Central Bank Performance Under Inflation Targeting:
The Role of Policy Design and Institutional Quality

Oleksandr Faryna
jointly with Sergiy Nikolaichuk (NBU) and Viktor Koziuk (NBU Council)

The usual disclaimer applies

NBU Workshop on Inflation Targeting in Emerging Economies
26 November 2021
Inflation Targeting (IT) quickly sweeps through the world
- 41 countries (30 EMs)
- 17 years on average (14 for EMs)

A single core idea - steer inflation (expectations) at its publicly declared target

Clear evidence of IT benefits
- Macroeconomic stability
- e.g., Obstfeld (2014)

Flexible framework
- Design: target level and range, inflation measure
- Institutional quality: transparency, independence, political stability
**IT Design: What target?**

- Generally higher targets and target ranges for newcomers
  - Need for disinflation
- Low and stable targets in AEs
- **Mixed picture for EMs**
  - Generally higher
  - Concerns on ZLB and catch-up effect?

<table>
<thead>
<tr>
<th></th>
<th>AEs</th>
<th>EMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Median</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.9</td>
<td>1.8</td>
</tr>
</tbody>
</table>
The Rise of Central Bank Transparency

- **CB Transparency Index**
  - Dincer & Eichengreen (2014)
  - Political, economical, procedural, policy, and operational transparency

- **Transparency improves with experience**
  - Rapid jump after IT launch
  - EMs are slower
Central Bank Independence: Good start for EMs

- **Legal Independence Index**
  - Bodea and Hicks (2015)
  - Reflects the independence of the CEO, independence in policy formulation, objective or mandate, and the stringency of limits on its lending to the public sector.

- **EMs are better from the beginning**
  - AEs were less prepared

- **De-jure is not always de-facto**
  - Negatively correlates with the level of development and governance indicators
Performance improves with experience

- High-productivity countries (twice higher world average)
- Middle-productivity countries (twice higher world average)
- Low-productivity countries (twice higher world average)
Higher targets induce upward deviations

Average inflation deviation below and above the target*

*Based on 5-year averages for 41 IT country from IT start to 2020
Frequency and duration is asymmetric

Frequency and duration of inflation deviations*

*Based on 5-year averages for 41 IT country from IT start to 2020
## Determinants of inflation deviation

### Estimation approach
- Dependent variable
  - Upward / downward absolute deviations from target / range
- Annual data for 41 countries
- Controls (level of development, macroeconomic environment, trade and financial openness)
- Random effects estimator (low variability in variables of interest)
- A battery of specifications (regressors correlate)
- Table reports direction and significance on average

<table>
<thead>
<tr>
<th>Determinants of inflation deviations</th>
<th>Absolute inflation deviation from</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>target</td>
<td>above</td>
<td>below</td>
<td>above</td>
</tr>
<tr>
<td></td>
<td>range</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Policy Design</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target level</td>
<td>+</td>
<td>ns</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Size of range</td>
<td>+</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td><strong>Institutional Quality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of IT</td>
<td>–</td>
<td>ns</td>
<td>–</td>
<td>ns</td>
</tr>
<tr>
<td>Regulatory quality</td>
<td>–</td>
<td>ns</td>
<td>–</td>
<td>ns</td>
</tr>
<tr>
<td>Political stability</td>
<td>–</td>
<td>ns</td>
<td>–</td>
<td>ns</td>
</tr>
<tr>
<td>CB Transparency</td>
<td>ns</td>
<td>–</td>
<td>ns</td>
<td>–</td>
</tr>
<tr>
<td>CB Independence</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
</tbody>
</table>
On target?

- Do CBs perform well in keeping inflation on target?
  - Generally, yes. Medium-term average inflation rates are close to targets
  - Short-term deviations are acceptable

- Does the policy design matter?
  - Yes. Lower trend inflation reduces inflation volatility (not surprisingly)
  - But. Higher (lower) inflation targets induce upward (downward) deviations from the target
  - Widening the target band does not guarantee that inflation stay within the range

- How about institutional quality?
  - Yes. CB’s consistency and transparency reduce inflation deviations
  - But. Not always and asymmetrically
  - Strangers among their own? CB’s legal independence do not necessarily help to tame inflation if the general regulatory quality and political stability are low
On target?

- Do CBs perform well in keeping inflation on target?
  - Generally, yes. Medium-term average inflation rates are close to targets
  - Short-term deviations are acceptable

- Does the policy design matter?
  - Yes. Lower trend inflation reduces inflation volatility (not surprisingly)
  - But. Higher (lower) inflation targets induce upward (downward) deviations from the target
  - Widening the target band does not guarantee that inflation stay within the range
On target?

- **Do CBs perform well in keeping inflation on target?**
  - Generally, yes. Medium-term average inflation rates are close to targets
  - Short-term deviations are acceptable

- **Does the policy design matter?**
  - Yes. Lower trend inflation reduces inflation volatility (not surprisingly)
  - But. Higher (lower) inflation targets induce upward (downward) deviations from the target
  - Widening the target band does not guarantee that inflation stay within the range

- **How about institutional quality?**
  - Yes. CB’s consistency and transparency reduce inflation deviations
  - But. Not always and asymmetrically
  - Strangers among their own? CB’s legal independence do not necessarily help to tame inflation if the general regulatory quality and political stability are low
National Bank of Ukraine