Managers’ selling price expectations

Roberta Friz

EU BCS Workshop

Brussels, 10-11 November 2008
Introduction

Producer prices help to identify price pressures at the earlier stages of the production chain that could subsequently be passed on to finished goods and hence to consumer prices.

↓

They are of particular importance for policy makers and economic analysis.

↓

Are managers' selling price expectations a good predictor of producer prices?
Outline

➢ Data
  • Survey data
  • Reference series

➢ Descriptive statistics

➢ Forecasting or now-casting PPI

➢ Comparison with PMI

➢ Summary and Concluding Remarks
Data

- Business and Consumer Survey Database (BCS)
- Q: “How do you expect your selling price to change over the next 3 months? They will.”
- A: Increase, remain unchanged or decrease
- For the euro area it has been a monthly question…
  ... in manufacturing sector since 1980
  ... in services sector 2003
  ... in retail trade sector 2003
  ... in construction sector 1980
Data

- Producer Prices Index (monthly since 1985)
- Short term statistics, follow the NACE rev.1
- C_D_E Total industry (excluding construction)
  - C: Mining and quarrying
  - D: Manufacturing
  - E: Electricity, gas and water supply

- Difficulties to find (harmonised) producer price data for the construction sector

⇒ Analysis limited to PPI in the manufacturing sector and selling price expectations in the manufacturing sector
Descriptive statistics

EU (25)

- PPI, y-o-y % ch (lhs)
- Selling prices expt. (rhs)

% change


ECFIN – 10/11/2008
Slide 6
Descriptive statistics

euro area (15)

Germany

Spain

France
Descriptive statistics

- **Italy**

- **Netherlands**

- **Poland**

- **UK**
**Descriptive statistics**

Correlation between selling price expectations and PPI in the manufacturing sector (y-o-y % change)
Jan 1990 to July 2008 (except France, which starts in 1996)

<table>
<thead>
<tr>
<th></th>
<th>EU</th>
<th>EA</th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>IT</th>
<th>NL</th>
<th>PL</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>coincident</td>
<td>0.74</td>
<td>0.75</td>
<td>0.68</td>
<td>0.68</td>
<td>0.82</td>
<td>0.73</td>
<td>0.70</td>
<td>0.67</td>
<td>0.73</td>
</tr>
<tr>
<td>expect. leading 1 month</td>
<td>0.74</td>
<td>0.75</td>
<td>0.69</td>
<td>0.67</td>
<td>0.78</td>
<td>0.77</td>
<td>0.69</td>
<td>0.72</td>
<td>0.70</td>
</tr>
<tr>
<td>expect. leading 2 months</td>
<td>0.72</td>
<td>0.74</td>
<td>0.69</td>
<td>0.63</td>
<td>0.72</td>
<td>0.78</td>
<td>0.67</td>
<td>0.75</td>
<td>0.66</td>
</tr>
<tr>
<td>expect. leading 3 months</td>
<td>0.70</td>
<td>0.71</td>
<td>0.69</td>
<td>0.60</td>
<td>0.66</td>
<td>0.78</td>
<td>0.65</td>
<td>0.77</td>
<td>0.64</td>
</tr>
<tr>
<td>expect. lagging 1 month</td>
<td>0.72</td>
<td>0.73</td>
<td>0.65</td>
<td>0.68</td>
<td>0.85</td>
<td>0.68</td>
<td>0.68</td>
<td>0.58</td>
<td>0.75</td>
</tr>
<tr>
<td>expect. lagging 2 months</td>
<td>0.68</td>
<td>0.69</td>
<td>0.60</td>
<td>0.65</td>
<td>0.86</td>
<td>0.62</td>
<td>0.64</td>
<td>0.48</td>
<td>0.75</td>
</tr>
<tr>
<td>expect. lagging 3 months</td>
<td>0.62</td>
<td>0.63</td>
<td>0.53</td>
<td>0.61</td>
<td>0.84</td>
<td>0.55</td>
<td>0.58</td>
<td>0.37</td>
<td>0.74</td>
</tr>
</tbody>
</table>

The higher results are registered for:
- coincident correlations in the EU, the EA, Spain and the Netherlands.
- In Germany, Italy and Poland selling price expectations are leading producer prices
- In France and in the UK higher correlations are registered with expectations lagging producer prices
Three-year rolling horizon correlation coefficients between selling price expectations (balance statistic) and producer prices in the manufacturing sector (in year-on-year % changes)
Descriptive statistics

• The directional analysis (between January 1990 and September 2008) reports a success rate of:
  – 58% in the EU.
  – 54% in the euro area and Germany
  – 57% in Spain
  – 48% in France
  – 51% in Italy
  – 62% in the Netherlands.
  – 61% in Poland
  – 52% in the UK
A statistical analysis through Granger-causality tests on the strength of the relationship between the two variables suggests that selling price expectations contain significant information for the estimation of producer prices in the manufacturing sector.
• Producer prices are released with only one month of delay:
  – For example: October PPI data will be released on the 2\textsuperscript{nd} of December
We try to measure the explanatory power of selling price expectations to forecast producer prices assessing the improvement of a simple AR (-1) model.

Results show that, in general, the selling price expectations coefficient is significant but R-squared improves only marginally. 

SPE seems not to be important to forecast PPI.
Comparison with PMI

• PMI includes two questions which can be related to producer prices:

  • on output prices: “Please compare the average price that you charged per unit of output (volume weighted) this month with the situation one month ago”

  • on input prices: “Please compare the average price of your purchases (volume weighted) this month with the situation one month ago”
Comparison with PMI

Correlation between PMI and PPI in the manufacturing sector (y-o-y % change)

<table>
<thead>
<tr>
<th></th>
<th>EA</th>
<th>DE</th>
<th>ES</th>
<th>FR</th>
<th>IT</th>
<th>NL</th>
<th>PL</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>coincident (input prices)</td>
<td>0.83</td>
<td>0.83</td>
<td>0.52</td>
<td>0.80</td>
<td>0.21</td>
<td>0.61</td>
<td>0.39</td>
<td>0.73</td>
</tr>
<tr>
<td>coincident (output prices)</td>
<td>0.73</td>
<td>0.78</td>
<td>0.44</td>
<td>0.71</td>
<td>0.55</td>
<td>0.62</td>
<td>0.51</td>
<td>0.73</td>
</tr>
</tbody>
</table>

- A somewhat higher correlation can be observed for the EA as a whole, and in Germany

- Our indicators show better results at other individual country level
Conclusions

- Although exceptions and divergences in specific periods or countries occurred, the analysis shows that the answers to the specific question can provide useful indications of producer prices.

- However, the fact that 'hard' data on producer prices are available with a delay of only one month, diminishes somewhat the value of the selling price expectations indicator.
Conclusions

• Additional work is needed in order to understand why selling price expectations and producer prices in the manufacturing sector diverged quite significantly, both in direction and strength, in the period 2005 to 2007
• The analysis could be extended to the selling price expectations of managers in the services, retail trade and construction sectors
• Explore the possibility to build a total selling price expectations indicator, which will be the results of combining all four business sectors
Thank you for your attention