Inflation Targeting in Chile

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Central Bank of Chile
March 2007
Plan of presentation

1. The road to inflation targeting and a floating exchange rate.

2. Monetary policy: Is there an exchange rate target as well?

3. Exchange rate volatility.


5. Final remarks.
The road to inflation targeting and floating exchange rate

- ER band, 1984-1999
- “Impure” inflation targets, 1991-1999
- Foreign exchange (FE) interventions in response to appreciation pressures, 1990-97
- FE interventions in response to depreciation pressures, 1998
- Loss of credibility in the ER band.
- Abandonment of the band; ER floating 1999.
- Full adoption of inflation targeting, 2000.
Nominal Exchange Rate, 1990-2005

Source: Central Bank of Chile.
Inflation and inflation targets 1991-2005

Source: Central Bank of Chile.
Nominalization increased the volatility of CPI-adjusted interest rates …

Source: Central Bank of Chile.
Nominalization increased the volatility of CPI-adjusted interest rates …

… while nominal rates stabilized.

Source: Central Bank of Chile.
As in other economies, simple passthrough coefficients have fallen.

Does monetary policy react to changes in the nominal exchange rate?

Schmidt-Hebbel and Werner (1) made an empirical exercise to answer this question. First, they adjusted a Taylor rule sensitive to changes in the NER:

\[ R_t = \beta_1 + \beta_2 R_{t-1} + \beta_3 (\text{InfExp} - \text{IT})_t + \beta_4 Y_{\text{gap}}_t + \beta_5 \text{dep}_t + \beta_6 G_{\text{bond}}_t \]

### OLS Estimates of Taylor Rules

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<tbody>
<tr>
<td></td>
<td>Real interest rate lag</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.89</td>
<td>0.92</td>
<td>0.92</td>
<td>0.47</td>
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<tr>
<td></td>
<td>(3.88)*</td>
<td>(25.20)*</td>
<td>(14.6)*</td>
<td>(4.79)* (5.45)*</td>
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<tr>
<td>Expected inflation-inflation target</td>
<td>0.30</td>
<td>0.01</td>
<td>0.01</td>
<td>0.08</td>
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<tr>
<td></td>
<td>(2.42)</td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.16) (–1.01)</td>
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<tr>
<td>Output gap</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
<td>0.11</td>
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<tr>
<td></td>
<td>(0.50)</td>
<td>(1.56)</td>
<td>(1.15)</td>
<td>(1.34) (1.25)</td>
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<tr>
<td>Nominal exchange rate</td>
<td>–0.01</td>
<td>–0.01</td>
<td>0.01</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>(–0.02)</td>
<td>(–0.27)</td>
<td>(0.41)</td>
<td>(1.51) (–0.23)</td>
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<tr>
<td>Long-term government bond</td>
<td>0.32</td>
<td>0.03</td>
<td>0.02</td>
<td>1.98</td>
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<tr>
<td></td>
<td>(0.51)</td>
<td>(0.64)</td>
<td>(0.09)</td>
<td>(4.02)* (2.86)*</td>
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<tr>
<td>Trade deficit lag (exports-imports)</td>
<td>–0.01</td>
<td>–0.01</td>
<td>–0.01</td>
<td>–0.01</td>
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<tr>
<td></td>
<td>(–0.1)*</td>
<td>(–2.49)*</td>
<td>(–1.75)</td>
<td>(–3.2)* (–2.7)*</td>
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<tr>
<td>Summary statistic</td>
<td>Adjusted $R^2$</td>
<td></td>
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<td></td>
<td>0.75</td>
<td>0.88</td>
<td>0.87</td>
<td>0.80</td>
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<td>Durbin-Watson statistic</td>
<td>1.92</td>
<td>1.64</td>
<td>1.68</td>
<td>2.17</td>
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</tbody>
</table>

There is no evidence that monetary policy has a systematic concern for NER movements …

Source: Schmidt-Hebbel & Werner (2002)
OLS Estimates of Taylor Rules ("Rolling coefficients")

Brazil

Chile

Mexico

..but there are episodes where the NER has been considered in monetary policy decisions.

Source: Schmidt-Hebbel & Werner (2002)
NER Volatility
(CV within a month)

Source: Central Bank of Chile.
<table>
<thead>
<tr>
<th></th>
<th>CH$</th>
<th>Yen</th>
<th>Euro</th>
<th>AUS$</th>
<th>NZ$</th>
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<tbody>
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<td>2001</td>
<td>8.3%</td>
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<td>2002</td>
<td>9.6%</td>
<td>9.7%</td>
<td>9.1%</td>
<td>8.7%</td>
<td>9.9%</td>
<td>19.2%</td>
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<td>2003</td>
<td>8.2%</td>
<td>8.2%</td>
<td>10.3%</td>
<td>10.0%</td>
<td>10.4%</td>
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<tr>
<td>2004</td>
<td>10.9%</td>
<td>9.5%</td>
<td>10.6%</td>
<td>12.9%</td>
<td>13.8%</td>
<td>21.0%</td>
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<td>2005</td>
<td>9.3%</td>
<td>8.7%</td>
<td>9.0%</td>
<td>9.3%</td>
<td>10.2%</td>
<td>15.4%</td>
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<tr>
<td>2006</td>
<td>7.1%</td>
<td>8.2%</td>
<td>7.6%</td>
<td>8.6%</td>
<td>11.3%</td>
<td>15.3%</td>
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</table>

(*) La volatilidad cambiaria fue estimada empleando la metodología Riskmetrics de JP Morgan Chase, que consiste en efectuar una modelación GARCH de la varianza del retorno logarítmico del tipo de cambio.
FUENTE: Bloomberg y Banco Central de Chile.
Macroeconomic environment

Fiscal Balance (B.C.G.) (% of GDP)

Source: Ministry of Finance.

Fiscal policy has helped …
Macroeconomic environment

Fiscal Balance (B.C.G.) (% of GDP)

Source: Ministry of Finance.

Sovereign Spread (Basis points)

Source: Central Bank of Chile.

Fiscal policy has helped …

…along with country risk.
A policy episode worth commenting

Source: Central Bank of Chile.
Final Remarks

ER forecast and transparency.

Degrees of freedom for foreign exchange interventions.

Depth of the ER derivatives market.

A pending policy issue.