

CREDIT OPINION

22 June 2017

Update

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RATINGS

Ecopetrol S.A.

Domicile	Bogota, Distrito Capital, Colombia
Long Term Rating	Baa3
Type	LT Issuer Rating - Dom Curr
Outlook	Negative

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Ecopetrol S.A.

Update after ratings affirmation at Baa3 and negative outlook

Summary Rating Rationale

Ecopetrol's Baa3 senior unsecured ratings and its ba3 Baseline Credit Assessment (BCA) reflect the company's status as Colombia's leading oil and gas producer, accounting for about two-thirds of the country's production and 100% of the supply of oil products, and the size of its operations, which benefits from having valuable assets that can be relatively easily monetized. The ratings also take into consideration Ecopetrol's more stable cash flows from its midstream subsidiaries, which includes Ocesa (Baa3 negative). This is counterbalanced by execution risk on reserve replacement and corresponding reserve life growth and uncertainties derived from the investigations about Reficar. Furthermore, we assume high probability of support from the Government of Colombia (Baa2 stable) and a moderate default dependence between the two entities. This assessment results in a three-notch uplift of Ecopetrol's senior unsecured rating to Baa3 from its ba3 BCA, which reflects the company's intrinsic credit risk without support considerations.

Recent Developments

Certain current and former executives of Ecopetrol and Reficar, as well as other individuals, are under investigations by the Colombian Office of the Comptroller General, Attorney General's Office, and Prosecutor's Office on possible overpayments and wrongdoing regarding the upgrade and expansion of Ecopetrol's Cartagena refinery, Reficar. As a consequence of the Prosecutor's announcement on April 27, 2017 of its intention to pursue charges to individuals involved in Reficar's project, Ecopetrol delayed the filing of its Form 20-F for year 2016. The delay in filing derived from PWC, auditor of Ecopetrol's 2013-2015 financial statements, not immediately allowing the company to use its audit opinion on 2014-2015 statements for filing purposes. The company finally filed Form 20-F on May 31, 2017, after receiving a consent from PWC.

In connection with the ongoing investigations, Ecopetrol has retained a US-based law firm to perform a third-party investigation on the matters set forth by the Prosecutor's Office. We will watch closely any developments arising from investigations around cost overruns in Reficar's expansion and potential consequences on the company's liquidity and operations.

Credit Strengths

- » Leading oil and gas producer, accounting for about two-thirds of Colombia's production; only provider for refined products in the country
- » Integrated business model
- » Portfolio of valuable assets that can be relatively easily monetized, including Ocesa (Baa3 negative)

- » Assumption of high support from the Government of Colombia (Baa2 stable)

Credit Challenges

- » Still high exploration and production (E&P) operating costs
- » Low reserve life at 6.7 years as of December 2016
- » Stagnant production

Rating Outlook

The negative rating outlook is based on low reserve life, high execution risk related to reserve replacement, and on the unfavorable credit and operating developments that could arise from the current investigations at Reficar.

Factors that Could Lead to an Upgrade

A positive rating action could occur if the company manages to efficiently increase its reserve life by using mostly cash on hands and internally generated cash thus protecting its credit metrics. Specifically, if reserve life increases and retained cash flow/net debt is sustained at above 25%, Ecopetrol's ratings could be upgraded.

Factors that Could Lead to a Downgrade

A ratings downgrade could occur if Ecopetrol's faces liquidity constraints, its reserve life keeps a negative trend or if retained cash flow/net debt is below 20% for the foreseeable future. In addition, because Ecopetrol's ratings benefit from implicit support from the government of Colombia, a negative action on the government's rating or outlook, or a change in our assumptions about government support, could lead to a negative action on Ecopetrol's ratings.

Key Indicators

Exhibit 1

Key Indicators

Ecopetrol S.A.

	3/31/2017(L)	12/31/2016	12/31/2015	12/31/2014	12/31/2013
Average Daily Production (Mboe/d)	632.4	636.6	680.3	659.6	665.6
Proved Reserves (Million boe)	1,569.3	1,569.3	1,818.7	2,053.3	1,945.0
Total Crude Distillation Capacity (mbbl/day)	335.0	405.0	335.0	335.0	335.0
EBIT/Average Book Capitalisation	10.5%	9.1%	9.6%	15.7%	23.9%
Downstream EBIT/Total Throughput Barrels (\$/bbl)	\$1.4	\$0.5	\$3.8	\$1.4	-\$5.3
EBIT/Interest Expense	3.4x	2.7x	3.2x	9.3x	17.1x
Retained Cash Flow/Net Debt	32.9%	25.2%	16.2%	14.8%	40.6%
Total Debt/Capital	51.3%	52.8%	52.7%	32.2%	23.0%

All figures and ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Source: Moody's Financial Metrics™

Detailed Rating Considerations

LEADING UPSTREAM & DOWNSTREAM POSITION IN COLOMBIA

Ecopetrol is the leading oil and gas producer in Colombia, accounting for over 60% of the country's oil and gas reserves and 63% and 68% of its respective current crude oil and natural gas production. With 1.6 billion barrels of equivalent oil (BOE) of proved reserves as of year-end 2016 and production averaging 715 thousand barrels of equivalent oil per day (mboed) as per the company's expectation for 2017, Ecopetrol ranks as a mid-sized integrated oil company relative to its larger government-owned peers. In addition to selling its own production, Ecopetrol purchases and trades the government's royalty crude, its own natural gas royalties that are paid in cash, as well as a portion of third-party production in Colombia.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

In downstream, Ecopetrol owns all of the country's 405,000 barrels per day (bpd) of crude refining capacity through 4 four refineries. About 98% of Ecopetrol's production comes from two refineries, inland refinery at Barrancabermeja, responsible for 250,000 bpd, and Reficar at Cartagena, which has a 150,000 bpd capacity plant. Ecopetrol is the largest wholesale marketer in the Colombia, with virtually 100% market share, but does not engage in retail product marketing. Ecopetrol upgraded its Reficar refinery and expanded its capacity. During the process, the group expanded its capacity by 70,000 bpd to a total distillation capacity of 405,000 bpd and increased its Nelson complexity index to 10.5 from 5.1, allowing for lower cost feedstock and better product slate, which improved overall efficiency started in mid-2016. Ecopetrol is also Colombia's largest petrochemical producer, with 475,000 tons per annum of polypropylene capacity.

The company also owns indirectly and operates directly or in joint ventures close to 8,900 kilometers of crude oil and refined product pipelines, equivalent to 81% of Colombian pipeline capacity, including 100% or majority stakes in four of the largest crude pipelines, which connect field production to the refineries and to wholesale product and export terminals. These assets are a stable source of cash flows to Ecopetrol and provides liquidity cushion as tariffs are established in US dollars.

STAGNANT PRODUCTION AND LOW LEVELS OF RESERVES

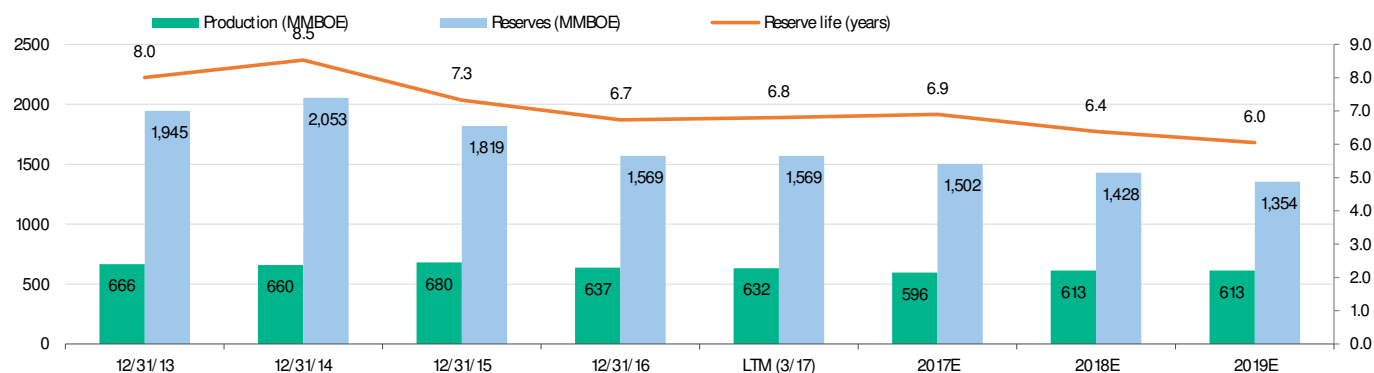
Looking forward, Ecopetrol's production growth rate has a stable trend but at low single digits levels. In order to protect its liquidity position, Ecopetrol cut capex by 25% in 2015 and by 63% in 2016 to USD 3 billion, which negatively compares to the original USD 4.8 billion planned for the year, and to the USD 6.5 billion spent in 2015.

Capex cuts negatively impacted production growth. Production slightly declined by 6% in 2016 to 637 mboe (net of royalties), even considering the incorporation of the Rubiales field's 50 mboe in mid-year 2016. For 2017, we expect only about 1% production increase. Ecopetrol's production is spread among various regions within Colombia, a geographic diversity that somewhat helps protect the business against guerrilla attacks on Ecopetrol facilities, since the company can access production from other fields and infrastructure in the event of disruptions.

Ecopetrol's 6.7 years of reserve life as of year ended December 31, 2016 is low and, although the company's liquidity and financing flexibility supports organic and inorganic reserve replacement, execution risk is significant. Ecopetrol's finding and development costs have been high, resulting in low returns and weak reserve replacement with more constrained capital spending. When analyzing return on investment, we focus on leveraged full-cycle ratio, which links cash operating costs to the ongoing capital invested in replacing reserves, showing the cash margin generated for each dollar invested over a cycle in the finding and development effort. In the case of Ecopetrol, this ratio has been below 1 since 2015. Achieving further material efficiencies in adding new reserves could take several years with success dependent in part on exploration.

Exhibit 2

Production and reserves evolution Ecopetrol S.A.



Production net of royalties

Source: Ecopetrol's Form 20F and Moody's Financial Metrics™

STABILIZATION OF FREE CASH FLOW SINCE 2016

The company's efforts to reduce investments in order to protect liquidity has resulted in better performance in terms of free cash flow (adjusted), which amounted USD 2.4 billion, as of March 31, 2017, from USD 1.5 billion in 2016 and USD-3.4 billion in 2015.

For 2017, Ecopetrol expects that capex will reach USD 3.5 billion and will be 90% directed to E&P. Reduced investments in downstream, which will decline materially as the upgrade of refinery Reficar is completed, will help contain cash outflows to fund investments in E&P.

Favorable results from the midstream business, which benefits from high capacity utilization and adequate tariffs, as well as the 25% higher refining capacity and efficiency improvements starting in June 2016, will contribute to Ecopetrol's ability to post flat to slightly positive free cash flow in the next couple of years, assuming dividend payments at a rate of 40% of net profit before impairments, as per the company's guidance.

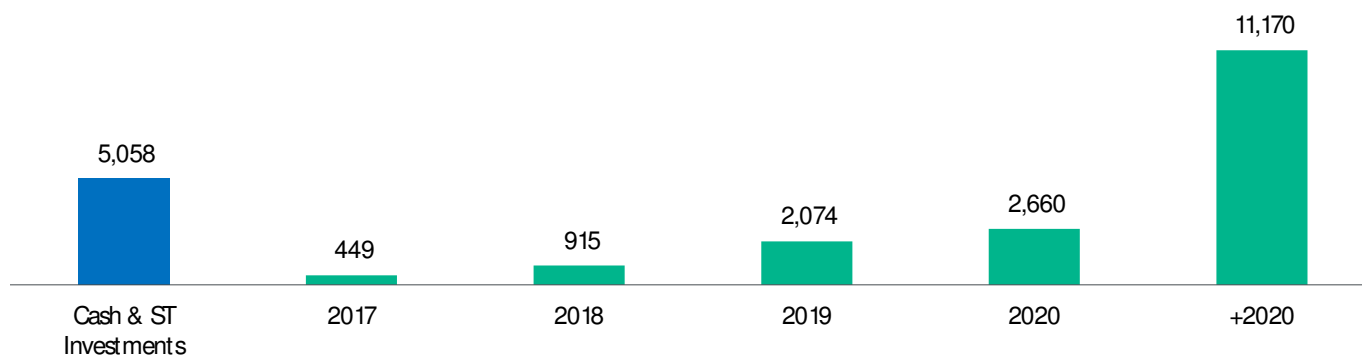
STABLE DEBT LEVERAGE OVER THE MEDIUM TERM

We believe that Ecopetrol's adjusted debt leverage will be at 2 times at the end of 2017, which positively compares to its internal maximum limit of 3 times and with all of its NOC's peers in the region. Our view about Ecopetrol's leverage is based on relatively stable oil prices in the \$40-60 dpb range in the medium term and the company's limited ability to reduce operating costs and increase capital efficiency further given its small operations size.

Liquidity Analysis

Ecopetrol's liquidity is good and refinancing risk is low. Cash on hands of USD 5.2 billion as of March 31, 2017 favorably compared to USD 449 million in maturing debt in 2017 and USD 915 million in 2018. In addition, operating results for the first quarter of 2017 were positive and the company believes it will not need external funding this year.

Exhibit 3
Debt Maturity Profile
Ecopetrol S.A.



In USD million. As of March 31, 2017.
Source: Ecopetrol's audited financial statements

Profile

Ecopetrol is the largest integrated oil and gas company in the country. The company has three business segments: exploration and production (42% of total revenues and 47% of EBITDA in 2016), refining activities (50% of total revenues and 10% of EBITDA), and transportation and logistics (8% of total revenues and 43% of EBITDA). Its production averaged 632 mboed (net of royalties) for the last twelve months ended on March 31, 2017, when total assets amounted to USD 42 billion. The government of Colombia (Baa2 stable) owns 88.5% of the company through shares held by the Ministry of Finance; the balance is trading in the Colombian Securities Exchange since November 2007 and Ecopetrol's ADR's are listed on the New York Stock Exchange since 2008.

Rating Methodology and Scorecard Factors

The forward looking grid-indicated rating before the government fiscal dependence factor is Baa3, compared to Ecopetrol' ba3 BCA and Baa3 Global Scale Rating. The fiscal dependence factor of 2, which is an indicator of the financial risk associated with government taxation and financial dependence on the company, changes the grid outcome for the 12-18 month forward view to Ba2.

Exhibit 4

Rating Factors

Ecopetrol S.A.

Integrated Oil & Gas Industry Grid [1][2]	Current LTM 3/31/2017		Moody's 12-18 Month Forward View As of 6/20/2017 [3]	
	Measure	Score	Measure	Score
Factor 1 : Scale (25%)				
a) Average Daily Production (Mboe/d)	632.4	A	613.2	A
b) Proved Reserves (Million boe)	1,569.3	Baa	1,480.3	Baa
c) Total Crude Distillation Capacity (mblb/day)	405.0	Ba	405	Ba
Factor 2 : Business Position (20%)				
a) Business Position	Baa	Baa	Baa	Baa
Factor 3 : Profitability and Returns (10%)				
a) EBIT/Average Book Capitalisation	10.5%	Baa	17.3%	A
b) Downstream EBIT/Total Throughput Barrels (\$/bbl)	\$1.4	Aaa	\$1.2	B
Factor 4 : Financial Policy (20%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Factor 5 : Leverage and Coverage(25%)				
a) EBIT / Interest Expense	3.4x	Ba	6.1x	Baa
b) Retained Cash Flow/Net Debt	32.9%	A	21.6%	Baa
c) Total Debt/Capital	51.3%	Baa	51.7%	Baa
Rating:				
Indicated Rating from Grid Factor 1-5		Baa2		Baa3
Rating Drag	2	2	2	2
a) Indicated Rating from Grid		Ba1		Ba2
b) Actual Rating Assigned				Baa3
Government-Related Issuer	Factor			
a) Baseline Credit Assessment	ba3			
b) Government Local Currency Rating	Baa2			
c) Default Dependence	Moderate			
d) Support	Strong			
e) Final Rating Outcome	Baa3			

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of 3/31/2017(L)

[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Financial Metrics™

Ratings

Exhibit 5

Category	Moody's Rating
ECOPETROL S.A.	
Outlook	Negative
Issuer Rating -Dom Curr	Baa3
Senior Unsecured	Baa3

Source: Moody's Investors Service

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REPORT NUMBER

1079370