Managing commodity price shocks

by

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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD.
Introduction

- Commodity prices have seen large fluctuations over the last 20 years
- Significant challenges arise for large commodity exporters:
  - re macroeconomic management, both on the fiscal and monetary areas,
  - especially for less developed economies
- There are no “silver bullets” for the problems created by these fluctuations
- It is interesting to review some of the major issues, and how some countries have tried to confront them
Commodity price shocks are large but far from symmetric

- The size and timing of the shock can vary substantially
- Some countries had found ways to cope...

Source: Kohlscheen, Avalos and Schrimpf (2017)
Shocks may trigger large FX adjustments...

- Correlations vary, sometimes as a result of unrelated and unexpected factors
- Exchange rates are more volatile for large commodity exporters

**Fig. 3 - Commodity Share in Exports and Exchange Rate Volatility**

- Source: Kohlscheen, Avalos and Schrimpf (2017)
- Source: Avalos (2014)

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*Fig. 3.* Index of selected commodity prices (2001 = 100). S&P GSCI spot price indices, monthly average. Sources: Standard & Poor's; Datastream.
...complicating the management of monetary policy

- Exchange rates shift jointly with commodity prices...
- ... and the pass-through to domestic prices may create uncomfortable trade-offs

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exchange rate predictability (in-sample) in a panel setting</td>
</tr>
<tr>
<td>Dependent variable: log change of bilateral exchange rate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prediction horizon in days</th>
<th>k=1</th>
<th>k=5</th>
<th>k=22</th>
<th>k=44</th>
<th>k=66</th>
</tr>
</thead>
<tbody>
<tr>
<td>CXPI</td>
<td>-0.020***</td>
<td>-0.016*</td>
<td>-0.044***</td>
<td>-0.047***</td>
<td>-0.018</td>
</tr>
<tr>
<td>t-stat</td>
<td>3.51</td>
<td>1.89</td>
<td>5.19</td>
<td>2.65</td>
<td>0.88</td>
</tr>
<tr>
<td>R2 overall</td>
<td>0.0032</td>
<td>0.0113</td>
<td>0.0540</td>
<td>0.0934</td>
<td>0.1228</td>
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<tr>
<td>R2 within</td>
<td>0.0032</td>
<td>0.0111</td>
<td>0.0530</td>
<td>0.0917</td>
<td>0.1206</td>
</tr>
<tr>
<td>R2 between</td>
<td>0.5714</td>
<td>0.5608</td>
<td>0.6062</td>
<td>0.6143</td>
<td>0.6055</td>
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<td>Observations</td>
<td>30,294</td>
<td>30,283</td>
<td>30,096</td>
<td>29,854</td>
<td>29,612</td>
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<tr>
<td>Groups</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
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<tr>
<td>Fixed effects</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

Notes: This table shows the results of the panel regression \( \Delta s_{t+k} = \alpha + \Delta CXPI_{t+k} + \gamma_k + \theta_{k} + \epsilon_{k,t} \), where \( k \) stands for the length of the prediction horizon. t-statistics are based on clustered standard errors. *, **, *** denote statistical significance at 10%, 5% and 1%, respectively. The estimation is based on information from Jan 2004 to Feb 2015.

Source: Kohlscheen, Avalos and Schrimpf (2017)
Discussion

- The exchange rate is a core element of the nominal anchor in SOEs.
- The behavior of the exchange rate can fundamentally affect the dynamics of inflation and the working of monetary policy.
- Trade channel may not be as important as in the past for some countries (except “Dutch disease”).
  - Financial conditions and economic activity
- How to take account of FX fluctuations in monetary policy?
  - FX intervention
  - Foreign reserves accumulation
  - Macroprudential policy
- EMEs and CDDCs are rethinking their macroeconomic frameworks, both for fiscal (sovereign funds?) and monetary policy.
References


