A New Era of Monetary Policy: The Case of Israel

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GDP Growth
2000-2016F

Forecast

Emerging Markets
Israel
Czech Republic
Advanced Economies

Source: IMF and BOI.
# Israel & Czech Republic: General Comparison

<table>
<thead>
<tr>
<th></th>
<th>Israel</th>
<th>Czech Republic</th>
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<tbody>
<tr>
<td>Population (millions)</td>
<td>8</td>
<td>10.5</td>
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<tr>
<td>GDP ($US billion, 2013)</td>
<td>290</td>
<td>200</td>
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<td>GDP per Capita (PPP, 2013)</td>
<td>32,700</td>
<td>27,350</td>
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<tr>
<td>Annual Growth (2004-2014)</td>
<td>4.1%</td>
<td>2.3%</td>
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<tr>
<td>Unemployment (25-64)</td>
<td>5.1% (2014)</td>
<td>6.2% (2013)</td>
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<tr>
<td>Inflation (12 months)</td>
<td>-1.0%</td>
<td>0.1%</td>
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<tr>
<td>Government Expenditure</td>
<td>39.4%</td>
<td>42.5%</td>
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<td>(2014, % of GDP)</td>
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<tr>
<td>Tax Burden (% of GDP)</td>
<td>31% (2014)</td>
<td>34.1% (2013)</td>
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<tr>
<td>Government Gross Debt</td>
<td>67.8%</td>
<td>44.4%</td>
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<td>(% of GDP)</td>
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Source: IMF, WEO.
Since the Crisis, Monetary Policy Has Changed - Worldwide and in Israel
Central Banks’ Objectives

Before the financial crisis

“One target, one instrument simplicity”

Since the financial crisis

“Multiple instruments should increase the extent to which multiple objectives can simultaneously be pursued”

One major objective:
Maintaining price stability, and supporting economic activity.
Using one monetary tool:
Interest rate.

Multiple objectives:
• Maintaining price stability, and supporting economic activity.
• Ensuring financial stability
Using multiple policy tools:
• Interest rate (incl. negative level)
• Quantitative easing.
• Capital flow management measures.
• Foreign exchange intervention.
• Macroprudential measures.
• Forward guidance.

Source: IMF, “Monetary policy targets after the crisis”, April 2013.
Monetary policy under inflation targeting: Set interest rate to target inflation and output gap.

During a recession at the “economic core” addressed by monetary easing, a small open economy may experience exchange rate appreciation and lower demand for its exports.

Global monetary easing may directly and/or indirectly, via monetary policy reaction, affect asset prices and raise domestic financial stability concerns.

Balancing growth, inflation and financial stability calls for macroprudential policy and the use of multiple tools.
## Unconventional Monetary Tools Since The Global Financial Crisis

<table>
<thead>
<tr>
<th></th>
<th>Forex Intervention</th>
<th>Forward Guidance</th>
<th>QE</th>
<th>Negative Interest Rate</th>
<th>MAP</th>
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<td>USA</td>
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<td>Israel</td>
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- **Exchange rate floor**
- **Fixed exchange rate**

*Not all MAP measures were implemented by the central bank; some were by other entities.*

Source: IMF and Bloomberg.
Macroprudential

“Quite simple to describe but quite difficult to implement…”

The number of macroprudential policies in the housing market used by OECD countries has increased.

“The broad goal of these policies (MAP) is to limit the risk of financial system disruptions”

BOI’s Policy Objectives:

- Maintain price stability, as the central goal.
- Support for economic policy, primarily growth, employment and reducing social gaps.
- Support the stability and orderly activity of the financial system.
Inflation Environment
2006-2015

Israel
Czech Republic

Source: Bloomberg.
Exchange Rates
2007-2015

Source: Bloomberg.
Nominal Effective Exchange Rate
2007-2015, Index 01/2007=100

Source: BOI.
Development of Business Output Gap*
Quarterly, 2007-2014

*Deviation (in %) of actual GDP from potential GDP. Potential GDP is based on production function approach.
The increase in home prices stems from a number of factors:

- Decline in the attractiveness of alternative investment channels
- Low interest rate on mortgages
- The slow response of the supply of homes to demand

Source: Survey of home price and loans for residential purposes, and BOI Banking Supervision Dep’t.
1. Expansionary global monetary policy causes appreciation and affects exports.

2. Appreciation pressures intensified by natural gas finding.

3. Conventional monetary policy- reducing interest rates which led to: (i) lower cost of credit; (ii) reduced interest rate differentials; and (iii) diminished appreciation pressures on NIS.

4. However, lower interest rates affect asset prices, and in particular housing prices, and volume of mortgages.

5. Therefore: Macroprudential measures to reduce risk and reduce transmission of interest rate policy to asset markets.

6. Therefore: FX intervention from macroprudential considerations to economize on interest rate changes.
Central Bank Interest Rate
2007-2015

Source: Bloomberg.
Reserves
% of GDP, 2001-2014

Source: IMF.
Macroprudential Measures: Main Steps in Mortgage Market

- **Limiting variable-interest-rate component:**
  - to 1/3 of the total loan, (for variable IR which changes within 5 years) (May 2011);
  - to 2/3 (for all variable IR) (August 2013).

- **Limiting LTV ratio:** up to 75% for first-home buyers, up to 50% for investors, up to 70% for those upgrading their homes (November 2012).

- **Limiting PTI ratio:** up to 50% (August 2013).

- **Limiting maximum term:** 30 years (August 2013).

- **Higher capital requirements:**
  - for housing loans with LTV exceeding 45% (March 2013);
  - for housing loans with 40%<PTI<50 (August 2013).

- **Supplemental reserve** for housing loans (March 2013).

- **Capital buffer:** requiring banks to increase their Common Equity (September 2014).
Bank of Israel Policy Tools
2007-2015

Macro Prudential Measures

Interest Rate

FX Intervention

QE US$ 5 billion

CFMs

Source: BOI.
Some Tentative Lessons for CBs in SOEs

- The burden on CBs has increased dramatically since the GFC.
- Monetary policy in major central banks affect SOEs via the exchange rate & asset prices, thus affecting inflation, growth and financial stability.
- There is more CBs can do, even when they reach an interest rate of zero.
- Using MAP measures allows focusing monetary policy on its main objectives: inflation and growth.
Some Tentative Lessons for CBs in SOEs

(continued)

- Using a combination of policy instruments allows using each at lower dosage; this “buys time”.

- Using various MAP measures reduces diminishing return of each, and reduces incentives for circumventing.

- Each of the unconventional measures has risks that need to be recognized and managed.
Thank you