

Credit Opinion: [Petroleos Mexicanos](#)

Petroleos Mexicanos

Mexico City, Mexico

Ratings

Category	Moody's Rating
Outlook	Stable
Issuer Rating	Baa1
Senior Unsecured	Baa1
NSR 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
Repcon Luxembourg SA	
Outlook	Stable
Bkd Senior Unsecured	Baa1

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Key Indicators

Petroleos Mexicanos

	[1]LTM 9/30/07	2006	2005	2004
Adj. EBIT / Adj Avg Capitalization	110%	127%	107%	90%
Adj Ebit / Adj. Interest	8.6x	9.4x	7.7x	10.2x
Adj. RCF / Adj. Net Debt	8%	9%	-6%	0%
Adj. Debt / Adj Capitalization	157%	161%	202%	153%
Adj. Debt / Total Proved BOE Reserves	\$5.70	\$5.94	\$6.00	\$4.67
Total Proved BOE RLI	9.8	9.6	10.2	10.9

[1] Calculated using last 12 months ending September 30, 2007 and year-end reserves

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

Opinion

Recent Developments

The Mexican congress passed an energy reform bill in October 2008 that will directly affect PEMEX's operations, governance, and investments. Among the reforms are provisions that will allow greater autonomy for PEMEX in setting its budgets, higher retentions of windfall oil revenues for internal investment, and new forms of incentive contracts that would allow foreign companies to enter into projects to advance the development of Mexico's hydrocarbon resources. While the energy reforms indicate an evolving and stronger consensus about changes that need to be implemented for PEMEX, further substantive fiscal changes were not part of the package, and the reforms fall short of more far-reaching changes that would help promote hydrocarbon exploration and development, particularly in the deepwater Gulf of Mexico, which holds Mexico's best prospects for future reserve

and production growth. In particular, the upstream production sector will remain off-limits to production sharing or other forms of equity ownership that would promote accelerated investment. Most PEMEX's other operations, such as refining, will also remain closed to foreign investment or ownership.

In the meantime, PEMEX's crude production and exports continue to decline, with crude production from the Cantarell offshore field of approximately 1.06 million bpd down almost 25% in 2008 from 2007 levels. The company's recent projections show crude production down 12% in 2009 to an average 2.75 million bpd, while natural gas production will be up 10% to average 6.1 BCF/day.

Credit Strengths

- Sizable hydrocarbon reserves and production
- Monopoly status in Mexico's petroleum sector
- Fully integrated oil and gas operations
- Significant crude exporter
- Recent tax and energy reforms will aid capital retention

Credit Challenges

- High fiscal burden and debt incurred to support government
- Legacy of under-investment and declining hydrocarbon reserves and production-
- Low operating efficiency relative to international peers
- Petroleum sector (upstream and downstream) remains closed to foreign investment/ownership
- Substantial unfunded pension obligations

Rating Rationale

PEMEX is an integrated petroleum company 100% owned by the Mexican government. In accordance with Moody's GRI rating methodology, PEMEX's Baa1 global local currency rating reflects the following inputs:

- Baseline credit assessment (BCA) of 11 (equal to Ba1)
- Mexican government, the support provider, Baa1 local currency rating
- High dependence and high support factors

PEMEX's BCA reflects its sizable 14.4 billion BOE of proved hydrocarbon reserves (2007) and oil and gas production in the area of 4.25 million BOE/day of oil and gas production, its monopoly status in the Mexican petroleum industry, its fully integrated operations, and position as a leading crude oil exporter to the US (over 50% of its crude production is exported). However, the BCA also factors in PEMEX's elevated financial leverage; a heavy tax burden that, even with the benefits of recent tax reform, constrains capital retention and reinvestment; and a low reinvestment and reserve replacement record.

PEMEX is Mexico's largest company and the country's sole producer of crude oil, natural gas and refined products. Despite massive proven hydrocarbon reserves, a legacy of high taxes and under-investment has resulted in a declining reserve and production profile and deteriorating energy infrastructure. PEMEX has not replaced production for many years and crude oil reserves have declined steadily in tandem with its giant Cantarell oil field, which peaked in 2006. The field continues to undergo nitrogen injection and faces higher production costs. PEMEX's total replacement in 2007 was 50%, or 39% on a three-year average. Crude oil replacement increased slightly in 2007 to 48%, and total reserve replacement is expected to gradually increase to more than 80% in 2010.

Major developments in various fields such as KMZ and Chicontepec are intended to gradually offset Cantarell declines. However, Chicontepec is a technically challenging development and the increases will only occur over a number of years. Moreover, deepwater exploration, although increasing, is in an early phase that will require years of investment and development, with first production projected for 2014. While management believes it can offset Cantarell's decline from other fields in the near term, it is unclear whether new production will be able to offset the Cantarell, which contributed over 60% of total crude production as recently as 2005.

PEMEX's pre-tax cash flow is abundant and could support high levels of investment, but capital retention and investment are stymied by a high tax burden, especially when compared to its international peers, and by the prohibition on foreign investment in the Mexican oil sector. Moody's believes the tax reforms of 2007 will positive in terms of cash retention for investment, and the release from government budgetary processes will also allow for more flexibility in establishing annual budgets and long-term developments. However, the new fiscal regime will only modestly increase after-tax cash flows relative to PEMEX's sizable debt levels in the near-to-medium term. PEMEX's debt obligations, which increased annually over the past five years, leveled off and actually declined in 2007 as a result of higher pricing and cash flow, as well as higher earnings retention.

PEMEX's capital spending trend is positive, with investment up significantly from very low levels in 2002. Capital spending in 2008 is expected to be \$19.4 billion, up almost 25% over the \$15.6 billion spent in 2008. About 83% of the capital is in the upstream, with major investments to stem the Cantarell decline and to develop the KMZ and CLM oil fields, and step up drilling in the Chicontepec field, as well as gas in the Burgos basin. PEMEX still needs to import about 40% of the petroleum products consumed in Mexico and also has slated substantial downstream investment as part of a multi-year plan to increase heavy oil processing capacity and to reduce imports. The capital budget could be at a similar level in 2009, but it could come under pressure and will be a challenging year for funding as well as debt levels, given the collapse in crude prices and the company's 2009 planning based on a Mexican crude basket price of \$70/bbl.

Other Considerations

Methodology Comment: We use the integrated oil methodology to assess PEMEX's BCA. The integrated methodology yields an indicated rating of Baa1 (LTM 9/30/08) versus its current BCA of 13 (equivalent to Ba1). The higher grid-indicated rating reflects a preponderance of factors such as size and scale in both the upstream and downstream, and strong capital returns, which outweigh lower scorings in reinvestment risk and asset diversification. However, these metrics are historically based and do not reflect expected increases in capital spending and financial leverage in 2009 and beyond. Moreover, while the integrated methodology and BCA do encompass Mexican regulatory and economic risks that affect the company's operations in the normal course, they do not directly capture transfer or currency convertibility risk.

In terms of GRI uplift, high dependence reflects the strong linkage between PEMEX's operating and financial condition and that of the Mexican government. An assumption of high support in the event of distress reflects PEMEX's significant contribution to government revenue, its position as a major source of employment and foreign currency exports, and its role as a symbol of national sovereignty.

PEMEX's Baa1 foreign currency bond rating reflects both the Baa1 global local currency rating and the degree of sovereign interference anticipated in times of stress. Please refer to Moody's January 2005 Special Comment entitled "Piercing the Country Ceiling: An Update" and to the July 2006 GRI update on the expanded BCA scale.

Rating Outlook

The outlook for PEMEX's Baa1 global local currency rating and Baa1 foreign currency bond rating is stable. While the company is highly leveraged and taxed, we believe its need to retain capital and to reinvest to grow production has gained more widespread recognition across party lines, leading to recent tax reform. While we see little chance for significant private investment in the Mexican oil sector anytime soon, our outlook depends on the company's ability to fund its capital without further significant leverage increases, at least in the near term.

What Could Change the Rating - Down

A further decline in PEMEX's baseline credit assessment stemming from a material increase in its financial leverage or a significant deterioration in its production outlook could affect the BCA and, in turn, the ratings. If PEMEX's BCA were reduced, it would affect the GLCR and in turn the FCBR, at which point both would be rated below the sovereign.

What Could Change the Rating - Up

A rating 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.

Rating Factors

Petroleos Mexicanos

Integrated Oil & Gas Industry	Aaa	Aa	A	Baa	Ba	B	Caa
Factor 1: Reserve & Production Characteristics (25%)							
a) Total Proved Reserves (billion boe)	15.2						

b) Total Production (million boe p.a.)	1553					
c) Total Proved Reserve Life (years)		9.8				
Factor 2: Re-Investment Risk (10%)						
a) 3-Year All-Sources Reserve Replacement						29%
b) 3-Year All-Sources F&D Cost						\$17.09
Factor 3: Operating & Capital Efficiency (10%)						
a) Return on Capital Employed (ROCE)	105%					
b) Leveraged Full-Cycle Ratio on 3-Year All-Sources F&D	\$2.09					
Factor 4: Downstream Rating Factors (15%)						
a) Total Crude Distillation Capacity ('000 bpd)		1540				
b) # Refineries with Capacity > 100 M bpd		6				
c) Segment ROCE						-13%
Factor 5: Financial Metrics (30%)						
a) Retained Cash Flow / Net Debt						4.0%
b) EBIT / Interest Expense		8.6%				
c) Gross Debt / Total Proved Reserves				\$5.70		
d) Gross Debt / Total Capital						157%
Factor 6: Geographical/Geopolitical Risk Diversification (10%)						
a) Geographical/Geopolitical Diversification				X		
Rating:						
a) Assigned Rating				Baa1		
b) Methodology-Implied Rating				Baa2		

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