What Mexico’s economy confronts
Manuel Sánchez, Deputy Governor

Adam Smith Seminar, Schloss Spiez, Switzerland, July 2, 2014
Contents

1. The return of market optimism

2. Mexico’s cyclical recovery

3. Structural challenges
International financial conditions reflect the perceived postponement of monetary tightening by major central banks

- The Fed will likely continue tapering asset purchases, but it will probably maintain the current target range for the Fed funds rate for a considerable time.
- The ECB recently lowered its monetary policy rates, launched targeted long-term refinancing operations, and decided to intensify work for outright purchases in the ABS market.
- The Bank of Japan is to continue quantitative and qualitative monetary easing.
- Other advanced countries’ central banks have followed suit.
What Mexico’s economy confronts

The renewed search for yield has boosted overall and high-risk financial asset prices

Interest rates for select fixed-rate market instruments

United States

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<thead>
<tr>
<th>Instrument</th>
<th>United States</th>
<th>Europe</th>
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<tbody>
<tr>
<td>AAA Corporates</td>
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Europe

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* Bonds with a rating below BBB-. The duration of AAA-rated U.S. and European corporate bonds, BBB-rated U.S. corporate bonds, and mortgage backed securities is approximately 7 years. The agency bonds, European BBB-rated corporate bonds, and U.S. and European high-yield bonds have a duration of about 4 years. The duration of asset backed securities is 2 years.

Source: Bank of America – Merrill Lynch Indices
... and has also dampened financial market volatility

Financial market volatility

1/ MOVE, index of implied volatility in “at the money” options at a maturity of one month over Treasury bonds with maturities of 2, 5, 10 and 30 years. 2/ VIX, index of average implied volatility at one month in the options market for the S&P 500. 3/ CVIX, implied volatility at 3 months for currency rates. 4/ Historic volatility for the CRB (index of futures for commodities comprised of 19 contracts)

Source: Own calculations with Bloomberg data
At the same time, portfolio capital flows to emerging markets have recently regained steam.

Portfolio flows from nonresidents to emerging economies\(^1\)

Billions of dollars

1/ Includes 30 emerging economies. Data from April to June 2014 to be updated by the IIF.

In Mexico, as in other emerging markets, foreign holdings of local-currency government bonds have rebounded.

**M4 held by nonresidents**

Trillions of pesos at December 2010 prices

1/ M4 is defined as domestic financial assets and domestic private-sector bank deposits plus deposits in Mexican banks’ agencies abroad, held both by residents and nonresidents.

2/ Marked to market

Source: Banco de México
... while private-sector access to market financing has continued an upward trend

Outstanding nonfinancial-private-sector debt
End of period; billions of pesos at December 2010 and billions of dollars at 1982-84

1/Includes commercial paper, IOUs, stock certificates, and ordinary participation certificates. 2/Includes bonds and commercial paper

Source: Banco de México
As a result, interest rates remain at all-time or nearly all-time lows

Mexico: Government bond yields
% , daily average

Source: Banco de México

What Mexico’s economy confronts
However, there is no evidence of overheating in credit markets

Mexico: Total financing to the nonfinancial private sector
End of period; % of GDP

1/ Performing commercial bank credit to the nonfinancial private sector
Source: Banco de México and INEGI
... notwithstanding a certain recent deterioration in loan portfolio quality

**Mexico: Adjusted delinquency rates in the nonfinancial private sector**

Quarterly averages; %

1/ The adjusted delinquency rate is the past-due loan portfolio plus write-offs over the previous twelve months divided by the total loan portfolio plus write-offs over the previous twelve months

Source: Banco de México
Real estate prices have just kept up with consumer prices

Home prices vs. the CPI

2012=100

1/ Quarterly average for the CPI and quarterly data for home prices. */ Only includes April and May
Source: Sociedad Hipotecaria Federal and INEGI
... and no significant FX appreciation from the financial bonanza has occurred, thereby limiting carry trades somewhat.

Mexico and emerging economies: Nominal exchange rate
Local currency prices in terms of USD, December 2012=100

Graph showing the nominal exchange rate of Mexican peso and emerging economy currencies other than MXN, with appreciation marked.

*Includes Brazil, Chile, Colombia, Russia, Turkey, Poland, the Czech Republic, India, Indonesia, South Korea, Thailand, South Africa, Peru, Hungary and Malaysia

Source: Bloomberg
Yet global risk-taking poses challenges to emerging economies, including Mexico’s

- Market calm seems to increase with bad news from the pace of recovery in advanced economies
- Addiction to lax monetary policy leads to a search for yield in the form of leverage, or lower-quality, illiquid assets
- As disequilibria may build, significant asset price corrections may occur
- Given that investors may anticipate and act ahead of monetary policy decisions in advanced countries, capital flows could unwind in a disorderly way
- Authorities in emerging markets should remain alert to burgeoning vulnerabilities
Some factors in the Mexican economy could mitigate disturbances from possible capital flow reversals

- Modest and stable external debt to GDP
- Moderate corporate leverage and FX exposure
- Deep and liquid FX and sovereign bond markets
- Macroeconomic fundamentals
  - Reduced inflation
  - Relatively stable public debt
  - Low current account deficit more than financed by FDI
  - Solid banking sector
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Since mid-2012, Mexico’s GDP growth has taken a declining path and become stuck at low rates

Gross Domestic Product
% change, s.a.

Nonannualized quarterly (left axis)
Annual

s.a. / Seasonally adjusted
Source: Own calculations with data from INEGI
Economic deceleration reflects a sequence of negative shocks

- The U.S. slowdown
- A drop in government spending due to a new administration
- A shortage in the natural gas supply stemming from distribution bottlenecks, as well as greater demand and lower production
- The bankruptcy of the three largest housing development firms
- Tax reform which includes hikes and the elimination of immediate capital expenditure deductibility
Although manufacturing has picked up, construction continues to stagnate

Mexico: Manufacturing and construction
Quarterly averages; Q1 2008 = 100; s.a.

s.a. / Seasonally adjusted
Source: INEGI
The transitory slowing in manufacturing appears to stem from a soft patch in export demand

Exports of goods and services
Billions of 2008 pesos; s.a.

s.a. / Seasonally adjusted
Source: INEGI
Private consumption has remained largely flat since 2013

Private consumption
Billions of 2008 pesos; s.a.

s.a. / Seasonally adjusted
Source: INEGI
... reflecting weaker confidence levels

Consumer confidence
Quarterly averages; 2008 = 100, s.a.

*Only April to May
s.a. / Seasonally adjusted
Source: INEGI and Banco de México

What Mexico’s economy confronts
Investment has been a drag on the economy

Gross fixed capital formation
Billions of 2008 pesos; s.a.

What Mexico’s economy confronts

s.a./ Seasonally adjusted
1/ Manufacturing Sector Business Confidence Indicator
Source: INEGI
... while the performance of bank lending has followed that of output

Mexico: Bank credit and economic growth
Real annual change, %

1/ Performing commercial bank credit to the nonfinancial private sector. Change based on end-of-period figures
Source: Banco de México and INEGI
Given improved global conditions, Mexico’s GDP should rise gradually this year, and the next few years

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<tbody>
<tr>
<td>Banco de México</td>
<td>2.3 – 3.3</td>
<td>3.2 – 4.2</td>
<td>n.a.</td>
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<td>n.a.</td>
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<tr>
<td>The World Bank</td>
<td>2.3</td>
<td>3.5</td>
<td>4.0</td>
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</tbody>
</table>

Source: Banco de México, Blue Chip Economic Indicators and the World Bank
However, some risks persist

- In the short term, risks are to the downside
  - Possible additional weakening in consumer confidence
  - Greater deterioration in the construction sector
  - Increased global risk aversion

- In the long term, risks are to the upside
  - Momentum from structural reforms
In the context of slower GDP growth, monetary policy accommodation has broadened.

Mexico: Monetary Policy Rate

Annual, %

Source: Banco de México
Annual inflation is in the process of converging to the 3 percent permanent target

Average annual inflation

- Annual inflation has been converging to the 3 percent target set by the central bank.
- The graph shows the average annual inflation rate from 2003 to 2014, with the target line at 3%.

* Until May

Source: INEGI
A significant risk is upward pressure and volatility in the noncore component of the consumer price index

Average annual inflation

*% Until May

Source: INEGI

* / Until May

Source: INEGI
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Mexico’s long-term economic growth has been disappointing

Source: Own calculations based on INEGI data
The main challenge to sustained economic improvement is how to enhance total factor productivity growth.

Mexico: Growth accounting from 1981 to 2013

Annual average % change

The current reform agenda seeks to bring about investment and productivity gains

- The scope of the reforms is broad
- The opening of the energy sector to private agents is noteworthy
  - Contracts in exploration and extraction for oil and hydrocarbons
  - Permits in gas processing and oil refining, transportation, storage, distribution, and commercialization
  - Participation in electricity generation and sales
- Telecommunications reform is also promising
  - Players can offer all types of services provided market non-concentration requirements are met
  - Limits on FDI reduced
With geologic conditions similar to those of Texas, Mexico has a big opportunity for a more efficient oil sector.

Mexico and Texas: Crude Oil Production

Millions of barrels

/* Data annualized for Texas January to March and for Mexico, January to April
Source: The U.S. Energy Information Administration (EIA) and Petróleos Mexicanos
Despite abundant natural gas reserves, Mexico achieves only minimum and declining production

**Mexico and Texas: Natural Gas Production**

**Billions of cubic feet**

*Data annualized for Texas January to March and for Mexico, January to April*

Source: The U.S. Energy Information Administration (EIA) and Petróleos Mexicanos
Mexico cannot import enough natural gas cheaply due to a limited pipeline network, another investment opportunity.

Source: Presidencia de la República (2013), Primer Informe de Gobierno 2012-2013. Gobierno de los Estados Unidos Mexicanos
More readily available and cheaper natural gas and electricity would boost economic total productivity.

**Mexico and the United States: Electricity prices**

<table>
<thead>
<tr>
<th>Year</th>
<th>United States</th>
<th>Mexico</th>
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</thead>
<tbody>
<tr>
<td>2004</td>
<td>8.5</td>
<td>15.5</td>
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<tr>
<td>2005</td>
<td>8.8</td>
<td>16.5</td>
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<td>2006</td>
<td>9.0</td>
<td>17.0</td>
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<tr>
<td>2007</td>
<td>9.2</td>
<td>16.5</td>
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<td>2008</td>
<td>9.4</td>
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<td>2009</td>
<td>9.6</td>
<td>17.0</td>
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<tr>
<td>2010</td>
<td>9.8</td>
<td>16.0</td>
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<tr>
<td>2011</td>
<td>10.0</td>
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1/ Includes residential, commercial, services and agricultural. 2/ PPP adjusted, data up to October 2013

Source: Own calculations with information from the Energy Information Administration, SENER and OECD
The telecom sector needs more competition to broaden access, improve quality, and reduce prices

Mexico and the United States: Broadband for consumers

<table>
<thead>
<tr>
<th></th>
<th>Speed (megabytes per second)</th>
<th>Price (USD per megabyte per second)</th>
<th>Subscribers (per 100 inhabitants)</th>
<th>Optic fiber connections (% subscribers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>12.9</td>
<td>5.82</td>
<td>11.9</td>
<td>4.73</td>
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<td>United States</td>
<td>24.7</td>
<td>3.49</td>
<td>29.3</td>
<td>7.72</td>
</tr>
</tbody>
</table>

1/ Speed and price of broadband as of June 2014, and subscribers and fiber connections as of 2013
Source: OOKLA (2014), June; OECD Broadband Portal
Final remarks

- Authorities need to remain alert given market calm due to postponed tighter monetary policy in advanced nations
- Long positions in the search for yield pose risks
- Mexico’s GDP growth reflects negative transitory shocks, and the rebound still has to overcome drags from stagnant construction, lower investment, and soft private consumption
- With disappointing long-term economic growth, the main challenge is how to enhance productivity
- Reforms, currently in progress, have to be high-quality and well-implemented to draw investors and bring about productivity gains
Mejoran las perspectivas económicas mundiales.