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## INVESTORS SERVICE

### Credit Opinion: **Ecopetrol S.A.**

Global Credit Research - 26 Jun 2015

Bogota, Colombia

#### Ratings

Category	Moody's Rating
Outlook	Stable
Issuer Rating -Dom Curr	Baa2
Senior Unsecured	Baa2

#### Contacts

Analyst	Phone
Nymia C. Almeida/Mexico	52.55.1253.5700
Peter Speer/New York City	1.212.553.1653
Marianna Waltz, CFA/Sao Paulo	55.11.3043.7300

#### Key Indicators

##### [1]Ecopetrol S.A.

	12/31/2014	12/31/2013	12/31/2012	12/31/2011	12/31/2010
Average Daily Production (Mboe/d)	659.6	665.6	630.5	602.5	513.6
Proved Reserves (Million boe)	2,053.3	1,945.0	1,851.4	1,832.4	1,690.2
Total Crude Distillation Capacity (mmbbl/day)	335.0	335.0	335.0	335.0	335.0
EBIT/Average Book Capitalisation	15.5%	24.5%	30.1%	40.8%	25.3%
Downstream EBIT/Total Throughput Barrels (\$/bbl)		-\$10,212.0	-\$5,191.8	\$1,032.5	-\$5,552.2
EBIT / Interest Expense	9.2x	17.6x	16.6x	35.9x	22.0x
Retained Cash Flow/Net Debt	14.8%	40.6%	189.6%	589.6%	132.0%
Total Debt/Capital	32.2%	23.0%	17.8%	13.8%	20.0%

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

Note: For definitions of Moody's most common ratio terms please see the accompanying [User's Guide](#).

#### Opinion

##### Rating Drivers

- Leading integrated energy company in Colombia
- Peak leverage in 2015; expected to decline starting in 2016
- Low reserve life at 8.6 years
- Political risk concerns

##### Issuer Profile

Headquartered in Colombia, Ecopetrol S.A. (Ecopetrol) is the largest integrated oil and gas company in Colombia. It is responsible for over 60% of total Colombian oil production and has a proved hydrocarbon reserve position of roughly two billion barrels of oil equivalent at the end of 2014. For the twelve months ended January 31, 2015, the company generated revenues of USD38.4 billion and in March 31, 2015 it had total assets of USD52.3 billion. Its production averaged 773.4 mboed in the first quarter of 2015, from 755 mboed average in 2014. Following an IPO in 2007 and a second round share offering in August 2011, the government owns 88.5% of the company through shares held by the Ministry of Finance.

## **Rating Rationale**

Ecopetrol's ratings are based on its solid business strategy, now focused on expanding exploration activities to increase reserves as well as on improving production recovery and operating efficiencies across the board, which will help the company protect its credit quality through the current cycle of lower oil prices. The ratings also consider Ecopetrol's status as Colombia's leading oil and gas producer, accounting for about two-thirds of the country's production, and the size of its operations, which benefits from having valuable assets that can be relatively easily monetized. However, the ratings also factor in the staging and execution risks of its capex program and its increased debt leverage. A baseline credit assessment (BCA) of baa3 underlies the company's Baa2 issuer rating, which derives one notch of uplift under Moody's joint-default analysis, based on a high level of government support and moderate default correlation.

## **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 BOE reserves and 63% and 68% of its respective current crude oil and natural gas production. With roughly 2 billion BOEs of proved reserves as of year-end 2014 (70% liquids) and production averaging 773.4 mboed in the first quarter of 2015, Ecopetrol ranks as a mid-sized integrated oil company relative to its larger state oil company peers. In addition to selling its own production, Ecopetrol purchases and trades the government's royalty crude and a portion of the natural gas that are paid in-kind, as well as a portion of third-party production in Colombia.

In the downstream, Ecopetrol owns all of the country's 335,000 barrels per day (bpd) of crude refining capacity through the 250,000 bpd inland refinery at Barrancabermeja and a current 80,000 bpd plant at Cartagena, plus other smaller plants. In the first quarter of 2015, the company produced approximately 220,700 bpd and imported 121,400 bpd of refined products. Ecopetrol is the largest wholesale marketer in Colombia, with virtually 100% market share, but does not engage in retail product marketing.

Ecopetrol is also Colombia's largest petrochemical producer, with 475,000 tons per annum of polypropylene capacity. It also owns indirectly and operates directly or in joint ventures more than 8,900 kilometers of crude oil and refined product pipelines, 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.

### **STABLE RESERVES AND PRODUCTION PROFILE**

Ecopetrol's production is spread among various regions within Colombia, a geographic diversity that 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. The company has also increased its exports to Asia, which reached over 41% of its exported volumes in 2014, up from 21% in 2012, while decreasing its US exports to about 35% from 59% in the same period.

Ecopetrol had seen its output grow by 12% annually on average from 2009 to 2013 as it increased production at new fields, improved recoveries at mature fields, and replaced reserves at a 100%-plus annual rate. Going forward, we expect the company to maintain the same operating strategy. However, capex will decline substantially from over USD9.5 billion targeted annually, which will have a direct impact on production growth rates; we now expect Ecopetrol to increase production in about 5% only in the next couple of years. With regards to reserves, we expect the replacement rate to stay above 100%, which will provide for just a minor increase from current short 8.6 years reserve life.

### **CAPITAL SPENDING ADAPTED TO LOWER CRUDE PRICES**

Ecopetrol had ramped up capital spending significantly from 2008 to 2014 to fund its so-called Mega Plan, which was expected to materially increase crude oil and gas production, support infrastructure expansion, and refining upgrades. The Mega Plan set a capital program estimated at USD68.5 billion for 2014-2020 (equivalent to an

average of close to USD10 billion annually), which would take production to reach the 1.3 million BOE/day mark by 2020.

However, the significant fall of crude prices starting in mid-2014 prompted a reduction in Ecopetrol's capital investment plan for the upcoming years. The company's total USD7.9 billion capex program for 2015 includes close to USD4.7 billion in exploration and production, in onshore and shallow waters but also in deep waters. Exploration capex alone should increase from USD600 million in 2015 to an average of over USD1 billion in the next three years..

In addition, the company will invest USD1.5 billion in downstream, mostly towards the completion of the USD7.5 billion project to double throughput capacity at Reficar, a refinery in Cartagena, from 80,000 bpd to 165,000 bpd by the end of 2015, when Ecopetrol will start producing 100% of the gasoline and diesel consumed in the country at least until 2020. Investments in downstream will also help increase conversion to handle a heavier domestic crude slate (from current 0% to 60%) and produce a higher value yield of gasoline and middle distillates at Reficar.

The company will also invest USD2 billion to expand oil and oil products pipelines, ports, supply plants and on-off loading facilities. Ecopetrol controls a mid-stream subsidiary, Cenit, which holds interest in Bicentenario, Ocensa, and other pipelines in Colombia.

Total capex from 2016 on should decline materially after the completion of investments in Reficar.

#### DEBT LEVERAGE TO REACH PEAK LEVEL IN 2015

Leverage will increase in 2015 but will remain manageable based on the company's declining production costs, operating efficiency programs and the cushion in its balance sheet, since so far financial leverage is moderate for its rating category. We expect that Ecopetrol's leverage will peak during 2Q15 but will decline starting in 2016 as oil prices and production gradually increase and costs and expenses decline further. We also expect that, during the current period of lower operating cash flows, the government take as a percentage of net income will remain below the usual 80%; we note that the dividend payout ratio in 2014 (paid in 2015) was 70% of net income.

#### POLITICAL RISK CONCERNS

Ecopetrol and the oil industry in Colombia remain subject to periodic terrorist activity, including pipeline bombings and kidnappings, as well as agitation in areas such as the eastern provinces along the border of Venezuela and in the far south.

Colombia has witnessed a widespread decline in guerilla activity since the early 2000 period. However, Colombia's long-running war with the FARC insurgency movement leads to frequent attacks on its energy infrastructure, which could limit Ecopetrol's future production growth, and community protests can delay or halt crude deliveries. In the first half of 2014 alone, the Cano Limon pipeline was out of service for nearly two months with impact on production. The Transandino pipeline was also interrupted, negatively impacting production.

However, President Juan Manuel Santos is a former defense minister and has stepped-up protection of energy infrastructure, as well as promoted social programs to gain the support of local populations. He is also negotiating with the FARC to try to end the insurgency. Other risks include labor disruptions and access to new areas for future exploration and development, which will require soliciting the support and participation of indigenous peoples.

#### Liquidity Profile

Ecopetrol has an adequate liquidity position, including USD4.3 billion of cash and cash equivalents as of March 31, 2015. We expect cash flow from operations for the next 12 months to be at about USD4.5 billion, along with roughly USD8 billion of capex and USD2 billion in dividends. We expect negative free cash flow of close to USD7 billion in 2015 and USD2 billion in 2016.

Ecopetrol's debt maturity profile is manageable with an average maturity of 10.52 years. Although the government's stake in Ecopetrol cannot fall below 80%, the company can still issue an additional 8.5% of equity for financing, if necessary, although not envisioned at this point by the company.

#### Rating Outlook

Ecopetrol's rating stable outlook incorporates higher financial leverage in 2015 given weaker internally generated cash flow, caused by lower oil prices, and lower production than originally planned. In addition, the company has

traditionally paid a high statutory dividend, which competes with funds needed for reinvestment. However, we expect that ongoing cost controls and operating efficiencies as well as lower dividend payout ratio, at least related to fiscal year 2015 and 2016, will support free cash flow. In addition, although the government's stake in Ecopetrol cannot fall below 80%, the company can still issue an additional 8.5% of equity for financing, if necessary, although not envisioned at this point by the company.

### What Could Change the Rating - Up

An upgrade is unlikely in the near term given Ecopetrol's weakened credit metrics. Longer term, its BCA and ratings could be upgraded if it strengthens its balance sheet and reduces financial leverage to around 1 time gross debt to EBITDA.

### What Could Change the Rating - Down

Ecopetrol's ratings could be pressured downwards if production growth is significantly underperforms or if the company's debt increases materially beyond expectations or if the company fails to maintain Retained Cash Flow/Net Debt above 20% on a sustainable basis beyond 2015. The ratings could also be pressured if we viewed government support as likely to weaken. Actual rating outcomes in the future would take into account sovereign rating considerations, such as country rating and ceilings or support and dependence assumptions between the company and the government of Colombia, among other factors.

## Rating Factors

### Ecopetrol S.A.

Integrated Oil & Gas Industry Grid [1][2]	Current FY 12/31/2014		[3]Moody's 12-18 Month Forward ViewAs of 6/26/2015	
	Measure	Score	Measure	Score
<b>Factor 1 : Scale (25%)</b>				
a) Average Daily Production (Mboe/d)	659.6	A	788	A
b) Proved Reserves (Million boe)	2,053.3	A	2068	A
c) Total Crude Distillation Capacity (mmbbl/day)	335.0	Ba	335	Ba
<b>Factor 2 : Business Position (20%)</b>				
a) Business Position	Baa	Baa	Baa	Baa
<b>Factor 3 : Profitability and Returns (10%)</b>				
a) EBIT/Average Book Capitalisation	15.5%	A	8.6%	Ba
b) Downstream EBIT/Total Throughput Barrels (\$/bbl)	-\$5,324.3	Ca	-\$5000	Ca
<b>Factor 4 : Financial Policy (20%)</b>				
a) Financial Policy	Ba	Ba	Ba	Ba
<b>Factor 5 : Leverage and Coverage(25%)</b>				
a) EBIT / Interest Expense	9.2x	A	4x	Ba
b) Retained Cash Flow/Net Debt	14.8%	Ba	22.8%	Baa
c) Total Debt/Capital	32.2%	Aa	42.1%	A
<b>Rating:</b>				
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		Baa2		Baa2

Government-Related Issuer	Factor
a) Baseline Credit Assessment	baa3
b) Government Local Currency Rating	Baa2
c) Default Dependence	Moderate
d) Support	High
e) Final Rating Outcome	Baa2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] As of 12/31/2014; Source: Moody's Financial Metrics [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.

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