

# Ecopetrol S.A.

Fitch Ratings affirmed Ecopetrol S.A.'s Long-Term Foreign and Local Currency Issuer Default Ratings (IDRs) at 'BBB'. The Outlook is Negative. Fitch also affirmed the company's National Long- and Short-Term Ratings at 'AAA(col)'/F1+(col)'. The Rating Outlook for the National Long-Term Rating is Stable.

Ecopetrol's ratings reflect its close linkage with the Republic of Colombia (BBB/Negative), which owns 88.5% of the company. Ecopetrol's ratings also reflect the company's strategic importance for the country as well as its ability to maintain a solid financial profile despite the decline in hydrocarbon prices.

Ecopetrol's growth strategy and associated capex plan are considered adequate for the company's credit quality and cash flow generation ability. Fitch expects to maintain a financial and credit profile supportive of its standalone credit profile (SCP), which in Fitch's view is commensurate with a 'bbb'. The SCP assumes the company is not owned by Colombia and that it will not receive financial support from the government.

## Key Rating Drivers

**Linkage to Sovereign:** Ecopetrol's ratings reflect the strong linkage between the credit profile of Colombia and that of the company. The rating also reflects the government's strong incentives to support Ecopetrol in the event of financial distress, given the company's strategic importance, as it supplies virtually all liquid fuel in Colombia and owns 100% of the country's refining capacity. The company occasionally relies on funds from the government to offset the difference from selling fuel in the local market at lower prices than the export market.

**Strong Financial Profile:** Ecopetrol's 'bbb' SCP reflects its strong financial profile as it continued to improve credit metrics in 2019. Fitch-calculated gross leverage, measured by total debt to EBITDA, decreased to 1.2x as of the LTM ended Sept. 30, 2019 from 3.3x at YE 2016. The improving credit profile is primarily due to debt repayments. The company's declared dividends also decreased to a fraction of historical levels as a result of the decline in hydrocarbon prices. Fitch expects the company to stabilize its capital structure at current levels and for potential dividends or capex increases not to affect leverage.

**Neutral FCF Expected:** Fitch expects Ecopetrol's FCF to be neutral to marginally negative in the foreseeable future as a result of its dividend policy and projected capex. Ecopetrol recently announced an increase in annual capex to USD4.5 billion–USD5.5 billion for 2020 and dividends of up to 60% of net income. During the LTM ended Sept. 30, 2019, Ecopetrol's capex was approximately USD3.3 billion, down from USD6.9 billion per year between 2013–2015; the company also lowered dividends to USD3.2 billion during the period from USD4.2 billion between 2013–2015. During the LTM ended Sept. 30, 2019, Ecopetrol reported EBITDA of approximately USD9.4 billion, from USD7.9 billion in 2017. Total debt as of Sept. 30, 2019 was approximately USD11.7 billion.

**Manageable Capex Plan:** Ecopetrol plans to fund its roughly USD12 billion–USD15 billion capex program for 2019–2021 with internal cash flows. The company marginally improved its reserve life during 2018 as a result of a 129% reserve replacement ratio, to 7.2 years from a low of approximately 6.8 years in 2016. The company continues to focus its investment plan on building its reserve base, in line with the capex program. Fitch expects Ecopetrol's reserves and reserve life to continue improving as a result of ongoing exploration and production capex as well as the recent joint venture with Occidental Petroleum Corp. (BBB+/Stable) in the U.S. and its recent 30% stake acquisition of Gato Mato field in Brazil.

## Ratings

Rating Type	Rating	Outlook	Last Rating Action
Long-Term Foreign Currency IDR	BBB	Negative	Affirmed Dec. 3, 2019
Long-Term Local Currency IDR	BBB	Negative	Affirmed Dec. 3, 2019
National Long-Term Rating	AAA(col)	Stable	Affirmed Dec. 3, 2019

[Click here for full list of ratings](#)

## Applicable Criteria and Related Research

[Corporate Rating Criteria \(pub. 19 Feb 2019\)](#)

[Government-Related Entities Rating Criteria \(pub. 13 Nov 2019\)](#)

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**Stable Operating Metrics:** Ecopetrol's operating metrics should remain relatively stable and in line with the assigned rating. Proved reserves (1P) of 1.7 billion barrels of oil equivalent (boe) give the company a reserve life of 7.2 years as of YE 2018. The company reported reserve additions of 307 million boe in January 2019, of which 47 million boe were due to price revisions and the balance from improvements, extension and discoveries.

Ecopetrol's total debt/proved reserves improved to USD6.8 per boe as of June 30, 2019 from USD10 per boe in 2016 due to decreased debt. Fitch-calculated implied pretax break-even crude oil price for Ecopetrol has remained relatively stable over the past three years at approximately USD38/barrel.

## Financial Summary

(COP Bil.)	2017	2018	2019F	2020F
Gross Revenue	55,210	68,604	71,413	71,498
Operating EBITDA	23,280	30,269	31,161	30,898
Total Debt with Equity Credit/Operating EBITDA (x)	1.8	1.3	1.2	1.2
Total Net Debt with Equity Credit/Operating EBITDA (x)	1.4	0.9	0.9	1.0
Operating EBITDA/Interest Paid (x)	8.7	11.6	14.9	14.8

F -Forecast.

Source: Fitch Ratings, Fitch Solutions.

## Rating Derivation Relative to Peers

Ecopetrol's rating linkage to Colombia's sovereign ratings is in line with the linkage for most national oil and gas companies (NOCs) in the region; including Petroleos Mexicanos (PEMEX; BB+/Negative), Petroleo Brasileiro S.A. (Petrobras; BB-/Stable), Petroleos del Peru - Petroperu S.A. (BBB+/Stable) and Empresa Nacional del Petroleo (ENAP; A/Stable). In most cases, NOCs in the region are of significant strategic importance for energy supplies to their countries. NOCs also can serve as a proxy for federal government funding, as in Mexico, and have strong legal ties to the government through their majority ownership, strong control and at times governmental budgetary approvals.

Ecopetrol's SCP is commensurate with a 'bbb' rating, which is two notches higher than that of Petrobras at 'bb+', given Petrobras' higher leverage level. Ecopetrol's gross leverage as of Sept. 30, 2019 was 1.2x, compared with Petrobras' 3.2x.

Ecopetrol's credit profile is nine notches higher than Pemex 'ccc' SCP as a result of Ecopetrol's deleveraging capital structure versus Pemex's increasing leverage trajectory. Ecopetrol has and is expected to continue reporting stable production, which Fitch expects to stabilize between 725,000 boe per day and 750,000 boe per day. Pemex's crude production has been declining in recent years. These production trajectories further support the notching differential between the companies' SCPs.

Ecopetrol's credit profile and capital structure compares favorably to that of Repsol S.A. (BBB/Positive), which as of YE 2018 had total debt to EBITDA of 2.1x, net production of 715,000 boe per day, 1P reserves of 2,340 million boe and total debt to 1P of EUR5.3/boe. Ecopetrol's leverage as of the Sept. 30, 2019 was 1.2x. Its net production amounted to 720,000 boe per day and 1P reserves were 1,727 million boe.

Repsol's refining capacity of approximately 1 million barrels per day is much larger than Ecopetrol's approximately 405,000 barrels per day. Ecopetrol's credit profile is weaker than that of other international peers such as Eni SpA (A-/Stable) as a result of Ecopetrol's smaller production scale, although its capital structure is equally strong. Eni's leverage as of YE 2018 amounted to 1.6x, yet its production was larger and more diversified at 1.85 million boe per day, it had larger reserves at approximately 7.1 billion boe and total debt to 1P of EUR3.9/boe. Furthermore, Eni's organic reserve replacement ratio has met or exceeded 100% over the past five years and its reserve life exceeds 10 years.

## Navigator Peer Comparison

Issuer	Business profile								Financial profile		
	IDR/Outlook	Operating Environment	Management and Corporate Governance	Diversification	Proved Reserves	Cash Flow Cycle	Production Size	Profitability	Financial Structure	Financial Flexibility	
Ecopetrol S.A.	BBB/Neg	bbb	bbb	bbb	bbb	bbb	a-	bbb+	a-	bbb+	
Eni SpA	A-/Sta	a-	aa-	a	aa	bbb	a	a	a	a	
Hess Corporation	BBB-/Sta	aa	bbb	bbb-	bb+	bb	bbb-	bb	bbb-	bbb-	
Occidental Petroleum Corp.	BBB+/Sta	aa-	bbb+	a	a+	bbb	a-	a	a-	bbb	
Petroleo Brasileiro S.A. (Petrobras)	BB-/Sta	bb	bb	aa	aa	bbb	aa	a+	bbb-	bb	
Petroleos Mexicanos (PEMEX)	BB+/Neg	bbb	bbb-	a	aa	b	aa	bbb	ccc	b	
Repsol S.A.	BBB/Pos	a+	aa-	a+	bbb+	bbb	bbb	bbb+	bbb	bbb+	
YPF S.A.	CCC/RWOff	bb-	bb	bb-	bb-	b+	bbb	bb	bbb	bb-	

Source: Fitch Ratings. Importance: Higher (Red), Moderate (Blue), Lower (Light Blue)

Issuer	Business profile								Financial profile		
Name	IDR/Outlook	Operating Environment	Management and Corporate Governance	Diversification	Proved Reserves	Cash Flow Cycle	Production Size	Profitability	Financial Structure	Financial Flexibility	
Ecopetrol S.A.	BBB/Neg	0.0	0.0	0.0	0.0	0.0	2.0	1.0	2.0	1.0	1.0
Eni SpA	A-/Sta	0.0	3.0	1.0	4.0	-2.0	1.0	1.0	1.0	1.0	1.0
Hess Corporation	BBB-/Sta	7.0	1.0	0.0	-1.0	-2.0	0.0	-2.0	0.0	0.0	0.0
Occidental Petroleum Corp.	BBB+/Sta	19.0	15.0	17.0	18.0	14.0	16.0	17.0	16.0	14.0	14.0
Petroleo Brasileiro S.A. (Petrobras)	BB-/Sta	1.0	1.0	10.0	10.0	4.0	10.0	8.0	3.0	1.0	1.0
Petroleos Mexicanos (PEMEX)	BB+/Neg	2.0	1.0	5.0	8.0	-4.0	8.0	-2.0	-7.0	-4.0	-4.0
Repsol S.A.	BBB/Pos	4.0	5.0	4.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0
YPF S.A.	CCC/RWOff	5.0	6.0	6.0	5.0	4.0	9.0	6.0	9.0	5.0	5.0

Source: Fitch Ratings. Legend: Red = Worse positioned than IDR, Blue = In line with IDR, Light Blue = Better positioned than IDR

## Rating Sensitivities

### Developments That May, Individually or Collectively, Lead to Positive Rating Action

- An upgrade of Colombia’s sovereign rating.

### Developments That May, Individually or Collectively, Lead to Negative Rating Action

- A downgrade of Colombia’s sovereign rating;
- A significant weakening of the company’s linkage with the government and reduced government incentive to support Ecopetrol, coupled with a deterioration of its SCP.

## Liquidity and Debt Structure

**Strong Liquidity:** Ecopetrol’s strong liquidity is supported by cash on hand, positive cash flows, strong access to capital markets and an adequate debt maturity profile. As of Sept. 30, 2019, Ecopetrol reported USD3.3 billion of cash and equivalents on hand, compared with roughly USD1.3 billion of short-term debt and USD11.7 billion of total debt. The company also has a signed committed line of credit for USD665 million with Scotiabank and Mizuho Bank.

The company does not face significant financing needs over the foreseeable future, as its capex plan and dividend policies are expected to result in a positive cash flows.

## ESG Considerations

Unless otherwise disclosed in this section, the highest level of Environmental, Social and Governance (ESG) credit relevance is a score of ‘3’ – ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity.

Ecopetrol has an ESG Relevance Score of ‘4’ for waste and hazardous materials management due to oil spills the company has experienced.

The company has an ESG Relevance Score of ‘4’ for exposure to social impacts due to multiple attacks to its pipelines.

Ecopetrol’s score for Governance Structure (GGV) is ‘4’, resulting from its nature as a majority government-owned entity and the inherent governance risk that arises with a dominant state shareholder.

For more information on our ESG Relevance Scores, visit [www.fitchratings.com/esg](http://www.fitchratings.com/esg).

## Liquidity and Debt Maturity Scenario with No Refinancing

### Liquidity Analysis

(USD Mil.)	2019F	2020F
<b>Available Liquidity</b>		
Beginning Cash Balance	3,552	1,610
Rating Case FCF After Acquisitions and Divestitures	(715)	(911)
<b>Total Available Liquidity (A)</b>	<b>2,837</b>	<b>699</b>
<b>Liquidity Uses</b>		
Debt Maturities	(1,227)	(514)
<b>Total Liquidity Uses (B)</b>	<b>(1,227)</b>	<b>(514)</b>
<b>Liquidity Calculation</b>		
Ending Cash Balance (A+B)	1,610	185
Revolver Availability	0	0
Ending Liquidity	1,610	185
Liquidity Score (x)	2.3	1.4

F - Forecast.

Source: Fitch Ratings, Fitch Solutions, Ecopetrol S.A.

### Scheduled Debt Maturities

(USD Mil.)	12/31/18
2019	1,227
2020	514
2021	829
2022	333
2023	2,171
Thereafter	6,548
<b>Total</b>	<b>11,622</b>

Source: Fitch Ratings, Fitch Solutions, Ecopetrol S.A.

## Key Assumptions

### Fitch's Key Assumptions Within Our Rating Case for the Issuer

- Ecopetrol remains majority owned by the Republic of Colombia;
- Brent and West Texas Intermediate oil prices trend toward USD57.50/barrel and USD55.00/barrel, respectively, in the long term;
- Stable production, trending toward 750,000 boe per day by 2021;
- Aggregate capex of approximately USD5 billion per year;
- Dividends of 60% of previous year's net income.

Financial Data

(COP Bil.)	Historical			Forecast		
	2016	2017	2018	2019	2020	2021
<b>Summary Income Statement</b>						
Gross Revenue	47,732	55,210	68,604	71,413	71,498	71,545
Revenue Growth (%)	(8.4)	15.7	24.3	4.1	0.1	0.1
Operating EBITDA (Before Income from Associates)	15,927	23,280	30,269	31,161	30,898	30,575
Operating EBITDA Margin (%)	33.4	42.2	44.1	43.6	43.2	42.7
Operating EBITDAR	15,927	23,280	30,269	31,161	30,898	30,575
Operating EBITDAR Margin (%)	33.4	42.2	44.1	43.6	43.2	42.7
Operating EBIT	8,335	15,013	22,564	22,401	21,238	20,077
Operating EBIT Margin (%)	17.5	27.2	32.9	31.4	29.7	28.1
Gross Interest Expense	(2,765)	(2,386)	(2,399)	(2,096)	(2,089)	(2,240)
Pretax Income (Including Associate Income/Loss)	7,060	13,037	20,614	20,305	19,148	17,837
<b>Summary Balance Sheet</b>						
Readily Available Cash and Equivalents	13,778	10,914	11,633	8,012	5,948	7,280
Total Debt with Equity Credit	52,222	43,548	38,063	36,860	37,877	42,161
Total Adjusted Debt with Equity Credit	52,222	43,548	38,063	36,860	37,877	42,161
Net Debt	38,444	32,634	26,430	28,848	31,929	34,881
<b>Summary Cash Flow Statement</b>						
Operating EBITDA	15,927	23,280	30,269	31,161	30,898	30,575
Cash Interest Paid	(2,495)	(2,697)	(2,611)	(2,096)	(2,089)	(2,240)
Cash Tax	(4,347)	(4,217)	(6,650)	(8,135)	(7,671)	97,146
Dividends Received Less Dividends Paid to Minorities (Inflow/(Out)Flow)	233	270	109	0	0	0
Other Items Before FFO	4,890	403	(17)	0	0	0
Funds Flow from Operations	14,593	17,444	21,483	20,930	21,137	21,189
FFO Margin (%)	30.6	31.6	31.3	29.3	29.6	29.6
Change in Working Capital	(2,032)	(2,492)	(1,132)	59	2	1
Cash Flow from Operations (Fitch-Defined)	12,561	14,952	20,351	20,988	21,139	21,190
Total Non-Operating/Nonrecurring Cash Flow	0	0	0	—	—	—
Capex	(5,837)	(5,966)	(8,460)	—	—	—
Capital Intensity (Capex/Revenue) (%)	12.2	10.8	12.3	—	—	—
Common Dividends	(1,712)	(1,505)	(4,428)	—	—	—
FCF	5,011	7,482	7,463	—	—	—
Net Acquisitions and Divestitures	0	267	93	—	—	—
Other Investing and Financing Cash Flow Items	(4,596)	348	(437)	0	0	0
Net Debt Proceeds	4,595	445	(8,753)	(1,203)	1,017	4,284
Net Equity Proceeds	(3,150)	(9,007)	0	0	0	0
Total Change in Cash	1,860	(465)	(1,634)	(3,621)	(2,064)	1,332
<b>Calculations for Forecast Publication</b>						
Capex, Dividends, Acquisitions and Other Items Before FCF	(7,550)	(7,203)	(12,796)	(23,406)	(24,220)	(24,142)
FCF After Acquisitions and Divestitures	5,0152	7,749	7,556	(2,418)	(3,081)	(2,952)
FCF Margin (After Net Acquisitions) (%)	10.5	14.0	11.0	(3.4)	(4.3)	(4.1)
<b>Coverage Ratios</b>						
FFO Interest Coverage (x)	6.7	7.3	9.1	11.0	11.1	10.5
FFO Fixed Charge Coverage (x)	6.7	7.3	9.1	11.0	11.1	10.5
Operating EBITDAR/Interest Paid + Rents (x)	6.5	8.7	11.6	14.9	14.8	13.6
Operating EBITDA/Interest Paid (x)	6.5	8.7	11.6	14.9	14.8	13.6
<b>Leverage Ratios</b>						

Financial Data (Continued)

(COP Bil.)	Historical			Forecast		
	2016	2017	2018	2019	2020	2021
Total Adjusted Debt/Operating EBITDAR (x)	3.2	1.8	1.3	1.2	1.2	1.4
Total Adjusted Net Debt/Operating EBITDAR (x)	2.4	1.4	0.9	0.9	1.0	1.1
Total Debt with Equity Credit/Operating EBITDA (x)	3.2	1.8	1.3	1.2	1.2	1.4
FFO Adjusted Leverage (x)	3.1	2.2	1.6	1.6	1.6	1.8
FFO Adjusted Net Leverage (x)	2.3	1.7	1.1	1.3	1.4	1.5

F - Forecast.

Source: Fitch Ratings, Fitch Solutions.

How to Interpret the Forecast Presented

The forecast presented is based on Fitch Ratings' internally produced, conservative rating case forecast. It does not represent the forecast of the rated issuer. The forecast set out above is only one component used by Fitch Ratings to assign a rating or determine a rating outlook, and the information in the forecast reflects material but not exhaustive elements of Fitch Ratings' rating assumptions for the issuer's financial performance. As such, it cannot be used to establish a rating, and it should not be relied on for that purpose. Fitch Ratings' forecasts are constructed using a proprietary internal forecasting tool, which employs Fitch Ratings' own assumptions on operating and financial performance that may not reflect the assumptions that you would make. Fitch Ratings' own definitions of financial terms such as EBITDA, debt or free cash flow may differ from your own such definitions. Fitch Ratings may be granted access, from time to time, to confidential information on certain elements of the issuer's forward planning. Certain elements of such information may be omitted from this forecast, even where they are included in Fitch Ratings' own internal deliberations, where Fitch Ratings, at its sole discretion, considers the data may be potentially sensitive in a commercial, legal or regulatory context. The forecast (as with the entirety of this report) is produced strictly subject to the disclaimers set out at the end of this report. Fitch Ratings may update the forecast in future reports but assumes no responsibility to do so. Original financial statement data for historical periods is processed by Fitch Solutions on behalf of Fitch Ratings. Key financial adjustments and all financial forecasts credited to Fitch Ratings are generated by rating agency staff.

## Ratings Navigator

## Ecopetrol S.A.

ESG Relevance:



## Corporates Ratings Navigator Oil & Gas Production

Factor Levels	Sector Risk Profile	Operating Environment	Business Profile				Financial Profile			Issuer Default Rating
			Management and Corporate Governance	Diversification and Environmental Risk	Proved Reserves	Cash Flow Cycle	Production Size	Profitability	Financial Structure	
aaa										AAA
aa+										AA+
aa										AA
aa-										AA-
a+										A+
a										A
a-										A-
bbb+										BBB+
bbb										BBB
bbb-										BBB-
bb+										BB+
bb										BB
bb-										BB-
b+										B+
b										B
b-										B-
ccc+										CCC+
ccc										CCC
ccc-										CCC-
cc										CC
c										C
d or rd										D or RD

Operating Environment

bbb+	Economic Environment	bbb	Average combination of countries where economic value is created and where assets are located.
bbb	Financial Access	bbb	Average combination of issuer specific funding characteristics and of the strength of the relevant local financial market.
b-	Systemic Governance	bb	Systemic governance (eg rule of law, corruption; government effectiveness) of the issuer's country of incorporation consistent with 'bb'.
ccc+			

Diversification and Environmental Risk

a-	Diversification	bbb	Upstream E&P companies with diverse projects or smaller integrated. Less vulnerable to price volatility, still subject to cost overruns and production delays.
bbb+	Environmental Risk		
bbb			
bbb-			
bb+			

Cash Flow Cycle

a-	Free Cash Flow	bbb	Neutral across the cycle.
bbb+			
bbb			
bbb-			
bb+			

Profitability

a	FFO (\$)	bbb	\$4 billion
a-	Capex/CFO (%)	a	<100%
bbb+			
bbb			
bbb-			

Financial Flexibility

a	Financial Discipline	a	Clear commitment to maintain a conservative policy with only modest deviations allowed.
a-	Liquidity	a	Very comfortable liquidity. Well-spread debt maturity schedule. Diversified sources of funding.
bbb+	FFO Fixed Charge Cover	a	8.0x
bbb	FX Exposure	bbb	Some FX exposure on profitability and/or debt/cash flow match. Effective hedging in place.
bbb-	EBITDAR/(Gross Interest Expense + Rent)	bbb	9.0x

**How to Read This Page:** The left column shows the three-notch band assessment for the overall Factor, illustrated by a bar. The right column breaks down the Factor into Sub-Factors, with a description appropriate for each Sub-Factor and its corresponding category.

Management and Corporate Governance

a-	Management Strategy	bbb	Strategy may include opportunistic elements but soundly implemented.
bbb+	Governance Structure	bbb	Good CG track record but effectiveness/independence of board less obvious. No evidence of abuse of power even with ownership concentration.
bbb	Group Structure	a	Group structure shows some complexity but mitigated by transparent reporting.
bbb-	Financial Transparency	bbb	Good quality reporting without significant failing. Consistent with the average of listed companies in major exchanges.
bb+			

Proved Reserves

a-	Reserve Base (boe)	bbb	1.5 billion-2.5 billion
bbb+			
bbb			
bbb-			
bb+			

Production Size

a+	Production (thousand boe/day)	a	700 - 2,000
a			
a-			
bbb+			
bbb			

Financial Structure

a+	Lease Adjusted FFO Gross Leverage	a	2.2x
a	Lease Adjusted FFO Net Leverage	a	2.0x
a-	Total Adjusted Debt/Operating EBITDAR	a	2.0x
bbb+			
bbb			

Credit-Relevant ESG Derivation

Ecopetrol S.A. has 3 ESG rating drivers and 9 ESG potential rating drivers				Overall ESG	
key driver	0	issues	5	[Bar chart]	
driver	3	issues	4	[Bar chart]	
potential driver	9	issues	3	[Bar chart]	
not a rating driver	1	issues	2	[Bar chart]	
	1	issues	1	[Bar chart]	

- Waste and material handling; operations proximity to environmentally sensitive areas
- Social resistance to major projects or operations that leads to delays and cost increases
- Board independence and effectiveness; ownership concentration
- Emissions from OGP production
- Energy use in OGP operations
- Water management (e.g. usage levels, recycling capacity)

Showing top 6 issues  
For further details on Credit-Relevant ESG scoring, see page 3.



Credit-Relevant ESG Derivation

Ecopetrol S.A. has 3 ESG rating drivers and 9 ESG potential rating drivers

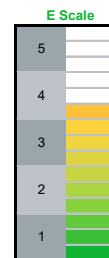
- Ecopetrol S.A. has exposure to waste and impact management risk which, in combination with other factors, impacts the rating.
- Ecopetrol S.A. has exposure to social resistance which, in combination with other factors, impacts the rating.
- Ecopetrol S.A. has exposure to board independence risk which, in combination with other factors, impacts the rating.
- Ecopetrol S.A. has exposure to emissions regulatory risk but this has very low impact on the rating.
- Ecopetrol S.A. has exposure to energy productivity risk but this has very low impact on the rating.
- Ecopetrol S.A. has exposure to water management risk but this has very low impact on the rating.

Showing top 6 issues

				Overall ESG Scale
key driver	0	issues	5	
driver	3	issues	4	
potential driver	9	issues	3	
not a rating driver	1	issues	2	
	1	issues	1	

Environmental (E)

General Issues	E Score	Sector-Specific Issues	Reference
GHG Emissions & Air Quality	3	Emissions from OGP production	Diversification and Environmental Risk; Profitability
Energy Management	3	Energy use in OGP operations	Diversification and Environmental Risk; Profitability
Water & Wastewater Management	3	Water management (e.g. usage levels, recycling capacity)	Diversification and Environmental Risk; Profitability
Waste & Hazardous Materials Management; Ecological Impacts	4	Waste and material handling; operations proximity to environmentally sensitive areas	Diversification and Environmental Risk; Profitability
Exposure to Environmental Impacts	3	Hydrocarbon reserves exposure to present/future regulation and environmental costs	Diversification and Environmental Risk; Profitability; Financial Flexibility



How to Read This Page

ESG scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant and green (1) is least relevant.

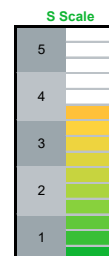
The Environmental (E), Social (S) and Governance (G) tables break out the individual components of the scale. The left-hand box shows the aggregate E, S, or G score. General Issues are relevant across all markets with Sector-Specific Issues unique to a particular industry group. Scores are assigned to each sector-specific issue. These scores signify the credit-relevance of the sector-specific issues to the issuing entity's overall credit rating. The Reference box highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis.

The Credit-Relevant ESG Derivation table shows the overall ESG score. This score signifies the credit relevance of combined E, S and G issues to the entity's credit rating. The three columns to the left of the overall ESG score summarize the issuing entity's sub-component ESG scores. The box on the left identifies the [number of] general ESG issues that are drivers or potential drivers of the issuing entity's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the score.

Classification of ESG issues has been developed from Fitch's sector and sub-sector ratings criteria and the General Issues and the Sector-Specific Issues have been informed with SASB's Materiality Map.

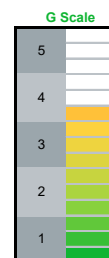
Social (S)

General Issues	S Score	Sector-Specific Issues	Reference
Human Rights, Community Relations, Access & Affordability	3	Operations proximity to areas of conflict or indigenous lands	Diversification and Environmental Risk; Profitability; Financial Flexibility
Customer Welfare - Fair Messaging, Privacy & Data Security	1	n.a.	n.a.
Labor Relations & Practices	3	Impact of labor negotiations and employee (dis)satisfaction	Profitability; Financial Structure; Financial Flexibility
Employee Wellbeing	2	Worker safety and accident prevention	Diversification and Environmental Risk; Profitability; Financial Flexibility
Exposure to Social Impacts	4	Social resistance to major projects or operations that leads to delays and cost increases	Production Size; Profitability; Financial Structure; Financial Flexibility



Governance (G)

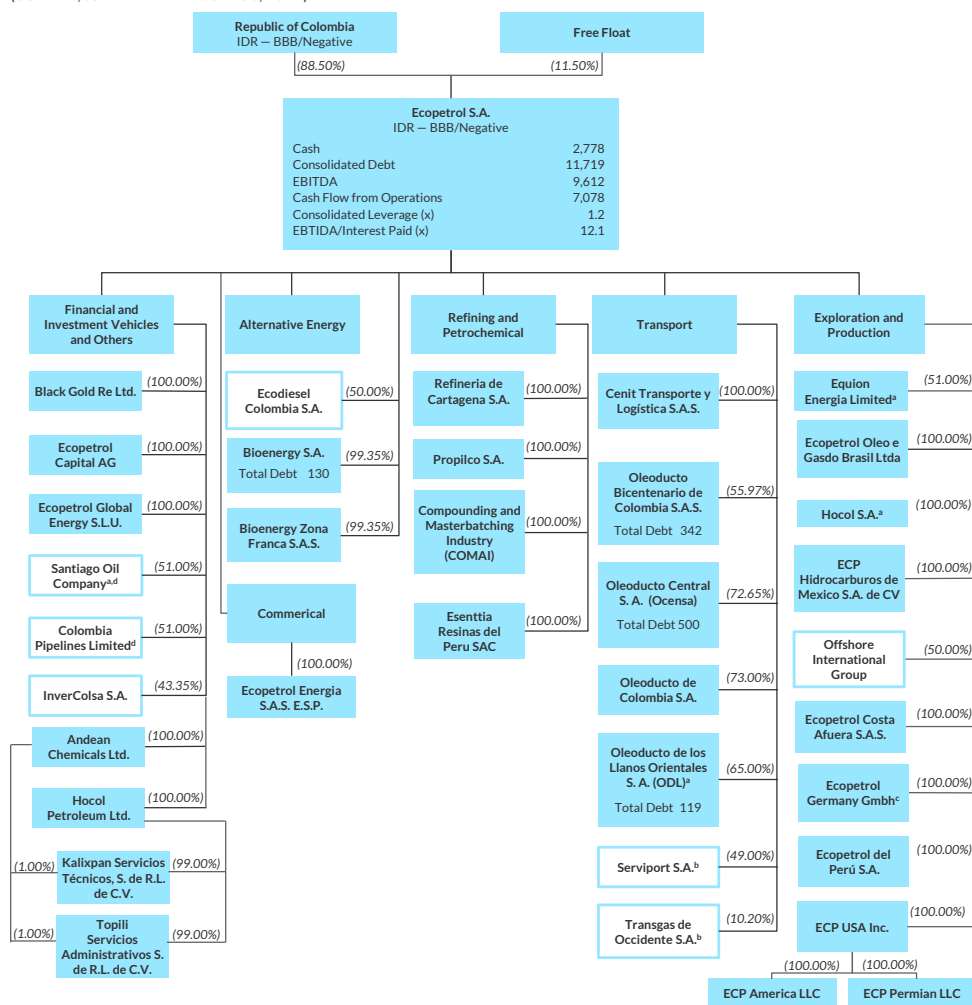
General Issues	G Score	Sector-Specific Issues	Reference
Management Strategy	3	Strategy development and implementation	Management and Corporate Governance
Governance Structure	4	Board independence and effectiveness; ownership concentration	Management and Corporate Governance
Group Structure	3	Complexity, transparency and related-party transactions	Management and Corporate Governance
Financial Transparency	3	Quality and timing of financial disclosure	Management and Corporate Governance



CREDIT-RELEVANT ESG SCALE	
How relevant are E, S and G issues to the overall credit rating?	
5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.
2	Irrelevant to the entity rating but relevant to the sector.
1	Irrelevant to the entity rating and irrelevant to the sector.

## Simplified Group Structure Diagram

Organizational Structure – Ecopetrol S.A.  
(USD Mil., as of LTM Ended June 30, 2019)



□ Unconsolidated/Associate Companies

<sup>a</sup>Foreign company branch office in Colombia. <sup>b</sup>Working interest of subsidiary of Ecopetrol S.A. <sup>c</sup>Company is in liquidation. <sup>d</sup>Owned by Equion. IDR – Issuer Default Rating.  
Source: Fitch Ratings, Fitch Solutions, Ecopetrol S.A.

Peer Financial Summary

Company	Issuer Default Rating	Financial Statement Date	Gross Revenue (USD Mil.)	Operating EBITDA (USD Mil.)	Total Debt with Equity Credit/Operating EBITDA (x)	Total Net Debt with Equity Credit/Operating EBITDA (x)	Operating EBITDA/Interest Paid (x)
Ecopetrol S.A.	BBB						
	BBB	2018	23,207	10,239	1.3	0.9	11.6
	BBB	2017	18,697	7,884	1.8	1.4	8.7
	BBB	2016	15,645	5,221	3.2	2.4	6.5
Petroleos Mexicanos (PEMEX)	BB+						
	BBB+	2018	87,452	29,504	3.7	3.5	4.9
	BBB+	2017	73,964	25,133	4.3	4.1	4.4
	BBB+	2016	57,510	15,301	6.9	6.4	3.2
Petroleo Brasileiro S.A. (Petrobras)	BB-						
	BB-	2018	95,584	31,047	2.7	2.2	5.5
	BB	2017	88,827	24,002	4.5	3.5	3.5
	BB	2016	81,405	24,173	4.8	3.9	3.4
YPF S.A.	CCC						
	B	2018	15,334	4,601	2.6	2.1	5.0
	B	2017	15,109	4,209	2.7	2.1	3.9
	B	2016	14,175	3,928	2.6	2.3	3.6
Hess Corporation	BBB-						
	BBB-	2018	6,322	2,845	2.6	1.5	6.7
	BBB-	2017	5,504	2,325	3.4	1.1	6.6
	BBB-	2016	4,762	1,376	5.0	3.2	4.0
Repsol, S.A.	BBB						
	BBB	2018	58,636	6,603	2.1	1.0	12.6
	BBB	2017	46,617	5,930	2.3	1.5	10.2
	BBB	2016	38,217	4,161	3.6	2.5	6.8
Eni SpA	A-						
	A-	2018	90,235	20,626	1.6	0.7	29.2
	A-	2017	76,510	13,841	2.1	1.2	21.5
	A-	2016	62,699	10,607	3.0	2.0	12.6
Occidental Petroleum Corp.	BBB+						
	A	2018	17,824	9,204	1.1	0.8	24.0
	A	2017	12,508	5,329	1.9	1.6	15.0
	A	2016	10,090	3,415	2.9	2.2	11.0

Source: Fitch Ratings, Fitch Solutions.

## Reconciliation of Key Financial Metrics

(COP Mil., as reported)	Dec. 31, 2018
<b>Income Statement Summary</b>	
Operating EBITDA	30,268,930
+ Recurring Dividends Paid to Non-controlling Interest	0
+ Recurring Dividends Received from Associates	108,991
+ Additional Analyst Adjustment for Recurring I/S Minorities and Associates	0
<b>= Operating EBITDA After Associates and Minorities (k)</b>	<b>30,377,921</b>
+ Operating Lease Expense Treated as Capitalised (h)	0
<b>= Operating EBITDAR after Associates and Minorities (j)</b>	<b>30,377,921</b>
<b>Debt &amp; Cash Summary</b>	
<b>Total Debt with Equity Credit (l)</b>	<b>38,062,645</b>
+ Lease-Equivalent Debt	0
+ Other Off-Balance-Sheet Debt	0
<b>= Total Adjusted Debt with Equity Credit (a)</b>	<b>38,062,645</b>
Readily Available Cash [Fitch-Defined]	6,311,744
+ Readily Available Marketable Securities [Fitch-Defined]	5,321,098
<b>= Readily Available Cash &amp; Equivalents (o)</b>	<b>11,632,842</b>
<b>Total Adjusted Net Debt (b)</b>	<b>26,429,803</b>
<b>Cash-Flow Summary</b>	
<b>Preferred Dividends (Paid) (f)</b>	<b>0</b>
Interest Received	383,624
<b>+ Interest (Paid) (d)</b>	<b>(2,610,562)</b>
<b>= Net Finance Charge (e)</b>	<b>(2,226,938)</b>
<b>Funds From Operations [FFO] (c)</b>	<b>21,483,368</b>
+ Change in Working Capital [Fitch-Defined]	(1,132,121)
<b>= Cash Flow from Operations [CFO] (n)</b>	<b>20,351,247</b>
<b>Capital Expenditures (m)</b>	<b>(8,460,426)</b>
<b>Multiple applied to Capitalised Leases</b>	<b>8.0</b>
<b>Gross Leverage</b>	
<b>Total Adjusted Debt / Op. EBITDAR<sup>a</sup> [x] (a/j)</b>	<b>1.3</b>
<b>FFO Adjusted Gross Leverage [x] (a/(c-e+h-f))</b>	<b>1.6</b>
Total Adjusted Debt/(FFO - Net Finance Charge + Capitalised Leases - Pref. Div. Paid)	
<b>Total Debt With Equity Credit / Op. EBITDA<sup>a</sup> [x] (l/k)</b>	<b>1.3</b>
<b>Net Leverage</b>	
<b>Total Adjusted Net Debt / Op. EBITDAR<sup>a</sup> [x] (b/j)</b>	<b>0.9</b>
<b>FFO Adjusted Net Leverage [x] (b/(c-e+h-f))</b>	<b>1.1</b>
Total Adjusted Net Debt/(FFO - Net Finance Charge + Capitalised Leases - Pref. Div. Paid)	
<b>Total Net Debt / (CFO - Capex) [x] ((l-o)/(n+m))</b>	<b>2.2</b>
<b>Coverage</b>	
<b>Op. EBITDAR / (Interest Paid + Lease Expense)<sup>3</sup> [x] (j/-d+h)</b>	<b>11.6</b>
<b>Op. EBITDA / Interest Paid<sup>3</sup> [x] (k/(-d))</b>	<b>11.6</b>
<b>FFO Fixed Charge Cover [x] ((c+e+h-f)/(-d+h-f))</b>	<b>9.1</b>
(FFO + Net Finance Charge + Capit. Leases - Pref. Div. Paid) / (Gross Int. Paid + Capit. Leases - Pref. Div. Paid)	
<b>FFO Gross Interest Coverage [x] ((c+e-f)/(-d-f))</b>	<b>9.1</b>
(FFO + Net Finance Charge - Pref. Div. Paid) / (Gross Int. Paid - Pref. Div. Paid)	

<sup>a</sup>EBITDA/R after Dividends to Associates and Minorities.  
Source: Fitch Ratings, Fitch Solutions, Ecopetrol S.A.

## Fitch Adjustment Reconciliation

(COP Mil.)	Reported Values Dec. 31, 2018	Sum of Fitch Adjustments	Preferred Dividends, Associates and Minorities Cash Adjustments	Adjusted Values
<b>Income Statement Summary</b>				
Revenue	68,603,872	0		68,603,872
Operating EBITDAR	30,268,930	0		30,268,930
Operating EBITDAR after Associates and Minorities	30,268,930	108,991	108,991	30,377,921
Operating Lease Expense	0	0		0
Operating EBITDA	30,268,930	0		30,268,930
Operating EBITDA after Associates and Minorities	30,268,930	108,991	108,991	30,377,921
Operating EBIT	22,564,080	0		22,564,080
<b>Debt &amp; Cash Summary</b>				
Total Debt with Equity Credit	38,062,645	0		38,062,645
Total Adjusted Debt with Equity Credit	38,062,645	0		38,062,645
Lease-Equivalent Debt	0	0		0
Other Off-Balance Sheet Debt	0	0		0
Readily Available Cash & Equivalents	11,632,842	0		11,632,842
Not Readily Available Cash & Equivalents	0	0		0
<b>Cash-Flow Summary</b>				
Preferred Dividends (Paid)	0	0		0
Interest Received	383,624	0		383,624
Interest (Paid)	(2,610,562)	0		(2,610,562)
Funds From Operations [FFO]	21,374,377	108,991	108,991	21,483,368
Change in Working Capital [Fitch-Defined]	(1,132,121)	0		(1,132,121)
Cash Flow from Operations [CFO]	20,242,256	108,991	108,991	20,351,247
Non-Operating/Non-Recurring Cash Flow	0	0		0
Capital (Expenditures)	(8,460,426)	0		(8,460,426)
Common Dividends (Paid)	(4,427,701)	0		(4,427,701)
Free Cash Flow [FCF]	7,354,129	108,991	108,991	7,463,120
<b>Gross Leverage (x)</b>				
Total Adjusted Debt / Op. EBITDAR) <sup>a</sup>	1.3			1.3
FFO Adjusted Leverage	1.6			1.6
Total Debt With Equity Credit / Op. EBITDA) <sup>a</sup>	1.3			1.3
<b>Net Leverage (x)</b>				
Total Adjusted Net Debt / Op. EBITDAR) <sup>a</sup>	0.9			0.9
FFO Adjusted Net Leverage	1.1			1.1
Total Net Debt / (CFO - Capex)	2.2			2.2
<b>Coverage (x)</b>				
Op. EBITDAR / (Interest Paid + Lease Expense) <sup>a</sup>	11.6			11.6
Op. EBITDA / Interest Paid) <sup>a</sup>	11.6			11.6
FFO Fixed Charge Coverage	9.0			9.1
FFO Interest Coverage	9.0			9.1

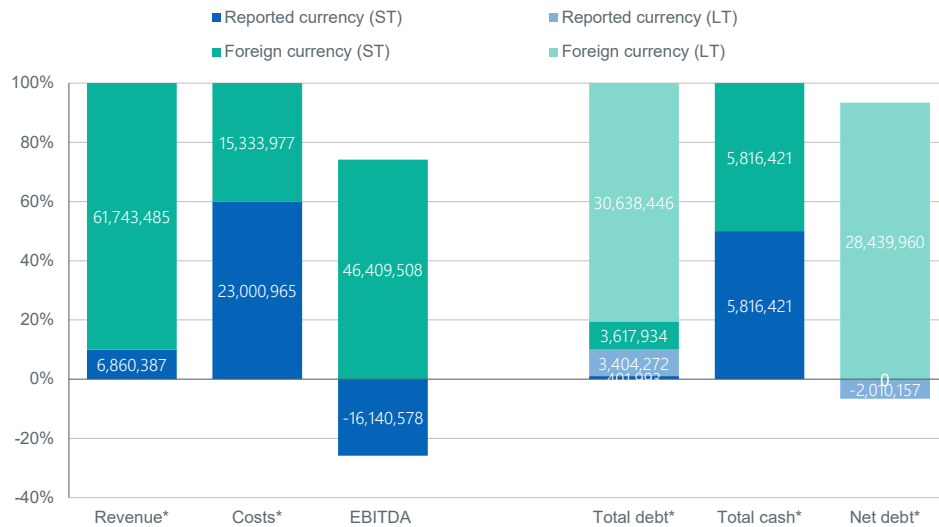
<sup>a</sup>EBITDA/R after Dividends to Associates and Minorities.  
Source: Fitch Ratings, Fitch Solutions, Ecopetrol S.A.

## FX Screener

Ecopetrol's FX exposure is considered moderate, as most of the company's revenues are either denominated or linked to U.S. dollars and a significant portion of its debt is in hard currency. The company could benefit from modest Colombian peso depreciation, as a significant portion of its costs are denominated in pesos. Although the company receives transfers from the country's oil price stabilization fund, it could see its exposure to peso delays in transfers from the stabilization fund increase under a very sharp depreciation scenario. This assumes a constant or marginally increasing global hydrocarbon price environment.

### Fitch FX Screener

(Ecopetrol S.A. — BBB/Negative, Dec-18, COPm)

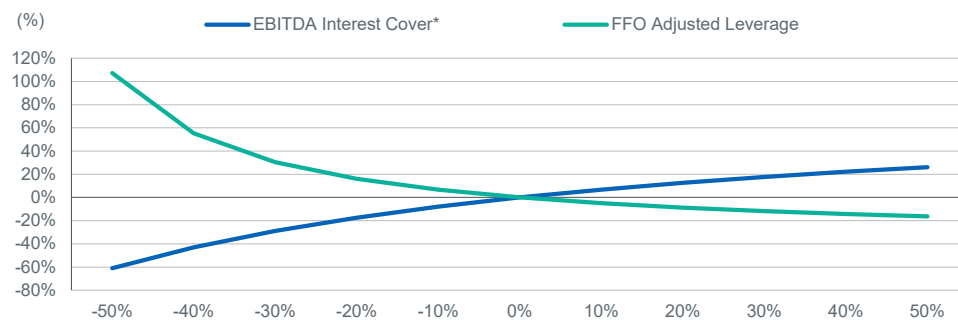


\*Post hedge, absolute figures displayed are Fitch's analytical estimates, based on publicly available information

Source: Fitch

### Fitch FX Screener - Foreign to Reported Currency Stress Test - Relative Variation

(Ecopetrol S.A. — BBB/Negative, Dec-18)

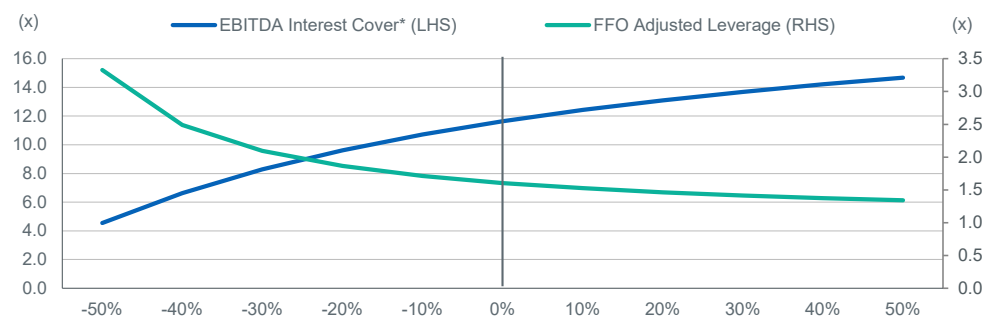


\*EBITDA after Dividends to Associates and Minorities

Source: Fitch

### Fitch FX Screener - Foreign to Reported Currency Stress Test - Absolute Variation

(Ecopetrol S.A. — BBB/Negative, Dec-18)



\*EBITDA after Dividends to Associates and Minorities

Source: Fitch

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