

Credit Opinion: Petroleos Mexicanos

Global Credit Research - 29 Jun 2012

Mexico, Mexico

Ratings

Category	Moody's Rating
Outlook	Stable
Issuer Rating	Baa1
Senior Unsecured	Baa1
NSR Senior Unsecured -Dom Curr	Aaa.mx
NSR BACKED Senior Unsecured - Dom Curr	Aaa.mx
Pemex Project Funding Master Trust	
Outlook	Stable
Senior Unsecured	Baa1
Fideicomiso No. F/163 de Pemex	
Outlook	Stable
Bkd Senior Unsecured -Dom Curr	Baa1
NSR BACKED Senior Unsecured - Dom Curr	Aaa.mx

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Key Indicators

Petroleos Mexicanos[1]

	12/31/2011	12/31/2010	12/31/2009	12/31/2008	12/31/2007
EBIT / Book Capitalization	73.9%	66.2%	71.2%	142.1%	130.5%
EBIT / Interest Expense	9.2x	6.7x	5.0x	8.0x	9.3x
Retained Cash Flow / Net Debt	11.0%	10.4%	6.2%	73.8%	21.3%
Gross Debt / Total Capital	123.1%	118.3%	134.7%	197.8%	154.5%
Gross Debt / Total Proved Reserves	\$8.58	\$8.65	\$8.61	\$6.27	\$5.48
Total Proved Reserve Life (Yrs)	10.2	10.1	10.2	9.9	9.2

[1] All ratios are calculated using Moody's Standard Adjustments. 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

- * High fiscal burden and elevated financial leverage
- * Reserves and production growth challenge
- * Benefits and challenges of energy reform implementation
- * Rising capital spending trend
- * Government related issuer with strong implied government support

Corporate Profile

Petróleos Mexicanos (PEMEX) is the state oil company of Mexico. It has monopoly status in the petroleum industry and is 100%-owned by the Mexican government. PEMEX is a fully integrated company with operations in oil and gas exploration and production, refining, distribution and retail marketing, pipelines and petrochemicals. With 52% of its crude oil exported in 2011, it is also a leading crude supplier to the United States.

Rating Rationale

PEMEX's Baa1 foreign currency and local currency ratings factor in strong implied support and uplift from the government of Mexico (government bond rating Baa1). PEMEX's ratings reflect the company's sizable 13.8 billion BOE of proved hydrocarbon reserves, and oil and gas production averaging about 3.7 million BOE/day in 2012, its monopoly status, integrated operations, and position as a leading crude oil exporter to the U.S. However, on the negative side, PEMEX's heavy tax burden, high financial leverage and challenge in stabilizing and growing its core oil production weigh heavily on our fundamental assessment as reflected in the baseline credit assessment of 11 (comparable to Ba1).

Even with the benefit of fiscal and energy reforms PEMEX remains capital-constrained and its ability to attract capital and technology to the upstream is stymied by Mexico's constitutional prohibition on foreign investment and equity ownership of reserves. While the company has started to step up deepwater exploration, it will take years of consistent reinvestment and success before it can become a significant production source. In the meantime, the company will remain focused on increasing production from its conventional offshore and onshore basins, including recent light oil discoveries, as well as on investing in upstream and downstream infrastructure to meet rising energy and product demand in Mexico.

DETAILED RATING CONSIDERATIONS

HIGH FISCAL BURDEN AND ELEVATED FINANCIAL LEVERAGE

PEMEX's pre-tax cash flow is abundant and could support high levels of investment, but capital retention and investment continue to be stymied by a heavy tax burden, especially when compared to its international peers, and by the exclusion of foreign investment in the Mexican oil sector. The tax reforms enacted since 2006 have been only mildly beneficial in terms of cash retention for investment. The 2008 energy reform mooted the need for the PIDIREGAS (public works) financing structure and de-linked PEMEX from the national budget setting process, giving it more autonomy in establishing annual budgets and long-term development plans and the authority to directly issue debt. However, the new fiscal regime has not appreciably increased PEMEX's after-tax cash flows relative to its heavy debt burden, partly a result of cost caps on deductions against the Ordinary Hydrocarbons Duty, which have stayed fixed as capital costs have increased, passing on the benefit of higher oil prices to the government.

As a result, PEMEX continues to report losses despite higher revenues and operating profits, with a net loss of US\$6.67 billion in 2011. Its first quarter net income of US\$ 2.63 billion primarily reflected currency gains arising from an 8% appreciation of the Peso. The company is also increasing its capital budget and outspending cash flow from operations, which in conjunction with large debt amortizations will require large debt issuance and some draw down in its cash position. PEMEX's debt declined 4.8% in the first quarter of 2012 to M\$743.6 billion but was up almost 12% over year-end 2010 in peso terms, and some 7% in dollar terms at \$57.8 billion. PEMEX is likely to show further debt increases in 2012, and could undertake US\$8 billion-\$10 billion in financing to cover its cash flow deficit and debt amortizations.

PEMEX also has sizable pension obligations that have continued to increase, totaling M\$731 billion (\$52.4 billion) at year end 2011. While there has been some dialogue around pension relief and the possible transfer of PEMEX's pension obligations to the government, we do not expect this to happen in the foreseeable future. The pension liabilities are direct obligations of PEMEX and not guaranteed by the government, but we believe the government

would never allow PEMEX to default on these obligations.

CHALLENGE OF RESERVES AND PRODUCTION GROWTH

PEMEX is Mexico's sole producer and marketer of crude oil, natural gas and refined products. Despite massive proven hydrocarbon reserves, a legacy of high taxation and under-investment has resulted in a trend of declining reserves and production as the giant Cantarell oil field declined. Still, PEMEX has been increasing capital investment and its reserve replacement has improved. The company achieved full reserve replacement in 2011 for the first time in many years, at 101%, up from 85% in 2010 from 50% since 2007. It added over 1.37 billion BOEs via revisions and discoveries from the KMZ fields and other sources, including natural gas. Three-year average reserve replacement was 88% from all sources.

PEMEX's oil and gas production has largely stabilized in 2012 at about 3.98 million BOE/day, despite the impact of the Cantarell field decline, reflecting rising production from the KMZ complex and increasing natural gas production. Cantarell is producing about 455,000, down from a peak 2.1 million bpd, although its decline rate has been slowed to about 1% per month. Total crude production in 2012 is averaging about 2.53 million bpd and is expected to remain at that level, with a significant rise in KMZ production, light crude from the offshore Tabasco Litoral, and other fields such as Ixtal-Manik and Delta del Grijalva. KMZ is now PEMEX's largest producing complex at about 850,000 bpd and is expected to plateau over the next 2-3 years based on the company's staged development plan of the field complex. Natural gas production was on a rising trend from non-associated gas developments in the Northern basins, as well as from associated gas from offshore fields, but with field declines and recent reductions in Burgos and Veracruz due to low gas prices, overall production is down over 9% from 2010 levels, averaging about 6.4 BCF/day in 2012.

The ATG complex (formerly Chicontepec) is estimated to have more than 17 billion barrels of 3P reserves but has proved to be a technically challenging fractured reservoir with a low recovery factor of 5%-9% and a slow ramp up in production, averaging about 66,000 bpd in 2012. PEMEX has pulled back on investing in ATG to evaluate new development technologies. Under a "field lab" approach and contract regime, it is enlisting the major oil service firms to find efficient ways to raise ATG production rates and is increasing investment there to \$1.6 billion in 2012. PEMEX plans to bid out new performance contracts on ATG in the second half of 2012 based on the field work findings.

While the core Southeastern basin will remain PEMEX's primary focus in the medium term, the deepwater Gulf of Mexico provides the greatest prospects for long-term reserves and production growth. Deepwater seismic and exploration work is increasing but is still in an early phase and will require years of investment and development. From 2004-2011, PEMEX drilled nineteen wells with some potential commercial success, with the main discoveries being two natural gas wells in 2010, and an oil discovery from the Tamil-1 well. In 2012, the company plans to spend \$1 billion to drill up to six deepwater wells, including its first well to 3,000 feet in the Perdido fold belt bordering the U.S. Gulf waters.

The upstream sector remains off-limits to production sharing or other forms of equity ownership that could accelerate deepwater investment and the company lacks deepwater expertise. While its attempts to establish strategic partnerships or technology sharing agreements with the international companies have not made much headway, PEMEX is planning to offer deepwater acreage under future performance contracts, most likely in 2013 after the July presidential and congressional elections. The PRI candidate for president, Enrique Pena Nieto, has talked openly in the campaign about the need for a partial opening of the oil sector (refining, petrochemicals, shale gas reserves) to private investment, but not privatization per se. The extent to which this will carry through after the elections is not clear.

BENEFITS AND CHALLENGES OF ENERGY REFORM IMPLEMENTATION

The tax and energy reforms of 2006-2009 have affected PEMEX's operations, governance and investments, and included provisions to allow greater autonomy in setting budgets, and higher retentions of windfall oil revenues for internal investment. The energy reforms did provide for new incentive-based service agreements (Performance Contracts). The contracts do not allow the contractor/operator to own or control production or book reserves, but do provide a cost recovery mechanism plus a fee per barrel for successful production delivered to PEMEX. Contracts are awarded to the bidder with the lowest fee structure.

PEMEX awarded contracts in 2011 for re-development of three mature Southern region fields targeted to increase production from 14,000 bpd to 55,000 bpd. It also concluded a second bidding round in June 2012, with four Northern field onshore contracts awarded that are targeted to double production to 140,000 bpd. Two shallow water offshore contracts were not awarded. The ATG complex is expected to be bid out in the second half of 2012,

with possible deepwater contract bids in 2013. The smaller mature field contracts are a start, but it is not clear whether the model will work for large deepwater projects, which need the expertise of major deepwater players, but will still not provide equity ownership in the reserves.

CAPITAL SPENDING ON INCREASING TREND

PEMEX's capital spending trend has increased significantly over the past few years, following years of under-investment earlier in the decade. Capital spending in 2012 is budgeted at M\$301.3 billion (\$23.4 billion), up 5% over the 2011 budget, with 84% (\$19.6 billion) allocated to the upstream. While PEMEX's spending tends to be back-end loaded, with investment in the first quarter of M\$49.7 billion about 16% of the total for the years.

The largest portions of upstream investment will be for the Cantarell and offshore light crude fields, as well as KMZ. In the downstream, PEMEX still needs to import about 29% of the petroleum products consumed in Mexico. Downstream spending is budgeted at M\$ 48.7 B (\$3.9 billion) and is focused on new capacity to produce higher quality refined products and reduce dependence on product imports. The company finished the Minatitlan refinery conversion upgrade in 2011 and in 2012 will focus on increasing heavy oil processing capacity for the Salamanca refinery, including a major increase in conversion capacity and for increased diesel and clean fuels production. Front-end engineering is also moving forward on a \$9 billion 300,000 bpd greenfield refinery at Tula to produce low sulfur diesel and gasoline, with construction bidding to take place in 2012 and refinery startup in early 2016.

STRONG GOVERNMENT SUPPORT AND LINKAGE

PEMEX's debt is not guaranteed by the government or any other government-related entity. However, it is rated according to Moody's government-related issuers (GRI) methodology. PEMEX's Baa1 global local currency rating (GLCR) reflects a baseline credit assessment (BCA) of 11 (equal to Ba1), with uplift based on high level of imputed government support and dependence (default correlation). Our assumption of high government support in the event of distress reflects PEMEX's role as a symbol of national sovereignty, its significant contribution at about 40% of total government fiscal revenues, and its position as a major source of employment, exports and foreign currency reserves. We believe that in a distress situation the government would support PEMEX's debt, including its pension obligations.

Liquidity

PEMEX's high debt levels and amortizations entail a significant amount of refinancing risk. The company keeps a substantial amount of cash on the balance sheet, at about \$8.4 billion as of March 31, 2012. Committed bank facilities include \$3.25 billion in syndicated term and revolving bank credits, which were undrawn as of April, US\$1.05 billion equivalent of peso bank borrowing facilities, and sizeable lines with various bank export credit lines. As of March 31, 2012, PEMEX had about \$6.3 billion equivalent of scheduled debt maturities due in both 2012 and 2013.

PEMEX's debt is primarily US dollar denominated, but it has maintained good access to domestic and international markets and diversified its markets and currency, raising funds in dollars, Swiss Francs and Australian dollars, as well as through its domestic certificados bursatiles program. One of the risks for PEMEX would be if it were to meet market resistance to new debt at some point in the future, given the large amount of debt it needs to issue and a rising leverage scenario.

Rating Outlook

The outlook for PEMEX's Baa1 GLCR and Baa1 foreign currency bond rating (FCBR) is stable. The stable outlook depends on the company's ability to fund its capital without significant leverage increases, at least in the near-term and on its continuing market access.

What Could Change the Rating - Down

A material increase in financial leverage or further significant deterioration in its production outlook could affect PEMEX's ratings. We will continue to monitor the impact of energy reform, including developments around the incentive contracts, and PEMEX's success in keeping production stable in the medium-term. A reduction in the BCA would result in a downgrade of the global local currency and foreign currency bond ratings, at which point PEMEX would be rated below the sovereign.

What Could Change the Rating - Up

An upgrade is not likely at this time. In the longer term, stronger cash flow retention and an improving reinvestment and production profile could lead to a higher BCA and debt ratings.

Other Considerations

Methodology Comment: The integrated oil methodology yields an indicated rating of Baa2 (LTM 3/30/12) vs. PEMEX's BCA 11 (equivalent to Ba1). The methodology outcome reflects its large-scale operations, but also lower reinvestment metrics and high financial leverage. Factor 6 notches the rating to for the negative impact of the government's fiscal reliance on PEMEX, with an outcome of B2. The integrated methodology and BCA do not capture the impact of Mexican regulatory and economic risks on day-to-day operations or transfer/currency convertibility risk.

Rating Factors

Petroleos Mexicanos 94100

Integrated Oil & Gas [1]	LTM as of 12/31/2011		[2]Moody's 12-18 Month Forward View
Factor 1: Reserves & Production Characteristics (25%)	Measure	Score	Score
a) Average Daily Production (Mboe/d)	3607.8	Aaa	Aaa
b) Proved Reserves (Million boe)	13484.33	Aaa	Aaa
c) Total Proved Reserve Life (Yrs)	10.2	A	A
Factor 2: Re-Investment Risk (10%)			
a) 3-Year All-Sources Reserve Replacement	88%	Ba	Ba
b) 3-Year All-Sources F&D Cost (\$/boe)	\$11.6	A	A
Factor 3: Operating & Capital Efficiency (10%)			
a) Return on Capital Employed (ROCE) (3 Year Avg)	70.5%	Aaa	Aaa
b) Leveraged Full-Cycle Ratio	5.0x	Aaa	Aaa
Factor 4: Downstream Rating Factors (15%)			
a) Total Crude Distillation Capacity ('000 bpd)	1690.0	A	A
b) # of Refineries with Capacity > 100 M bpd	6.0	A	A
c) Segment ROCE (3 Year Avg)	-98.5%	Caa	Caa
Factor 5: Financial Metrics (40%)			
a) Retained Cash Flow / Net Debt (3 Year Avg)	9.2%	B	B
b) EBIT / Interest Expense (3 Year Avg)	6.9x	Baa	Baa
c) Gross Debt / Total Proved Reserves	\$8.6	B	B
d) Gross Debt / Total Capital	123.1%	Caa	Caa
Rating:			
Indicated Rating from Grid Factors 1-5		Baa2	
Notching for Government Fiscal Dependence		6	
Indicated Rating from Grid		B2	
Actual Baseline Assigned		11 (Ba1)	

Government-Related Issuer	Factor
a) Baseline Credit Assessment	11 (Ba1)
b) Government Local Currency Rating	Baa1
c) Default Dependence	Very High
d) Support	Very High
Final Rating Outcome	Baa1

[1] All ratios are calculated using Moody's Standard Adjustments. Source: Moody's Financial Metrics [2] his 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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