Use of survey data

Inflation perceptions: a cross country analysis

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Motivation

• Until 2002, inflation perception was highly correlated with actual inflation as measured by the Harmonized Index of Consumer Prices (HICP).
• In 2002, development in perceived inflation began to differ from the HICP inflation series.

➢ This divergence generated a lot of interest as this could have negative consequences both from a macroeconomic and from a political point of view.
Motivation

The purpose of this presentation is:

- to give an overview of the possible causes explaining the decoupling of the two series
- to report on factors that can explain the different patterns observed across euro area countries
- to see if the above explanations are confirmed by what is happening in Slovenia
- to investigate possible implications for Malta and Cyprus
Outline

1. Overview of the data at euro area level
2. Review of possible explanations for the divergence
3. Cross-country perspective
4. Inflation perceptions in Slovenia
5. Possible implications for Malta and Cyprus
6. Conclusions
Perceived and actual HICP inflation in the euro area

![Graph showing actual HICP inflation and inflation perceptions over time from 1996 to 2007.](image-url)
• In 2002 actual inflation remained stable: 2.3% as in 2001

• Estimated contribution of the euro cash changeover to the euro area inflation rate: between 0.12 and 0.29 percentage points

• But the share of consumers replying that inflation increased a lot, rose from around 18% in December 2001 to more than 40% in June 2002
• Consumers attach very high importance to price developments for goods and services that they buy more frequently

➢ “Out-of-the-pocket” index
Consumers are more influenced by:

• upward movements than by downward movements

• an exceptional high increase of a product with a very low-weight than a small decrease in a product that has a higher weight

• the number of price changes rather than by the direction of the changes

These effects could have been amplified by large media coverage of the event and a bias of euro area consumers against the euro
• Slowdown in the growth of disposable income due to factors other than HICP inflation

- slowdown in economic activity in 2002

- price increases of some items that are not included in the HICP basket
2001 "frozen" prices: the national currency remains a very strong reference point for a major share of euro area consumers
Cross-country perspective
Differences registered across euro area countries are mainly explained by:

- differences in actual inflation developments
- complexity of the conversion rate
- the difficulty in handling the euro
- others (dual display of prices, media/communication campaigns, market structure)
### Possible classification of the euro conversion rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Official conversion rate</th>
<th>Inverse conversion rate</th>
<th>Possible rule of thumb</th>
<th>Margin of error in %</th>
<th>Mathematical operation required</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT</td>
<td>13.7603</td>
<td>0.07267</td>
<td>7 euro ~ 100 schilling</td>
<td>3.68</td>
<td>divide by 7</td>
<td>Complex</td>
</tr>
<tr>
<td>BE</td>
<td>40.3399</td>
<td>0.02479</td>
<td>1 euro ~ 40 francs</td>
<td>-0.84</td>
<td>multiply by 4, multiply by 10</td>
<td>Medium</td>
</tr>
<tr>
<td>DE</td>
<td>1.95583</td>
<td>0.51129</td>
<td>1 euro ~ 2 DM</td>
<td>2.26</td>
<td>multiply by 2</td>
<td>Simple</td>
</tr>
<tr>
<td>FR</td>
<td>6.55957</td>
<td>0.15245</td>
<td>1 euro ~ 7 francs</td>
<td>6.71</td>
<td>multiply by 7</td>
<td>Complex</td>
</tr>
<tr>
<td>FI</td>
<td>5.94573</td>
<td>0.16819</td>
<td>1 euro ~ 6 markka</td>
<td>0.91</td>
<td>multiply by 6</td>
<td>Complex</td>
</tr>
<tr>
<td>GR</td>
<td>340.75</td>
<td>0.00293</td>
<td>3 euro ~ 1000 drachmas</td>
<td>-2.23</td>
<td>divide by 3, multiply by 1000</td>
<td>Medium</td>
</tr>
<tr>
<td>IE</td>
<td>0.787564</td>
<td>1.26974</td>
<td>0.8 euro ~ 1 punt</td>
<td>1.58</td>
<td>divide by 5, multiply by 4</td>
<td>Complex</td>
</tr>
<tr>
<td>IT</td>
<td>1936.27</td>
<td>0.00052</td>
<td>1 euro ~ 2000 lire</td>
<td>3.29</td>
<td>multiply by 2, multiply by 1000</td>
<td>Simple</td>
</tr>
<tr>
<td>LU</td>
<td>40.3399</td>
<td>0.02479</td>
<td>1 euro ~ 40 francs</td>
<td>-0.84</td>
<td>multiply by 4, multiply by 10</td>
<td>Medium</td>
</tr>
<tr>
<td>NL</td>
<td>2.20371</td>
<td>0.45378</td>
<td>1 euro ~ 2.2 guilders</td>
<td>-0.17</td>
<td>multiply by 2, divide by 10, add the 2 numbers</td>
<td>Complex</td>
</tr>
<tr>
<td>PT</td>
<td>200.482</td>
<td>0.00499</td>
<td>1 euro ~ 200 escudos</td>
<td>-0.24</td>
<td>multiply by 2, multiply by 100</td>
<td>Simple</td>
</tr>
<tr>
<td>ES</td>
<td>166.386</td>
<td>0.00601</td>
<td>6 euro ~ 1000 pesetas</td>
<td>0.17</td>
<td>divide by 6, multiply by 1000</td>
<td>Complex</td>
</tr>
</tbody>
</table>

Difficulties encountered with the euro by euro area citizens

Source: Eurobarometer
Others:

- dual display of prices
- media/communication campaigns
- market structure
Inflation perceptions in Slovenia
Slovenia

1 euro = 239.64 Slovenian tolars

Possible rule of thumb:
1 euro = 250 Slovenian tolars or
4 euro = 1000 Slovenian tolars

» complex mental calculation
  (dividing by 4 and multiply by 1000)

» overestimation of the price by 4.3%

⇒ risk of a decoupling between actual and perceived inflation
• Other risk: bias of consumers against the euro

• Factors reducing the risk:
  – general economic situation in Slovenia remained buoyant
  – retail trade market structure
  – dual display of prices (until June 2007)
  – detailed information on retail prices are available in internet
  – the euro was not completely new to the Slovenian population
Perceived and actual HICP inflation in Slovenia

Actual HICP inflation (lhs)
HICP - "out-of-the-pocket" (lhs)
Inflation perceptions (rhs)
Cyprus and Malta
Perceived, expected and actual HICP inflation in Cyprus and Malta
Exchange rates

Cyprus
1 euro = 0.585274 CYP
Possible rule of thumb:
1 euro = 0.5 CYP
Divide by 2

- Simple mental calculation but
underestimation of the price by
more than 14%

or

1 euro = 0.6 CYP
Multiply by 6 then divide by 10

- Complex mental calculation
and overestimation of around
3%

⇒ medium risk of a decoupling
between actual and perceived
inflation

Malta
1 euro = 0.429300 MTL
Possible rule of thumb:
1 euro = 0.5 MTL
Divide by 2

- Simple mental calculation but
overestimation of the price by
more than 16%

or

1 euro = 0.4 CYP
Multiply by 4 then divide by 10

- Medium mental calculation
and underestimation of around
7%

⇒ medium risk of a decoupling
between actual and perceived
inflation
Cyprus:

– Dual display of prices 1st September 2007 to 30 September 2008
– Agreement with retailers (Fair Pricing Code)
– Euro-Observatories
– Toll-free telephone line for the euro

Malta:

– Dual display of prices up to 30 June 2008
– Agreement with retailers (FAIR)

! the euro is not completely new to the Cypriot and Maltese populations
Conclusions

- Euro cash changeover did affect inflation perceptions in the euro area

- Psychological factors can have an important impact on inflation perceptions

- Communication on non-technical issues of the euro cash changeover is very important
  - Information on the HICP basket
  - Dual display
  - Media campaign