	-1	-3	-2	-11	-19	-19	-22
Other	—	—	—	—	—	—	—	—	—
End of year	7	6	6	4	3	51	62	58	102
Africa									
Start of Year	143	135	145	152	139	125	128	125	128
Revisions	8	-3	23	0	-7	0	3	17	22
Improved Recovery	—	—	—	—	—	—	—	—	—
Extensions & Discoveries	2	19	3	—	—	—	—	—	—
Production	-18	-7	-19	-13	-7	-5	-6	-14	-21
Other	—	—	—	—	—	—	—	—	—
End of year	135	145	152	139	125	128	125	128	129
Asia									
Start of Year	—	—	—	51	39	40	36	174	174
Revisions	—	—	—	7	7	11	44	37	8
Extensions & Discoveries	—	—	28	1	—	—	6	—	2
Sales	—	—	-1	-14	—	—	-35	-9	—
Production	—	—	-1	-5	-6	-27	-36	-31	-29
Other	—	—	—	—	—	—	—	—	—
End of year	—	—	51	39	40	194	174	174	154

Source: BiG Research

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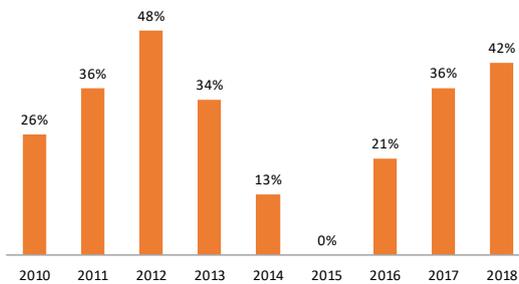
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Repsol Results Oil and Gas overview

REPSOL (in million EUR)	2010	2011	2012	2013	2014	2015	2016	2017	2018
Worldwide									
Oil (MBBL/Day)	146	110	142	139	134	207	243	255	261
Gas (MMCF/Day)	1112	1060	1068	1163	1237	1977	2509	2468	2550
Production (MBOE/Day)	344	299	335	346	355	559	690	695	715
Oil/gas mix (%)	42%	37%	42%	40%	38%	37%	35%	37%	37%
Hedged Oil (\$/BBL)	73	84	89	89	80	45	39	50	64
Hedged Gas (\$/MCF)	2.7	3.5	3.7	4.0	3.8	2.8	2.4	2.9	3.4
Revenues	8250	7651	5014	4731	2278	4751	4936	5985	7701
Production Costs	3104	3107	1229	1273	1207	2773	2590	2757	2947
Exploration Expense	502	382	551	619	811	1812	577	574	670
DD&A	2066	1786	871	898	634	5129	2369	2505	2600
Other Expenses	332	352	75	26	16	91	109	1021	389
Income Tax	1277	806	1290	1093	215	-1303	129	824	1004
Results of Operations	969	1106	998	822	78	3751	838	-346	869

Source: BiG Research

Repsol Effective Tax Rate (in %)



Source: BiG Research

Repsol Value Creation (in %)



Source: BiG Research

Repsol Operational Values



Source: BiG Research

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▲ Glossary

API gravity – Measure of how heavy or light a petroleum liquid is compared to water. If its API gravity is greater than 10, it is lighter and floats on water.

boe – Barrel of oil Equivalent (unit of energy based on the approximate energy released by burning one barrel)

CFO-exWC – Operating cash flows without changes in working capital

DACF – Operating cash flows minus financing expenses

Downstream – The refining of petroleum crude oil and the processing and purifying of raw natural gas, as well as the marketing and distribution of products derived

EBITDAX – EBITDA with exploration expenses also subtracted

E&P – Exploration and Production

FPSO – Vessel which is designed to receive hydrocarbons produced by itself or from nearby platforms or subsea template, process them, and store oil until it can be offloaded onto a tanker or transported through a pipeline.

Fracking – The process of injecting liquid at high pressure into subterranean rocks so as to force open existing fissures and extract oil or gas.

Gearing Ratio – Total debt divided by total equity

Heavy Oil – Highly-viscous oil that cannot easily flow to production wells under normal reservoir conditions and, therefore, is cheaper.

IEA – International Energy Agency

kboe/d – thousand barrels of oil equivalents per day

Lifting Costs – The operational cost to produce a barrel after well is drilled

LNG – Liquefied Natural Gas

LPG – Liquid Petroleum Gas (byproduct of crude refining often known as propane or butane)

Netback – Sale price of a barrel of oil minus all costs associated with it (including transportation, royalties, etc.)

Proved Reserves – Proved oil and gas reserves are those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible.

Shale Oil – Light crude oil contained in petroleum-bearing formations of low permeability, often shale, economic production from tight oil formations typically requires hydraulic fracturing

Sweet Oil – Contains small amounts of hydrogen sulfide and carbon dioxide and is, therefore, more valuable. Typically used to refine gasoline.

Sweet Gas – Sweet gas is the natural gas that contains very little or no the hydrogen sulfide

Recycle Margin – Refining margins are the difference in value between the products produced by a refinery and the value of the crude oil used to produce them.

Recycle Ratio – Profit per barrel divided by cost of finding and developing it

Upstream – Includes searching for potential underground or underwater crude oil and natural gas fields, drilling exploratory wells, and subsequently drilling and operating the wells that recover and bring the crude oil or raw natural gas to the surface

Wet gas – Produced gas that contains natural gas liquids.

Working Interest – Type of investment in oil and gas drilling operations in which the investor is directly liable for a portion of the ongoing costs associated with exploration, drilling, and production. In a similar fashion, working interest owners also fully participate in the profits of any successful wells

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