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INVESTORS SERVICE

# Credit Opinion: Petroleos Mexicanos

Global Credit Research - 28 Jun 2013

*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]**

| | 12/31/2012 | 12/31/2011 | 12/31/2010 | 12/31/2009 | 12/31/2008 |
|---|---|---|---|---|---|
| EBIT / Book Capitalization | 57.6% | 58.6% | 66.2% | 71.2% | 142.1% |
| EBIT / Interest Expense | 14.8x | 11.8x | 6.7x | 5.0x | 9.6x |
| Retained Cash Flow / Net Debt | 9.4% | 10.3% | 10.4% | 6.2% | 3.0% |
| Gross Debt / Total Capital | 113.5% | 92.8% | 118.3% | 134.7% | 197.8% |
| Gross Debt / Total Proved Reserves | $11.65 | $8.63 | $8.65 | $8.61 | $6.27 |
| Total Proved Reserve Life (Yrs) | 10.3 | 10.2 | 10.1 | 10.2 | 9.9 |

[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

* Stronger reserves and production growth prospects

* Rising capital spending trend

* High fiscal burden and elevated financial leverage

* Increasing momentum for energy reform

* 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 about 49% of its crude oil exported in 2012, 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 13.9 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 US.

However, our baseline credit assessment of Ba1 also factors in the company's heavy tax burden, high financial leverage and need to maintain and grow its core oil production. Even with potentially significant energy reform that could open PEMEX to foreign investment and technology in the upstream and other sectors, the company remains capital-constrained by taxes and Mexico's constitutional prohibition on equity ownership of reserves.

To help stabilize production and reserves, PEMEX has been focusing on its core Southeastern basin offshore and onshore reserves and exploitation opportunities. It has also started to step up deepwater exploration, making its first notable deepwater light oil discoveries in 2012, which bodes well for future oil resource development. Still, the deepwater and large onshore unconventional oil and gas resources present major development and technology challenges that will require years of consistent reinvestment and success to come to fruition. In the meantime, the company will remain focused on growing production from its traditional basins, including recent light oil discoveries, and on upstream and downstream infrastructure investments to meet rising energy and product demand in Mexico.

## DETAILED RATING CONSIDERATIONS

IMPROVED RESERVES AND PRODUCTION GROWTH PROSPECTS

PEMEX is Mexico's sole producer and marketer of crude oil, natural gas and refined products. Despite the benefit of its massive proven hydrocarbon reserves, the company is burdened by high taxation and a legacy of under-investment that resulted in steady declines in proved reserves and production earlier in the decade, particularly as the giant Cantarell oil field went into decline.

Since then, PEMEX has been increasing upstream investment to grow reserves and stabilize production, with a focus on its traditional core offshore and onshore Southeastern basins, which can be developed and produced at competitive costs. In 2012 it achieved full replacement of proved reserves for the second year in a row with replacement of 104% up from 101% in 2011, and a three-year average replacement rate of 97% from all sources, compared to replacement rates of 88% in 2010 and 50% in 2007. Additions in 2012 included revisions and discoveries from conventional shallow fields, the KMZ fields and other sources, including natural gas. With its ramp up in exploration spending, the company expects reserve replacement to exceed 100% for the next few years.

PEMEX's total oil and gas production has largely stabilized in the area of 3.7 million BOE/day in first quarter 2013, reflecting rising production from the KMZ complex and stable natural gas production. Total crude production averaged about 2.54 million bpd in 2012 and is expected to be flat to slightly growing through 2015, but the company is targeting an ambitious 3 million bpd of crude production by 2018, primarily from conventional oil and gas development projects.

The core Southeastern basin will remain PEMEX's most important producing area for the foreseeable future. KMZ is the largest producing complex with around 855,000 bpd of production at plateau rates following a staged field development program, along with light crude from the offshore Litoral de Tabasco, and other fields such as Ixtal-

Manik and Delta del Grijalva. Cantarell continues its decline, producing about 455,000, but its relative importance has also shrunk, contributing about 17% of total crude output, down from a peak 2.1 million bpd in 2004.

Natural gas had been on a rising trend from non-associated gas developments in the Northern basins as well as from offshore associated gas; however, production more recently has been down as a result of reduced drilling in Burgos and Veracruz due to low gas prices and core field declines, with production overall averaging about 5.77 BCF/day as of first quarter 2013.

One of PEMEX's most prospective gas areas, the ATG complex (formerly Chicontepec) has more than an estimated 17 billion barrels of 3P reserves but is a technically challenging fractured reservoir with a low recovery factor of 5%-9%. PEMEX has been using a "field lab" approach and contract regime in ATG, enlisting the major oil service firms to find ways to increase well productivity and reduce costs. While production has not achieved earlier targeted levels, it has risen from 44,800 bpd in early 2011 to about 79,000 bpd in first quarter of 2013. To promote further ATG development, PEMEX plans to award integrated service contracts in summer 2013 for six blocks in ATG, using an incentive payment structure and longer service terms of up to 35 years on the blocks.

The deepwater Gulf of Mexico provides the greatest prospects for long-term reserves and production growth. In 2012, the company drilled five deepwater wells and announced its first two significant light oil discoveries in the Perdido fold belt near the maritime borders with the US. Based on early results, the Trion-1 and Supremus-1 wells indicate vast prospective resources in the Perdido area, as does a third discovery from the Maximino well drilled in 2013. While PEMEX is increasing its deepwater exploration spending and hopes to accelerate development, the deepwater is still in an early phase and will require years of investment as well as technological expertise to develop. The company is also beginning to do exploration and seismic evaluation on potentially vast onshore shale oil and gas resources, which could be opened up to third party development as part of energy reform.

CAPITAL SPENDING ON INCREASING TREND

Following years of underinvestment, PEMEX has stepped up capital spending significantly over the past few years. Historically, its final approved budgets have been lower than the requested budget, but the government has approved increasing budgets in recent years. PEMEX's capital spending in 2013 is targeted at US$25.3 billion, up 5.9% over $23.9 billion in 2012, and some 32% over spending in 2011. About 79% will be allocated to the upstream and 17% to refining and marketing. PEMEX's capital spending is typically back-end loaded during the year, as indicated by capital spending in the quarter of 2013 of M$58.5 billion, or about 18% the total budgeted for the year.

The largest portions of upstream investment will be for the Cantarell and offshore light crude fields, as well as KMZ, with higher spending also slated for the ATG complex and offshore exploration. Downstream investment is driven by the mismatch between lighter refining capacity and an increasingly heavy crude barrel, and by Mexico's rising product imports.

Mexico's product imports have been on the rise, with PEMEX importing about 29% of the petroleum products consumed in Mexico. In the downstream, the company is investing in heavy oil processing capacity for the Salamanca refinery, including a major increase in conversion capacity, and to increase diesel and clean fuels production. Front-end engineering is also moving forward on a $12 billion 350,000 bpd greenfield refinery at Tula to produce low sulfur diesel and gasoline, with the refinery startup targeted for early 2016.

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 prohibition on foreign equity ownership of reserves and production. The company reported a net loss of M$ 4.39 billion (US$355 million) in the first quarter of 2013, versus net income of M$ 40.4 billion or US$3.5 billion in 2012, reflecting flat oil production, lower crude prices, higher operating expenses and lower crude export volumes, as domestic refineries increased throughput and refined product output for the domestic market. The company paid 102% of its pre-tax income, or M$ 18.1 billion in taxes and hydrocarbon duties.

With capital spending on an increasing trend and exceeding cash flow from operations, PEMEX will be cash flow negative in 2013, which, in conjunction with large debt amortizations, will require large debt issuance and some draw down in its cash position. PEMEX's debt increased slightly in 2012 to M$ 786.9 billion but declined 4.4% in peso terms in the first quarter of 2013, primarily reflecting the impact of peso appreciation. The company estimates it will need to issue in the area of US$9.7 billion of debt in 2013, for a net increase in total debt for the year of US$3.3 billion after amortizations of US$6.4 billion.

PEMEX also has sizable pension obligations, which jumped almost 50% to M$1.27 trillion (US$98.4 billion) as of year-end 2012, an amount well in excess of its funded debt. The increase primarily reflected a lower discount rate assumption required by the company's adoption of international accounting standards (IFRS). The government does not guarantee PEMEX's pension liabilities but we believe it would never allow PEMEX to default on these obligations. Pension reform is likely to take place as part of energy reform, most likely involving reductions in benefits for new employees, but without likely affecting the benefits of current employees and retirees.

INCREASING MOMENTUM FOR ENERGY REFORM

The tax and energy reforms of 2006-2009 included provisions that give PEMEX greater autonomy in establishing annual budgets. However, the tax reform did not appreciably increased PEMEX's after-tax cash flows, partly because of cost caps on the 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.

The energy reforms did provide for new incentive-based Exploration and Production Integrated Contracts, or Performance Contracts. The contracts do not allow the contractor/operator to own or control production or book reserves, but provide a cost recovery mechanism plus a fee per barrel for successful production delivered to PEMEX, with contracts awarded to the bidder with the lowest fee structure.

Following initial contracts on Southern and North fields in 2011 and 2012, PEMEX is expected to award new contracts on six ATG blocks in July 2013, to be followed by other contracts for extra heavy crude blocks in shallow waters and the deepwater Gulf. Other contracts could follow in 2014 on shale oil and natural gas blocks. The contracting of deepwater and unconventional acreage will be notable moves forward but the terms are not known and much of the interest is likely to depend on the outcome of energy reform.

President Enrique Pena Nieto is putting forward energy reform as a major initiative as part of the "pact with Mexico" and there appears to be a much stronger political consensus around the need for reform to promote energy development and growth in oil production. Congress is expected to introduce a new reform package in August 2013. Private ownership of reserves is not likely to occur, which would require a constitutional amendment.

However, numerous other important initiatives will be up for consideration, including potential reductions in the government fiscal take, joint ventures between PEMEX and private companies, the ability for private companies to independently make upstream investments, and a partial opening of refining, petrochemicals and pipeline and other infrastructure. Some combination of these changes could provide much-needed capital and technology to PEMEX and accelerate energy development in Mexico, particularly in the deepwater and unconventional shale resources. Prospects for reform and restructuring of PEMEX's costly pension programs are also advancing.

STRONG GOVERNMENT SUPPORT AND LINKAGE

PEMEX's debt is not guaranteed by the government or by 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 ba1, with uplift based on high level of imputed government support and dependence (default correlation). We assume high government support in the event of distress, reflecting PEMEX's role as a symbol of national sovereignty, its significant contribution at about 35% 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 $8.98 billion as of March 31, 2013. Committed bank facilities include two syndicated revolvers of $.125 billion each, due in 2013 and 2017, US$800 million equivalent of peso bank borrowing facilities, and various bank export credit lines. Scheduled debt amortizations are substantial at $6.4 B in 2013.

PEMEX will be active in both the international and domestic markets to cover cash flow deficits and debt amortizations. PEMEX has maintained good access to domestic and international markets, raising funds in dollars, Swiss Francs and Australian dollars, as well as via domestic issuance and export credit agencies including US EXIM Bank. While international bond markets are expected to account for some 40% of debt issuance in 2013, the company also derives significant amounts of financing in the domestic peso market under a certificades bursatiles program. The company could face increased financing risk if it meets market resistance at some point in the

future, given the large amount of debt it needs to issue.

### Rating Outlook

The outlook for PEMEX's Baa1 GLCR and Baa1 foreign currency bond ratings (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 significant deterioration in production 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 maintaining and growing production in the medium-term. A reduction in the BCA would result in a downgrade of the global local currency and foreign currency bond ratings.

### What Could Change the Rating - Up

A ratings upgrade is not likely at this time, nor is the company's debt likely to be rated above the government's. 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 3/30/13) vs. PEMEX's BCA of ba1. The methodology outcome reflects its large-scale operations, but also high financial leverage. The integrated methodology and BCA do not capture the impact of Mexican regulatory risks on day-to-day operations or transfer/currency convertibility risk. Factor 6 on Government Fiscal Dependence notches the rating for the negative impact of the government's fiscal reliance on PEMEX, with an outcome of Ba3.

## Rating Factors

**Petroleos Mexicanos**

| **Integrated Oil & Gas** [1][2] | **LTM as of 12/31/2012** | | [3]**Moody's 12-18 Month Forward View** |
|---|---|---|---|
| **Factor 1: Reserves & Production Characteristics (25%)** | Measure | Score | Score |
| a) Average Daily Production (Mboe/d) | 3587 | Aaa | Aaa |
| b) Proved Reserves (Million boe) | 13543 | Aaa | Aaa |
| c) Total Proved Reserve Life (Yrs) | 10.3 | A | A |
| **Factor 2: Re-Investment Risk (10%)** | | | |
| a) 3-Year All-Sources Reserve Replacement | 96% | Ba | Ba |
| b) 3-Year All-Sources F&D Cost ($/boe) | $10.8 | Aa | A |
| **Factor 3: Operating & Capital Efficiency (10%)** | | | |
| a) Return on Capital Employed (ROCE) (3 Year Avg) | 60.2% | Aaa | Aaa |
| b) Leveraged Full-Cycle Ratio | 5.8x | 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) | -84.2% | Caa | B |
| **Factor 5: Financial Metrics (40%)** | | | |
| a) Retained Cash Flow / Net Debt (3 Year Avg) | 10.0% | B | B |
| b) EBIT / Interest Expense (3 Year Avg) | 10.3x | A | Baa |
| c) Gross Debt / Total Proved Reserves | $11.7 | Caa | B |
| d) Gross Debt / Total Capital | 113.5% | Caa | Caa |
| **Rating:** | | | |

| Indicated Rating from Grid Factors 1-5 | | Baa2 |
|---|---|---|
| Notching for Government Fiscal Dependence | | 4 |
| Indicated Rating from Grid | | Ba3 |
| Actual Baseline Assigned | | ba1 |

| Government-Related Issuer | Factor |
|---|---|
| a) Baseline Credit Assessment | **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. [2] Based on financial data as of 12/31/2012; 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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