THE ROLE OF INFLATION EXPECTATIONS IN MODELLING AND MONETARY POLICY MAKING

NBP Workshop 2006

Timing: 9-10 February 2006

Venue: National Bank of Poland
ul. Świętokrzyska 11/21
00-919 Warszawa
Poland

Conference sessions: It is planned to have two sessions for invited speakers (45 minutes for each paper, including 25 minutes for presentations, 10 minutes for discussants and 10 minutes for a general discussion) and a panel discussion.

Papers to be presented:

1. **Roy Batchelor**, *How robust are quantified survey data? Evidence from the United States*

Abstract: Much survey data on consumer expectations is collected in the form of qualitative tendency surveys. For econometric modelling purposes it is useful to translate these into quantitative measures of the mean and dispersion of expectations. This paper develops "quantified" measures of unemployment, interest rate and inflation expectations for the US. These are compared with each other, and with direct quantitative estimates of expected inflation, and they are used to explore what factors matter for consumer perceptions of their own financial situation, and for their assessment of the economy as a whole. Mean expectations estimates form qualitative surveys appear fairly robust, but estimated standard deviations prove very unreliable.

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Discussant: Richard Curtin, University of Michigan

2. **Jan Marc Berk**, *Consumers' inflation expectations and monetary policy in Europe*

Abstract: This paper analyses the effects of monetary policy decisions on inflation expectations of European consumers. Using a novel approach, we convert qualitative survey responses of consumers in various European countries into a quantitative time series of inflation expectations. We investigate the effects of unanticipated movements in interest rates and inflation on inflation expectations across European countries. We *inter alia* seek to explore whether the reaction of consumers in countries with more credible central banks differs from the reaction of consumers in less credible countries.

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Discussant: Tomasz Łyziak, National Bank of Poland

3. **Michael F. Bryan, Stefan Palmqvist**, *Testing near-rationality using detailed survey data*

Abstract: This paper considers the evidence of "near-rationality," as described by Akerlof, Dickens, and Perry (2000). Using detailed surveys of household inflation expectations for the United States and Sweden, we find that the data are generally unsupportive of the near-rationality hypothesis. However, we document that household inflation expectations tend to settle around discrete and largely fixed "focal points," suggesting that both U.S. and Swedish households gauge inflation prospects in rather broad, qualitative terms. Moreover, the combination of a low-inflation environment and an inflation target in Sweden has been accompanied by a disproportionately high proportion of Swedish households expecting no inflation. However, a similar low-inflation trend in the United States, which does not have an explicit inflation target, reveals no such rise in the proportion of households expecting no inflation. This observation suggests that the way the central bank communicates its inflation objective may influence inflation expectations independently of the inflation trend it actually pursues.

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Discussant: Maciej K. Dudek, National Bank of Poland

4. **Richard Curtin**, *Inflation expectations: theoretical models and empirical test*

Abstract: The University of Michigan data on consumers' inflation expectations has been analyzed by a wide range of scholars for nearly fifty years. The empirical evidence has been mixed about the extent to which inflation expectations are determined by a forward or a backward looking formation process. Distinguishing between these two basic hypotheses has implications on how such data are utilized by monetary policy authorities. More importantly, the outcome of such empirical tests has implications for the acceptance or rejection of either the rational expectations hypothesis of traditional economic models or the bounded rationality postulate of the newer behavioral models. Tests of the formation process of inflation expectations, however, have suffered from disagreements about how to implement and test the various theories. The inflation expectations data from the University of Michigan are used to highlight these different approaches and findings. The results indicate that neither the full rationality hypothesis nor the fully bounded rationality postulate proves adequate to capture the data.

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Discussant: Michael F. Bryan, Federal Reserve Bank of Cleveland

5. **Magnus Forsells and Geoff Kenny**, *Survey expectations, rationality and the dynamics of euro area inflation*

Abstract: This paper uses survey data in order to analyse and assess the empirical properties of consumers' inflation expectations in the euro area and explores their role in explaining the observed dynamics of inflation. The probability approach is used to derive quantitative estimates of euro area inflation expectations from the qualitative data from the European Commission's Consumer Survey. The paper subsequently analyses the empirical properties of the estimated inflation expectations by considering the extent to which they fulfil some of the necessary conditions for rationality. The results suggest an intermediate form of rationality. In particular, the surveyed expectations are an unbiased predictor of future price developments and they incorporate – though not always completely – the information contained in a broad set of macroeconomic variables. In addition, although persistent deviations between consumers' expectations and the rational outcome have occurred, consumers are shown to rationally adjust their expectations in order to eventually "weed out" any systematic expectational errors. Interestingly, perhaps reflecting changes in the monetary policy regime, there is also evidence of "growing" rationality in the sense that expectations have become more rational over the 1990s compared with the 1980s. Moreover, estimates of a hybrid Phillips curve – which nests both backward and forward-looking inflation dynamics – suggests that consumer expectations played a role in determining the actual dynamics of inflation over the period 1985-2001.

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Discussant: Fabien Curto Milet, Balliol College, Oxford

6. **Martin Fukač**, *Should private expectations concern central bankers?*

Abstract: We analyze the standard New Keynesian economy adjusted by a financial intermediation sector, heterogenous, imperfect knowledge, and adaptive learning. We consider two groups of agents (i) private agents (households, firms, private banks) and (ii) the central bank who differ in their knowledge and expectations. The monetary-policy transmission is non-trivial in this environment. The interest rate directly affecting the decisions of households and firms is influenced by the private banks expectations, and the monetary policy may get distorted. The basic finding suggests the higher knowledge heterogeneity, the less active monetary policy should be in order to stabilize the economy. This contrasts the standard literature with homogenous knowledge and expectations.

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Discussant: Zoltan Jakab, National Bank of Hungary

7. **Christina Gerberding**, *Household versus expert forecasts of inflation: New evidence from European survey data*

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Discussant: Emilia Tomczyk, Warsaw School of Economics

8. **Ryszard Kokoszczyński, Tomasz Łyziak, Ewa Stanisławska**, *Consumer inflation expectations. Usefulness of survey-based measures – a cross-country study*

Abstract: We apply different versions of probability and regression methods to quantify consumers' inflation perception and expectations in the Czech Republic, Hungary, Poland and Slovakia. The assessment of their usefulness leads us to the conclusion that survey-based measures are not sufficiently reliable in Hungary and Slovakia. Therefore analysing one of the requirements of the rational expectations hypothesis, namely their unbiasedness, we constrain our analysis to Czech and Polish consumers. It seems that consumer inflation expectations in both economies do not fulfil rational expectations. Therefore estimating New Keynesian Phillips curves we relax that theoretical assumption.

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Discussant: Martin Fukač, Czech National Bank

9. **Staffan Lindén**, *400 000 observations on inflation perceptions and expectations in the EU. What will they tell us?*

Abstract: A straight forward way to measure the inflation expectations of the public is to ask people about their expectations, and in fact, a few surveys do exactly that. In November 2002, it was decided to introduce two new questions into the Harmonised Consumer Survey for the European Union, thus adding to the number of surveys that explicitly ask respondents about their inflation perceptions and expectations. The aim of the two new questions was to obtain point estimates of the perception and expectation, using a quantitative formulation on past and future inflation. There are two objectives of this paper. First, as the dataset used is new, a substantial part of this report is devoted to presenting the data. The second objective is to investigate in what way incentives can explain deviations between perceived and expected inflation and the official inflation rate. Since it is costly to both gather and analyse data to make a prediction of inflation, the hypothesis is that only those people with strong incentives to do so will attain this information, and thus be able to give informative answers to the survey questions. The main results show that stronger incentives to collect information on inflation induce respondents to produce perceived and expected inflation rates that closer correspond to the official rate of inflation. Basically the gap between the official rate and the average expected rate is halved.

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Discussant: Stefan Palmqvist, Sveriges Riksbank

10. Fabien Curto Milet, *Finding the optimal method of quantifying inflation expectations on the basis of qualitative survey data*

Abstract: A number of competing methods have been considered in the literature with the aim of quantifying qualitative survey data on inflation expectations. However, the issue of the optimal such quantification method has received relatively little attention, or was otherwise examined on limited sets of quantification techniques. This paper aims to address this issue in as comprehensive a manner as possible. We notably examine a number of methods derived from the Carlson-Parkin (1975) tradition, including several variants of the Batchelor and Orr (1988) approach; the 'regression method' of Pesaran (1984), and its reconsideration by Smith and McAleer (1995); and stochastic time-varying parameter approaches following Seitz (1988). Additional alternatives are developed and examined in this paper. The success of a quantification methodology is assessed both on the basis of its ability to match quantitative expectations data and on its behaviour in an important economic application, namely the modelling of wages in a number of European countries: France, Spain, the United Kingdom, Belgium, Germany, Sweden, Italy and The Netherlands.

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Discussant: Jerzy Mycielski, Warsaw University

11. **Maritta Paloviita, Matti Viren**, *The role of expectations in the inflation process in the euro area*

Abstract: This paper analyses the role of inflation expectations in the euro area. On one hand, the question is how inflation expectations affect both inflation and output, and, on the other hand, how inflation expectations reflect developments in these variables. The analyses make use of a simple VAR model of inflation, inflation expectations and the output gap that allows for an analysis of the dynamic interrelationship between these variables. This model is estimated on aggregate euro area data, pooled euro area country data and individual country data for the period 1979-2003. The empirical results give strong support for the idea that inflation expectations are the key ingredient of the inflationary process for the whole euro area and for most individual countries as well. Inflation expectations also have a significant negative impact on output. As for the determination of inflation expectations, it turns out that they are relatively persistent, almost as persistent as output. Even so, and especially in the medium term, inflation expectations adapt to developments in both output and (actual) inflation.

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Discussant: Roy Batchelor, Cass Business School, London