Is the Mexican Economy Ready for a Higher-Rate Environment?

Javier Guzmán Calafell, Deputy Governor, Banco de México

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The expectation of an increase in interest rates in the US is one of the main external challenges facing the Mexican economy.

The external environment is in addition characterized by:

- Uncertainty in international financial markets also influenced by the combination of other factors, and especially the situation in China.
- The fall in the price of oil.
- A decline in the volume of international trade.
- A lower potential rate of growth in advanced economies.
The evidence shows that the elements that are key in market differentiation among different economies include:

- Timely and credible policy action.
- Solid economic fundamentals:
  - Strong external and fiscal accounts.
  - Low inflation.
  - Sufficient international reserves.
  - A sound financial sector.
- Adequate growth potential.
In the face of a decline in oil prices and a lower oil production platform, a significant fiscal adjustment was introduced in 2015 and an additional one is envisaged for 2016.

2015: Preventive adjustment in programmable expenditure amounting to 0.7% of GDP with respect to the approved budget.¹/

2016: Additional adjustment in programmable expenditure, with respect to the estimate for 2015, equivalent to 0.5% of GDP.¹/

¹/ Excludes accounting entries related to the operational surplus of Banco de México in 2014 (MXN31.4bn).
Monetary policy has focused on the efficient convergence of inflation to its target.

Deviation of Headline CPI Inflation from the Target\(^1\)

Annual %

<table>
<thead>
<tr>
<th>Date</th>
<th>Adjustments</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2013</td>
<td>-50bps to 4.0%</td>
</tr>
<tr>
<td>September 2013</td>
<td>-25bps to 3.75%</td>
</tr>
<tr>
<td>October 2013</td>
<td>-25bps to 3.5%</td>
</tr>
<tr>
<td>June 2014</td>
<td>-50bps to 3.0%</td>
</tr>
</tbody>
</table>

\(^1\) In percentage points.
Source: Banco de México and INEGI.
And mechanisms for the provision of liquidity to the exchange market have been activated to avoid an excessive volatility of the exchange rate.

Minimum-price auctions\(^1\)/: USD200mn auctioned daily, if the one-day depreciation exceeds 1%.

No-minimum-price auctions\(^2\)/: USD200mn auctioned daily.

\(^1\)/ Active since 9 December 2014. Prior to 31 July 2015, the one-day depreciation threshold was 1.5%.

\(^2\)/ Active since 11 March 2015. Prior to 31 July 2015, the daily auctioned amount was USD52mn.

Source: Banco de México

<table>
<thead>
<tr>
<th>Year</th>
<th>Current Account % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>2.6</td>
</tr>
<tr>
<td>2016</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: Banco de México and International Monetary Fund.

Flexible Credit Line with the IMF
Through November 2016: USD 66.4 bn.
This policy package has allowed an orderly depreciation of the exchange rate.

Foreign Exchange Rates and Oil Prices
Index, Jan-2014 = 100

Emerging oil exporters: Colombia, Indonesia, Malaysia, and Russia.
Developed commodity exporters: Australia, Canada, and Norway.
Emerging markets: Brazil, Chile, Hungary, Korea, Peru, Poland, S. Africa, and Turkey.
Source: Banco de México with data from Bloomberg through 7 October 2015.

Operating Conditions in the MXN Market
Index

1/ The expected operating conditions index is based on the intraday volatility, risk reversal (skewness) and butterfly (kurtosis) implied in 6-month FX options.
Source: Banco de México with data from Bloomberg through 6 October 2015.
Furthermore, by acting as a shock absorber, the exchange rate has contributed to a smooth adjustment of domestic financial markets...

Yields on Government Securities

- **10 years**
- **5 years**
- **2 years**
- **1 year**
- **3 months**
- **1 day**

Operating Conditions of the Government Bond Market

- **Index, Annual %**

1/ The operating conditions index is based on the intraday average, volatility, skewness, kurtosis, buy-sell spread, and the daily traded volume of the Dec-24 bond.
Source: Banco de México with data from Brokers Interbancarios.
...with solvency indicators showing a comparatively good behavior.

5-year Credit Default Swaps
Basis Points

1/ Through 6 October 2015.
Source: Bloomberg.
GDP has continued to show moderate rates of growth in 2015, fostered by the expansion of domestic demand...

Gross Domestic Product
Quarterly % change, s.a.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quarter</th>
<th>GDP</th>
<th>Private Consumption</th>
<th>Government Expenditure</th>
<th>Private Investment</th>
<th>Net Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>I</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>0.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>I</td>
<td>0.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contributions to Bi-Quarterly GDP Growth in 1H-2015
% and % points, s.a.

GDP: 1.0
Private Consumption: 1.1
Government Expenditure: 0.1
Private Investment: 0.4
Net Exports: 0.6

s.a. / Seasonally adjusted.
Source: INEGI.

s.a. / Seasonally adjusted.
Source: Own calculations with data from INEGI.
Is the Mexican Economy Ready for a Higher-Rate Environment?

...and services on the supply side.

**Monthly GDP Proxy (IGAE)**
Index 2008 = 100, s.a.

**Industrial Activity**
Index 2008 = 100, s.a.

s.a. / Seasonally adjusted.
Source: INEGI.
Economic activity in Mexico is expected to continue to recover in coming months, stimulated by:

- The expected upturn of industrial output in the United States.
- The depreciation of the peso.
- The continued expansion of employment.
- Higher real wages resulting from lower inflation.
- The increase in remittances in pesos in real terms.
- A gradual effect of recent structural reforms.
Growth projections for 2015 have been adjusted downwards, but to a lesser extent than in other emerging market economies, with an upturn expected in 2016.

Revisions to 2015 GDP Growth Projections

% Points

Mexico: GDP Growth Projections (%)

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banco de México</td>
<td>1.7-2.5</td>
<td>2.5-3.5</td>
</tr>
<tr>
<td>IMF</td>
<td>2.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Analysts</td>
<td>2.3</td>
<td>2.8</td>
</tr>
</tbody>
</table>

1/ Includes Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Korea, Malaysia, Peru, Poland, Russia, South Africa, Thailand and Turkey.

2/ Includes Brazil, Chile, Colombia and Peru.

Source: IMF (World Economic Outlook) and Banco de México.
Nevertheless, downside risks have not disappeared and a negative output gap is expected to persist until the end of 2016.

**Output Gap Estimates**

% of potential GDP, s.a.

s.a./ Seasonally adjusted.
Source: Banco de México.
Inflation has evolved better than expected...

Consumer Price Index and USD/MXN Exchange Rate
Annual % Change

1/ Data for the exchange rate through 7 October 2015.
Source: Banco de México and INEGI.
... and that in other emerging markets...

**Consumer Price Inflation**

Annual %

<table>
<thead>
<tr>
<th>Country</th>
<th>Latest Reading</th>
<th>Target Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td></td>
<td></td>
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<tr>
<td>Indonesia</td>
<td></td>
<td></td>
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<tr>
<td>Colombia</td>
<td></td>
<td></td>
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<tr>
<td>Chile</td>
<td></td>
<td></td>
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<tr>
<td>S. Africa</td>
<td></td>
<td></td>
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<tr>
<td>Peru</td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td></td>
<td></td>
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<tr>
<td>Malaysia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. Korea</td>
<td></td>
<td></td>
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<tr>
<td>Czech Rep.</td>
<td></td>
<td></td>
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<tr>
<td>Hungary</td>
<td></td>
<td></td>
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<tr>
<td>Israel</td>
<td></td>
<td></td>
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<tr>
<td>Poland</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Bloomberg and INEGI.
... with a modest pass-through from the exchange rate to prices.

Pass-Through from FX Depreciation to Prices\(^1/\)

% Points

1/ Cumulative impact of a 10% nominal exchange rate depreciation against the USD on headline inflation. Source: Credit Suisse.
In addition, inflation expectations for 2015 have declined, and those for the medium and long term remain stable, although still above the target.

Headline Inflation Expectations
Median, %

<table>
<thead>
<tr>
<th>Banco de México’s Projections</th>
<th>2015</th>
<th>Below 3% for the rest of the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td></td>
<td>Near 3% throughout the year</td>
</tr>
</tbody>
</table>

Variability Interval

Source: Banco de México Survey.
In this context, monetary policy faces a situation of contrasts.

**Factors calling for an accommodative monetary policy:**

- ✓ Negative output gap.
- ✓ Low pass-through from the exchange rate to prices.
- ✓ Inflation at historical lows.
- ✓ Stable medium- and long-term inflation expectations.
- ✓ Strengthening of fiscal policy.
- ✓ Orderly evolution of financial markets.

**Risks to inflation and financial stability as a result of:**

- ✓ Volatility in international financial markets.
  
  - Normalization of monetary policy in the United States and economic uncertainty in China, among others.
- ✓ Low oil prices.
- → Risk of an additional depreciation of the peso and of a higher pass-through to inflation as the economy recovers, with a potential impact on expectations.
- ✓ Supply side shocks.
Therefore, Banco de México’s Board of Governors will remain vigilant of the behavior of all inflation determinants and its expectations for medium- and long-term horizons, in particular:

✓ The pass-through from exchange rate movements to prices.
✓ The relative monetary policy stance between Mexico and the United States.
✓ The evolution of the degree of slack in the economy.

➢ The above with the purpose of implementing any necessary measures, with all flexibility and at the moment that conditions require it, to consolidate the convergence of inflation to the 3 percent target.
Mexico’s financial system is solid and risks, though increased by the adverse external environment, remain contained.

- Well capitalized, liquid and profitable banking system.
- Moderate levels of household indebtedness.
- Risks from corporate foreign currency liabilities alleviated by long amortization periods, fixed interest rates, natural hedging and prudent use of derivatives.
- Absence of bubbles in financial and real sectors.
- Relatively small size of shadow banking system and more regulated than in other countries.
- Comprehensive institutional framework for monitoring financial stability risks.
In addition, foreign investment in long-term government securities in pesos continues to show an upward trend.

Holdings of Government Securities by Non-Residents
Billion MXN

1/Includes: Bonds, Cetes, Bondes, Bondes D and Udibonos.
2/ Through 29 September 2015.
Source: Banco de México.
On the other hand, a major effort of structural reform has been launched, that is expected to increase potential output growth...

Long-Term Real GDP Growth: Observed and Expected¹/
Annual %

1/ GDP growth estimates for 2015 and for 2016-2025 correspond to the median projections of analysts surveyed by Banco de México (2.3% and 3.44%, respectively).
Source: Banco de México and INEGI.
...with favorable results anticipated also in relative terms.

Long-Term Real GDP Growth: Expected minus Observed\(^1/\)

% Points

<table>
<thead>
<tr>
<th>Country</th>
<th>% Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>0.7</td>
</tr>
<tr>
<td>India</td>
<td>0.5</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.1</td>
</tr>
<tr>
<td>Poland</td>
<td>-0.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>-0.2</td>
</tr>
<tr>
<td>Turkey</td>
<td>-0.9</td>
</tr>
<tr>
<td>Colombia</td>
<td>-0.9</td>
</tr>
<tr>
<td>Thailand</td>
<td>-1.0</td>
</tr>
<tr>
<td>Korea</td>
<td>-1.1</td>
</tr>
<tr>
<td>South Africa</td>
<td>-1.1</td>
</tr>
<tr>
<td>Peru</td>
<td>-1.2</td>
</tr>
<tr>
<td>Chile</td>
<td>-2.4</td>
</tr>
<tr>
<td>Brazil</td>
<td>-3.4</td>
</tr>
<tr>
<td>China</td>
<td>-3.5</td>
</tr>
</tbody>
</table>

To sum up, as a result of:

- An adequate macroeconomic policy stance.
- Strong economic fundamentals.
- An increase in growth potential.

The bases have been laid to allow the Mexican economy to face the challenges resulting from a difficult external environment.

Still, many risks persist, and an efficient implementation of the reforms will be required, with policies adjusted flexibly and additional measures introduced as needed.