Central Bank’s Objectives, Targets, Tools

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2021
CEPR Report

*The ECB Strategy: The 2021 Revue and its Future*

with L. Reichlin, W. McKibbin, M. McMahon, G. Ricco, R. Reiss, B. Weder

*The Case for a Positive Inflation Target in the Euro Area: Evidence from France, Germany and Italy*


(Usual disclaimer applies...)
Price stability is still the primary objective of CBs

CBs have adopted range of additional objectives:
- financial stability macro & micro (leverage, asset prices, banks, ...)
- balanced real economy (full employment, external balance, ...)
- distributional tasks (inclusive growth, ...)
- climate change targets
Central Bank Objectives

- New tasks adopted during a period with
  - persistent shortfall with regard to primary objective
  - policy constraints along many fronts (lower bound, issuer/cap. key limits)

- Few additional (& effective) instruments to pursue additional tasks. Bank supervision, perhaps macro-pru, what else...?
Central Bank Objectives

- ECB strategy review:
  Pretense of no trade-offs between price-stability & other objectives

- Convenient position to avoid questions about primary mandate....
  ...but trade-offs lie potentially ahead:
  More forceful & persistent inflation dynamics
  => price stability vs. financial stability

- New ECB strategy:
  Little guidance on trade-offs & no framework for communication
Many welcome changes in new ECB strategy:

- symmetric inflation target around 2%
- commitment to a forceful reaction to deflationary shocks
- willingness to tolerate temporary inflation overshoots in bringing medium-term inflation back to target
The Primary Objective

- No quantitative analysis underpinning price stability objective (2%)

- Start from baseline of 0% (optimal in ECB MP models)
  then add to that baseline:
    - avoid country-level deflation in a heterogeneous currency union
    - correct for inflation mismeasurement (unaccounted quality progress)
    - lower bound constraint & low real interest rates

- Our research: challenges the optimality of the 0% baseline.
Outline of the Remaining Talk

1. Explain where the 0% benchmark comes from (intuitively)

2. Explain why benchmark makes little sense (empirically)

3. Convince you that the benchmark should be higher \( \approx 1.5\% \)
Zero Optimal Inflation
Zero Optimal Inflation
Zero Optimal Inflation

Works similarly for deflation $\Rightarrow$ zero inflation optimal
1. Explain where the 0% benchmark comes from (intuitively)

2. Explain why benchmark makes little sense (empirically)

3. Convince you that the benchmark should be higher $\approx 1.5\%$
The world looks different: relative price trends everywhere
- newly incoming products initially expensive (relative to competitors)
- relative price falls over product lifetime

What is the optimal inflation rate for such a setting?
Declining Relative Prices with Zero Inflation

Flexible price

Average price

Time
Declining Relative Prices with Zero Inflation

Flexible price: blue  Sticky price: red

Average price

Time
Optimal increase of average price:
inverse of the decrease in relative price on previous slides
Estimation Approach

- Estimate the efficient rates of relative price for many product categories in France, Germany & Italy
- Use micro price data underlying the HICP (PRISMA network)
- Data 2010-2019: close to 100 million price quotes in total
- Compute the distribution of category-specific optimal inflation rates
Figure 5: Optimal inflation, COICOP5 level (2015/6-2019, harmonized sample, expenditure-weighted distribution)
Outline of the Remaining Talk

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Optimal Inflation Rate

- Use standard sticky price theory to derive the optimal aggregate inflation rate (Adam & Weber (2021))

- Optimal target with *heterogeneous efficient relative price trends*

\[ \Pi^* = \sum_{z=1}^{Z} w_z \cdot b_z \]

- \( b_z \): *efficient* rate of relative price decline in category \( z \)
- \( w_z \): approximately the expenditure weight

- Holds with various price setting frictions (Calvo or menu-cost)
## Optimal Inflation Rate: Baseline Estimates

<table>
<thead>
<tr>
<th></th>
<th>France 2015-19</th>
<th>Germany 2015-19</th>
<th>Italy 2016-19</th>
<th>Euro Area (FR, GER, IT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal Inflation Target</td>
<td>1.8%</td>
<td>1.8%</td>
<td>0.8%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>
## Optimal Inflation: Broad Disaggregates

<table>
<thead>
<tr>
<th></th>
<th>Food</th>
<th></th>
<th>Non-energy industrial goods</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>II*</td>
<td>Exp. Weight</td>
<td>II*</td>
<td>Exp. Weight</td>
</tr>
<tr>
<td>France</td>
<td>0.2%</td>
<td>30.9%</td>
<td>4.9%</td>
<td>34.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.1%</td>
<td>26.5%</td>
<td>5.5%</td>
<td>39.3%</td>
</tr>
<tr>
<td>Italy</td>
<td>0.0%</td>
<td>26.4%</td>
<td>2.6%</td>
<td>34.4%</td>
</tr>
</tbody>
</table>

|                | II*  | Exp. Weight |
| France         | 0.1% | 34.3%       |
| Germany        | -0.9%| 34.0%       |
| Italy          | -0.1%| 38.7%       |

Table 7: Optimal inflation for broad aggregates (2015/6-2019, harmonized sample)
Welfare Costs or Suboptimal Inflation Targets

<table>
<thead>
<tr>
<th></th>
<th>Euro Area (2015/6-2019)</th>
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<tbody>
<tr>
<td></td>
<td>harmonized sample</td>
</tr>
<tr>
<td>Optimal inflation</td>
<td>1.5%</td>
</tr>
<tr>
<td>Present value of consumption-equivalent welfare losses:</td>
<td></td>
</tr>
<tr>
<td>Versus actual HICP inflation</td>
<td>0.5%</td>
</tr>
<tr>
<td>Versus zero inflation</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Table 6: Welfare costs of suboptimal inflation
Conclusions

- CBs pursue broader set of objectives w/o broader instrument set

- Trade-offs: acknowledge them & explain how they are dealt with

- Primary objective:
  - benchmark rate from which to start should not be zero
  - relative price trends in FR/GER/IT $\approx 1.5\%$