Mexico’s Economic Policy under External Constraints
Manuel Sánchez, Member of the Board
Adam Smith Seminar, Schloss Spiez, Switzerland, June 27, 2012
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1 Monetary Policy and Capital Inflows

2 Implications of European Uncertainty

3 Economic Developments and Outlook
During the last ten years monetary policy in Mexico has been implemented under an inflation targeting regime

- Stabilization has been gradual to minimize possible social costs
  - Declining inflation targets at first, then fixed
  - Since 2003, 3% permanent target, with a variability range of plus/minus one percentage point

- Communication has been key to the effectiveness of monetary policy
  - Quarterly inflation reports and press conferences
  - Monetary policy communiques
  - Minutes from Board policy decision meetings
On the back of prudent fiscal policy, inflation has dropped and has been converging towards the permanent target.

Annual headline inflation

Source: INEGI and Banco de México
A crucial challenge to convergence continues to be the persistence of inflation expectations above the target.

Inflation expectations

Short and medium-term

Long-term

Source: Banco de México
The policy interest rate responded to cyclical conditions, and has been constant for almost three years.

Source: Banco de México
The yield curve has been shifting with that of the U.S., reflecting the extraordinary monetary accommodation in that country.

**Yield curve**

**End of year, %**

**U.S.**

- 2009
- 2010
- 2011
- 2012*

**Mexico**

- 2009
- 2010
- 2011
- 2012*

* / June 15, 2012

Source: U.S. Treasury

Source: Banco de México
The resulting recent interest-rate spread have been wide and relatively stable.

Interest-rate spreads
Mexico vs. U.S., %

Source: Banco de México and Federal Reserve
and have given rise to substantial capital inflows to Mexico, especially in the bond market

**M4 held by non-residents**

<table>
<thead>
<tr>
<th>Trillion pesos at April 2012 prices, s. a.</th>
<th>% of M4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>* Marked to market</td>
</tr>
<tr>
<td>Bank deposits</td>
<td>Source: Banco de México</td>
</tr>
<tr>
<td>Public securities*</td>
<td>Source: Banco de México</td>
</tr>
</tbody>
</table>

* Source: Banco de México
Typically, some dangers may arise in episodes of strong capital inflows

- An excessive currency appreciation\(^1\)
  - Worsening of the trade balance
  - Output contraction
  - Lower policy interest rate usually recommended

- Asset price bubbles\(^2\)
  - Credit and consumption boom
  - Output expansion
  - Advised higher policy interest rate to prick the bubbles could further attract capital inflows

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In Mexico, the first danger does not seem to have materialized as implied by a relatively weak peso and high export growth.

- **Real effective exchange rate**
  - 2008=100
  - Source: Bank of International Settlements

- **Manufacturing exports**
  - 2007=100, s. a.
  - Source: Banco de México

The graphs illustrate the depreciation of the peso and the trends in manufacturing exports and U.S. industrial production over the period from May 2007 to November 2012.
In fact, except for 2009, the Mexican economy has expanded faster than that of the United States

Mexico and U.S. GDP
Change, %

Source: INEGI and Bureau of Economic Analysis
The clearest effect of capital inflows seems to be their contribution to the rising trend of Mexican bond and stock prices.

**Fixed-rate bond price***

100=face value

- **20 years**
- **10 years**

*10-year bond issued in December 2007 and 20-year bond issued in December 2004 (both 80% held by non-residents)

Source: Calculations with VALMER and PIP data

**Stock market price index (IPC)**

2009=100

Source: Bolsa Mexicana de Valores

Mexico’s Economic Policy under External Constraints
However, there are no visible signs of the second danger in the real estate market

Homes prices vs. CPI

2009=100

Source: Sociedad Hipotecaria Federal and INEGI
... or in the credit market, which has seen an incipient but recently weakened recovery process

Commercial banks’ performing loans to non-financial private sector

Billion pesos as of December 2010

% of GDP

Source: Banco de México and INEGI
... or in the form of significant aggregate demand pressures

Output gap

% of potential output, s. a.

s.a./ Seasonally adjusted

Source: Calculated by Banco de México with data from INEGI
The absence of major demand pressures is partly explained by the monetary policy stance and sterilization of international reserves.

**Sources and uses of the economy’s financial resources**

<table>
<thead>
<tr>
<th>% of GDP, end of period</th>
<th>2009</th>
<th>Q1 2012</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economy’s financial resources</td>
<td>72.4</td>
<td>81.4</td>
<td>9.0</td>
</tr>
<tr>
<td><strong>Sources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M4</td>
<td>56.3</td>
<td>64.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Held by non-residents</td>
<td>3.2</td>
<td>9.0</td>
<td>5.8</td>
</tr>
<tr>
<td>External financing</td>
<td>16.1</td>
<td>17.2</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Uses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International reserves</td>
<td>9.4</td>
<td>12.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Federal public sector</td>
<td>34.6</td>
<td>36.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Private sector</td>
<td>29.6</td>
<td>31.7</td>
<td>2.1</td>
</tr>
<tr>
<td>States and municipalities</td>
<td>2.2</td>
<td>2.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Other items</td>
<td>-3.4</td>
<td>-2.4</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*/ Figures may not add up due to rounding
Source: Banco de México*
Contents

1 Monetary Policy and Capital Inflows

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During the last two years the Eurozone has been the most important source of global uncertainty

- Skepticism over long-term fiscal consolidation plans
- Tensions between needed austerity measures and growth
- Increasing market expectations about the size of firewalls
- Banks’ rising loan losses, deleveraging and capital requirements
- High funding costs and liquidity pressures faced by banks
- Lack of competitiveness
The main effect on Mexico has been financial, mostly through exchange rate volatility.

**Exchange rate implied volatility**
One-month peso-dollar option, 2008=100

Source: Bloomberg

**Exchange rate risk reversal**
One-month peso-dollar option, 2008=100

Source: Bloomberg
A possible source of concern is the high participation of Mexican banks with headquarters in the Eurozone. The share of banking assets held in subsidiaries or branches of global banks* as a percentage of total banking system assets, end of 2008, is shown in the diagram. The number of foreign banks may not be exhaustive for some countries, e.g., Mexico.

Notwithstanding time lags, domestic and foreign bank lending has exhibited similar cyclical behavior.

Commercial banks’ performing loans to the non-financial private sector*
Real annual change, %

* Data include all foreign and domestic banks in the system
Furthermore, longstanding regulation has shielded financial intermediaries against external shocks

- Foreign banks operate only through subsidiaries
- Regulation for all banks
  - Capitalization standards
  - Minimum capital for dividend distribution
  - Limits on related-party lending
  - Restrictions on FX transactions
    - Deposits
    - Net liabilities
    - Net open position
    - Liquidity ratio
Banks in Mexico satisfy high capitalization, provisioning and liquidity standards

### Banking system indicators

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2009</th>
<th>Q1 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Capital</strong> (% risk-weighted assets)</td>
<td>16.09</td>
<td>16.51</td>
<td>15.73</td>
</tr>
<tr>
<td><strong>Tier 1 capital</strong> (% net capital)</td>
<td>93.79</td>
<td>88.46</td>
<td>87.78</td>
</tr>
<tr>
<td><strong>Past-due loan portfolio</strong> (% total loan portfolio)</td>
<td>2.31</td>
<td>3.65</td>
<td>2.94</td>
</tr>
<tr>
<td><strong>Provisions for expected losses</strong> (% of the past-due loan portfolio)</td>
<td>224.96</td>
<td>161.76</td>
<td>180.40</td>
</tr>
<tr>
<td><strong>Liquid assets</strong> (% net cash outflows)</td>
<td>...</td>
<td>427.81</td>
<td>413.40</td>
</tr>
</tbody>
</table>

*/ Calculations based on Basel III liquidity coverage ratio  
Source: CNBV and Banco de México*
Additionally, the recent crisis has led authorities to implement several macroprudential initiatives

- A faster pace of international reserves accumulation
- IMF flexible credit line
- Mexico’s Financial System Stability Council

✓ Identifies systemic risks and proposes policies and solutions
Financial authorities continue monitoring external risks and domestic vulnerabilities

- Risks arising from abroad
  - Deterioration of the world economy
  - Spillovers from a worsening of the Eurozone crisis
  - Sudden capital stops and reversals

- Domestic vulnerabilities
  - Banking industry highly concentrated
  - Some banks exposed to liquidity risk if faced with higher market volatility
  - Some bank portfolios carry a heavy weight of loans to subnational governments

Since 2009, Mexico has undergone a process of economic recovery along with the U.S. economy.

**Gross Domestic Product**

**Annual growth, %**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>4.42</td>
<td>3.85</td>
</tr>
<tr>
<td><strong>Agriculture</strong></td>
<td>-2.92</td>
<td>0.27</td>
</tr>
<tr>
<td><strong>Industrial</strong></td>
<td>5.45</td>
<td>3.49</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>7.45</td>
<td>3.95</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td>4.19</td>
<td>4.36</td>
</tr>
</tbody>
</table>

Source: INEGI

**Economic activity indicators**

*2003 = 100, s. a.*

- **Total**
- **Services**
- **Industrial Production**

s.a./ Seasonally adjusted

*/ Global Economic Activity data until March 2012

Source: INEGI
Manufacturing exports by sector and destination have continued to post high rates of growth

Manufacturing exports
2007=100, s. a.

s.a./ Seasonally adjusted and trend data
Source: Banco de México
Also, expansion of sales and investment remains uninterrupted.

**Wholesales and retail sales**

*2003 = 100, s. a.*

- Wholesale
- Retail

**Gross Fixed Investment**

*2008 = 100, s. a.*

- Total
- Construction
- Machinery and equipment

s.a./ Seasonally adjusted and trend data

Source: INEGI
Dynamic domestic demand has been supported by job creation and greater consumer confidence.

**Formal employment***
Millions of workers

**Consumer confidence**
2003=100

/* Workers insured by the Mexican Social Security System (IMSS)
Source: IMSS

Source: Encuesta Nacional sobre la Confianza del Consumidor (ENCO), INEGI and Banco de México
... as well as an improvement in business perception and the expansion of credit

Prospective indicators for manufacturing
50 points reference; s. a.

Commercial banks’ performing loans to the non-financial private sector
2007=100

Source: Banco de México, INEGI and IMEF

Source: Banco de México
The Mexican economy is expected to continue growing at a stable, moderate pace.

<table>
<thead>
<tr>
<th>GDP Change, %</th>
<th>2011</th>
<th>2012(^F)</th>
<th>2013(^F)</th>
<th>2014(^F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.9</td>
<td>3.5</td>
<td>4.1</td>
<td>4.4</td>
</tr>
<tr>
<td>U.S.</td>
<td>1.7</td>
<td>2.1</td>
<td>2.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.0</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Source: IMF (2012), *World Economic Outlook*, April
The most likely inflation path will lie within a 3-4% interval.
Finally, there are risks to both output growth and inflation

- **Output**
  - Lower-than-anticipated expansion of the U.S.
  - Global economic weakening due to a worsening of Eurozone problems

- **Inflation**
  - Persistent weakness of the peso and greater-than-expected pass-through to prices
  - Aggregate demand pressures
Final remarks

- Inflation has been converging towards the permanent target
- Wide yield spreads have drawn capital inflows which have contributed to high bond and stock prices
- No clear signs of a bubble in the real estate and credit markets or excessive pressures on aggregate demand
- The main effect of global turmoil in Mexico has been FX volatility
- Banks in Mexico meet high capitalization, provisioning and liquidity standards. Several macroprudential initiatives are in place
- Since 2009, Mexico has undergone a process of economic recovery and is expected to continue growing at a stable, moderate pace
Mejoran las perspectivas económicas mundiales