Research Update:

PEMEX Outlook Revised To Negative On Similar Action On Mexico; SACP Cut To 'b-' From 'bb-' On Weak Credit Fundamentals

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Table Of Contents

Rating Action Overview
Rating Action Rationale
Outlook
Company Description
Our Base-Case Scenario
Ratings Score Snapshot
Related Criteria
Ratings List
Research Update:

PEMEX Outlook Revised To Negative On Similar Action On Mexico; SACP Cut To 'b-' From 'bb-' On Weak Credit Fundamentals

Rating Action Overview

• Incremental budgetary allocations for PEMEX in 2019 and recent public statements from the federal government, to assure that the company will meet all its financial obligations in a timely manner, reinforce our assessment of an almost certain likelihood of extraordinary government support if the company were to run into financial difficulties. Therefore, the ratings on PEMEX continue to mirror those on the sovereign.

• On March 4, 2019, S&P Global Ratings revised our global scale rating outlook on Mexican oil company to negative from stable following a similar action on the sovereign. We also affirmed our global scale 'BBB+' foreign currency and 'A-' local currency ratings. In addition we affirmed our national scale 'mxAAA/mxA-1+' issuer credit ratings on the company. The outlook on this rating remains stable. We also affirmed our 'BBB+' foreign currency and 'A-' local currency issuer credit ratings on PEMEX's subsidiaries.

• We have revised downwards our stand-alone credit profile (SACP) on PEMEX to 'b-' from 'bb-' due to a persistent deterioration of the company's business and financial risk profiles that has compromised the recovery of its upstream and downstream activities. In addition, we consider that the government's financial support, in order to restore credit fundamentals, falls well short of the company's multi-annual capital investment needs.

• The negative outlook on PEMEX mirrors that on the sovereign and reflects our view that the close relationship between the company and the sovereign will remain unchanged over the next couple of years.

Rating Action Rationale

The outlook revision on the ratings on Petroleos Mexicanos (PEMEX) and its subsidiaries, P.M.I. Trading Ltd., PMI Norteamerica S.A. de C.V., and MEX GAS SUPPLY S.L., follows a similar action on the sovereign (see "Mexico Outlook Revised To Negative On Potential For Lower Growth Prospects; 'BBB+/A-2' Foreign Currency Ratings Affirmed," published March 1, 2019).

We affirmed the ratings on PEMEX and its subsidiaries, reflecting our expectation of an almost certain likelihood of extraordinary government support to the company in a financial distress scenario. This is based on our assessment of PEMEX's critical role for the Mexican government, both
economically and for the execution of the government's energy policy. Our assessment also captures the integral link between PEMEX and the government, given the full ownership of the company and the high government involvement in all strategic decisions. We consider that our assessment is reinforced by the president's February 14 public assurance that PEMEX benefits from an overarching and unconditional federal support, and that the company will meet all its financial obligations in a timely manner. Federal support is also evident in incremental allocations in the 2019 federal budget, including a MXN25 billion capital injection, as well as in the plan for an early monetization of federal promissory notes to fund part of PEMEX's pension liabilities. Although in our view these actions are insufficient to fully address PEMEX's funding needs, they underpin the track record of government support to the company.

Following our August 2018 revision of PEMEX's SACP to 'bb-', we expected the company would implement several strategic initiatives to improve the health of its core businesses, particularly through joint investments with private-sector companies to address the decline in crude oil production and stabilize it at just below 1.90 million barrels per day (mbd). We also indicated that a key factor supporting PEMEX's SACP was the favorable comparison with industry peers in terms of scale, size of proven reserves, and production volumes.

The current three-notch drop in PEMEX's SACP is due to the deterioration of credit fundamentals, stemming from two main factors. First, the company's core businesses are underperforming our previous expectations. Second, we view the government's plan to restore PEMEX's credit fundamentals as limited in scope, particularly to address some of the company's long-term business and financial risks. On one hand, the company faces a record-low production volume of only 1.62 mbd, as of January 2019. Also, the continued loss in operating efficiencies has the national refining system (NRS) running at less than 40% of installed capacity. This data points to the weak condition of PEMEX's asset base, which according to our estimates could need multi-annual capital investments of at least $20 billion per year to prevent further deterioration.

On the other hand, the plan to restore credit fundamentals prioritizes the stabilization of production volumes in the short term and the development of new fields to increase crude output in the medium term. Such plan contemplates the development of new shallow water and onshore fields, productivity improvements in mature fields, and incremental drilling activities. Under this strategy, we consider that PEMEX could face budgetary constraints to accelerate much needed investments in exploration and incorporation of reserves and could leave the reserve replacement ratio below 100%, which in our view, jeopardizes long-term growth prospects. We also expect heavy crude oil as a percentage of total production--at 60% as of January 2019--to remain high going forward. This is worrisome because the upcoming IMO 2020 regulation could dent the price of high-sulfur maritime fuels, weighing on the profitability of heavy oil producers. Moreover, if the share of heavy crude oil production remains high, it is likely that PEMEX will continue to be dependent on imports of refined products or light crudes due to crude oil mix...
requirements for the current configuration of the NRS.

The federal government recently laid out a financial plan to support PEMEX through a cash capital injection, an approval for the monetization of federal promissory notes to fund pension liabilities, a revision of PEMEX's tax regime to increase certain tax deductions at productive fields, and close collaboration to deter fuel theft. The government has estimated this support at $5.5 billion this year, but this amount, in our opinion, falls well short of our estimated annual investment requirements of more than $20 billion for the company's upstream, downstream, and midstream units. Therefore, downside risks on PEMEX's operating performance persist.

In our view, execution risk for PEMEX is high. We consider that the implementation of the company's business plan remains exposed to politically driven decisions that could conflict with business and financial objectives. In addition, a constant oversight from the federal government poses unwanted hurdles that may slow operations and possibly delay the deployment of projects. Therefore, we consider that the risk of failing to meet established milestones and deliver prompt results is consistent with our SACP assessment of 'b-'.

**Outlook**

The negative outlook on PEMEX and on its subsidiaries reflects that on the sovereign. Under the new administration, we expect a closer relationship between PEMEX and the government, where the government will be highly involved in all strategic decisions to execute its energy policy. We also expect an active government oversight of the company's regular operations, which provides comfort to our assumptions that PEMEX would receive additional support to mitigate unexpected setbacks. Therefore, we continue to correlate the ratings on PEMEX and its subsidiaries with those on the sovereign.

**Downside scenario**

We could lower the rating on the company if we were to downgrade Mexico, or if the company's relationship with the government and the likelihood of support diminishes. Furthermore, a downward revision of PEMEX's SACP would follow a further drop in crude oil production and in capital investments that fail to improve the reserve replacement rate. Such a scenario would result in a debt-to-EBITDA ratio between 7.0x and 7.5x. We could also revise the company's SACP downward if further deterioration of credit fundamentals pressures liquidity such that cash sources don't exceed the uses of cash by at least 1.2x for a forward-looking 12-month time horizon.

**Upside scenario**

An upgrade of PEMEX would only follow a similar rating action on the sovereign. We could raise the company's SACP if new projects materialize and contribute higher-than-expected incremental production and cash flows, while
the company's initiatives to strengthen its finances improve profitability and reduce financing needs in the intermediate term, leading to a debt-to-EBITDA ratio below 5.0x on a consistent basis.

Company Description

PEMEX is a Mexico-based integrated oil and gas company, which the government fully owns. The company holds 1P reserves of around 7,700 million barrels of oil equivalent (mmboe), and as of Jan. 31, 2019, it posted a total production of 1.86 thousand of barrels of oil equivalent (mboe). PEMEX is organized in state-owned subsidiaries that conduct the exploration and production (E&P) of hydrocarbon resources; the refining of petroleum products and derivatives; pipeline transportation, storage, and distribution to third parties, and certain petrochemical activities, among others. The company has an international trading and risk management segment that operates through P.M.I. Trading, PMI Norteamerica, and MEX GAS SUPPLY.

Our Base-Case Scenario

- Our price deck assumptions for WTI crude oil are $50 per barrel for 2019 and 2020, and $55 per barrel for 2021. Our pricing assumptions include a historical average spread between the Mexican mix and WTI, which is around $7.00 per barrel below the benchmark. We also incorporate PEMEX's crude oil hedging program to protect the company's budget against a potential sharp decline in oil prices.
- Crude oil production to continue to decline in 2019 resulting from the absence of incremental output in new fields and the lower productivity of certain key fields. However, a successful implementation of new service contracts would help stabilize production at around 1.65 mbd in 2020.
- Revenue to decrease around 10% in 2019 amid stagnant oil prices and lower crude oil production than in 2018. For 2020, we expect revenue growth to remain flat, as incremental production related to service contracts kicks in. By 2021, we expect more favorable oil prices and the stabilization of crude oil production would allow the company to reach mid-single digit revenue growth.
- Crude oil to export terminals remains in the area of 1.08 mbd.
- Structural changes prevent EBITDA margins from eroding, such as cost-control initiatives and remedy actions to deter fuel theft.
- The profit-sharing duty rate at 65%, in accordance with Mexican law. New initiatives to increase certain tax deductions at productive fields to go into effect in 2019.
- Capital expenditures (capex) of around $10.5 billion in 2019, and between $7.5 billion and $8.0 billion in the following years. Approximately 75% of the capex budget to be allocated to E&P activities and the remainder for NRS.
No significant impact on financial metrics due to exchange-rate fluctuations because PEMEX's dollar-denominated sales provide a natural hedge.

Under these assumptions, we arrive to the following credit metrics:

- Adjusted EBITDA margin of 35.1% in 2019 and 34.8% in 2020, mainly due to the continued decline in hydrocarbon production and NRS's weak performance;
- Adjusted debt to EBITDA of 6.0x in 2019 and 6.2x in 2020; and
- Negative free operating cash flow to debt for the next two years.

The ratings on P.M.I. Trading, PMI Norteamerica, and MEX GAS SUPPLY mirror those on PEMEX, given that we view these entities as core subsidiaries and that they would benefit indirectly from the government's potential extraordinary support to PEMEX. PMI Norteamerica's subsidiaries conduct international commercial activities for PEMEX's crude oil, and refined and petrochemical products, with the exception of natural gas. These subsidiaries' main objectives are to assist in maximizing PEMEX's profitability and optimizing its operations through the use of international trade. PMI Norteamerica has implemented its own risk-management policies, but conducts its operations according to those of PEMEX. MEX GAS SUPPLY is the trading arm for international natural gas purchases and sales. Moreover, this entity's risk management policies and practices follow PEMEX's directives.

Liquidity

We assess PEMEX's liquidity as adequate because we expect its liquidity sources to exceed its uses by 1.2x for the next 12 months. In addition, our analysis incorporates qualitative factors such as the company's strong relationship with banks, high standing in the capital markets (resulting from implied government support), and generally prudent risk management.

Principal liquidity sources:
- Cash and liquid investments of MXN81.9 billion as of December 2018;
- Undrawn bank lines of MXN152.4 billion;
- Cash funds from operations (FFO) of about MXN63.3 billion for the next 12 months, which incorporates the revision of PEMEX's tax regime to increase certain tax deductions at productive fields;
- Capital injection of MXN25 billion from the federal government; and
- Monetization of federal government promissory notes for MXN35 billion.

Principal liquidity uses:
- Short-term debt maturities of MXN191.8 billion for the next 12 months;
- Working capital outflows of around MXN51.6 billion for the next 12 months; and
• Maintenance capex of MXN67.3 billion for the next 12 months.

**Tax Regime**

PEMEX faces restrictive covenants on certain business actions, under its credit facilities and selected bond issuances, as follows:

• The sale of substantial assets essential for the continued operations of its business;

• The incurrence of liens against its assets; and

• Transfer, sale, or assignment of rights to payment not yet earned under contracts for the sale of crude oil or natural gas, accounts receivable or other negotiable instruments.

**Ratings Score Snapshot**

**Issuer Credit Rating**

Foreign Currency: BBB+/Negative/--

Local Currency: A-/Negative/--

Business risk: Fair

• Country risk: Moderately high

• Industry risk: Intermediate

• Competitive position: Fair

Financial risk: Highly Leveraged

• Cash flow/Leverage: Highly Leveraged

Anchor: b

**Modifiers**

• Diversification/Portfolio effect: Neutral (no impact)

• Capital structure: Neutral (no impact)

• Financial policy: Neutral (no impact)

• Liquidity: Adequate (no impact)

• Management and governance: Weak (-1 notch)

• Comparable rating analysis: Neutral (no impact)

• Stand-alone credit profile: b-

• Related government rating: A-

• Likelihood of government support: Almost certain

• Rating above the sovereign: (no impact)
Related Criteria

- **General Criteria:** Methodology For National And Regional Scale Credit Ratings, June 25, 2018
- **Criteria - Corporates - General:** Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- **General Criteria:** Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- **Criteria | Corporates | General:** Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- **Criteria | Corporates | Industrials:** Key Credit Factors For The Oil And Gas Exploration And Production Industry, Dec. 12, 2013
- **General Criteria:** Methodology: Industry Risk, Nov. 19, 2013
- **General Criteria:** Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- **Criteria | Corporates | General:** Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- **Criteria | Corporates | General:** Corporate Methodology, Nov. 19, 2013
- **General Criteria:** Group Rating Methodology, Nov. 19, 2013
- **General Criteria:** Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- **General Criteria:** Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010
- **General Criteria:** Use Of CreditWatch And Outlooks, Sept. 14, 2009

Ratings List

Ratings Affirmed; CreditWatch/Outlook Action

<table>
<thead>
<tr>
<th>To</th>
<th>From</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleos Mexicanos</td>
<td>BBB+/Negative/--</td>
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<tr>
<td>PMI Norteamerica S.A. de C.V.</td>
<td>BBB+/Stable/--</td>
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<td>P.M.I. Trading Ltd.</td>
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<td>MEX GAS SUPPLY S.L.</td>
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Issuer Credit Rating

- **Foreign Currency:** BBB+/Negative/--
- **Local Currency:** A-/Negative/--

Ratings Affirmed

Petroleos Mexicanos
Issue Credit Rating
CaVal (Mexico) National Scale mxAAC/Local Currency A-
Foreign Currency BBB+
CaVal (Mexico) National Scale mAAA

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.