

## Hermann Remsperger: Central banks and forecasting needs

Concluding remarks by Dr Hermann Remsperger, Member of the Executive Board of the Deutsche Bundesbank, at the Eighth Bundesbank Spring Conference “New Developments in Economic Forecasting”, Eltville, 6 May 2006.

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At the end of this conference and after two days of intensive discussion, I am sure, dear colleagues, that you would like my concluding remarks to be brief. And that is why I want to raise only one specific question: are all central banks confronted with the same forecasting needs or are there differences – in particular, are there differences rooted in different strategies?

I think, we can approach this question from two opposite angles. The first perspective takes a certain monetary policy concept as given and asks about the consequences on forecasting. The second perspective takes our forecasting abilities as given and asks about the consequences on the choice of a specific monetary policy strategy.

Let me start from this second perspective. I'd like to emphasize that the limits in forecasting do have an influence on the design and implementation of monetary policy.

Take the ECB as a first example. The two-pillar strategy of the Eurosystem was designed and built in 1998 with the expectation of a profound regime shift: The move to stage Three of European Monetary Union was expected to affect economic behaviour, institutional structures and statistical series in the euro area.

In its first monthly report in January 1999 the ECB made the following statement: “The Eurosystem’s stability-oriented monetary policy strategy is a new and distinct strategy, which reflects the unique circumstances and institutional environment that will face the Eurosystem. ... In particular, mechanical responses to a small number of indicators or forecasts at the start of Stage Three may be especially misguided, given the inevitable uncertainties about economic relationships prompted by the regime shift associated with the transition to Monetary Union”.<sup>1</sup>

During this conference, Fabio Canova assured us that the Maastricht Treaty and the creation of the ECB have not triggered any major structural changes in the features of business cycles and the transmission of shocks. However, it was not clear ex ante that we would come to this conclusion ex post. Furthermore, this result is probably not unconnected with the behaviour and strategy of the ECB. In this respect, it is not an argument against the ECB’s cautious behaviour.

A second example of how limited forecasting abilities impact on monetary policy strategy let me mention the debate about the role of asset prices. Most central banks are wary of using asset prices as a target in their strategy. This is not because they deny that asset price bubbles can do a lot of harm to the economy.<sup>2</sup>

However, serious shortcomings in our forecasting ability have to be acknowledged. There are several aspects to our limited knowledge: one is our inability to identify asset prices that are justified by economic fundamentals. These reflect unknown future returns and expectations. The paper presented by Professor Pesaran at this conference also highlighted many of the problems involved. Another issue is our limited ability to forecast how asset prices will react to policy actions.

Up to now, I have discussed how certain limits in knowledge and forecasting ability have influenced the design of central banks’ strategies. I would now like to consider the other side of the matter, namely how does the choice of a certain strategy influence the forecasting exercises carried out at the respective central banks?

It seems that the introduction of an inflation targeting strategy has spurred on the efforts which those central banks have made with regard to formal forecasting procedures. Of course, the respective central banks were always interested in forecasting. However, inflation targeting has brought a new

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<sup>1</sup> See ECB, Monthly Bulletin, January 1999, P. 50.

<sup>2</sup> See, for example, ECB: Asset price bubbles and monetary policy, Monthly Bulletin, April 2005, pp 47-60.

challenge: how to convince the public that the central bank is really committed to meeting the inflation target?

Unlike a central bank which pursues an intermediate target with a contemporary target variable, a promise to realise a specific inflation rate in the future has to be supported by a transparent forecasting process which shows that the central bank sets its instruments consistently. This means that, at least in principle, the public must be in a position to understand and duplicate the central bank's forecast.

John Robertson, an economist from the Atlanta Fed, when comparing the approaches of different central banks, therefore states that "It is perhaps not surprising that there is a great reliance on models at central banks that have explicit inflation objectives, such as the Bank of England and the Reserve Bank of New Zealand. In those cases it is particularly important that the policymakers ensure that policy decisions are consistent with inflation objectives and are as transparent to the public as possible".<sup>3</sup>

Of course, these central banks also have to show the limits of the accuracy of their forecasts. This has become a very common feature since the trumpet charts – an expression used by Rachel Lomax – and fan charts of the Bank of England.

The preference for formal models was probably not only the result of inflation targeting in itself. Some of these central banks had a particularly strong need for transparency owing to their former unsatisfactory stability records and lack of independence. It was therefore of utmost importance to them to regain their reputation through applying a transparent forecasting procedure.

Switzerland is a different case. Through following monetary targets, the Swiss National Bank was, for many decades, one of the most stability-oriented central banks in the world. Since the year 2000 monetary policy in Switzerland has been based mainly on inflation forecasts.

In the short-run statistical time-series models play a role, whereas for the medium-run forecasts, structural VARs and structural macromodels, amongst others, are employed.

However, monetary aggregates, in particular M3, continue to play an important role as indicators.<sup>4</sup> In particular, long-term inflation forecasts based on monetary growth are an important ingredient of the Swiss National Bank's strategy.<sup>5</sup> Recent studies underline the relevance of (filtered) monetary developments for future inflation in Switzerland.<sup>6</sup>

This brings me to the ECB's strategy and its forecasting needs. As you know, the ECB uses a two-pillar concept or, to put it in other words, a monetary and an economic analysis. The economic analysis in particular relies heavily on forecasting methods to gain an insight into future developments and their consequences for monetary policy.

In this framework, the ECB also publishes projections of its staff "not only to underscore the forward-looking orientation of the single monetary policy, but also to enhance its transparency".<sup>7</sup> These projections are based, as in other central banks, on a variety of models but also, as has often been underlined, on judgemental considerations.

However, the ECB has always emphasised that, in the long run, inflation (respectively price stability) is a monetary phenomenon and that it would be a severe mistake to concentrate exclusively on economic analysis. "The ECB's strategy employs both economic and monetary analyses ... because

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<sup>3</sup> See J Robertson: Central bank forecasting: an international comparison, FED Atlanta Economic Review, 2000, p 30.

<sup>4</sup> See T Jordan, M Peytrignet and G Rich (2001): The role of M3 in the policy analysis of the Swiss National Bank, in: H-J Klöckers and C Willeke (eds), Monetary analysis: Tools and applications, ECB, pp 47-62.

<sup>5</sup> See Swiss National Bank: Monetary policy decisions of the Swiss National Bank for 2000, SNB Quartalsheft 4/1999, pp 19-23.

<sup>6</sup> See P Gerlach-Kristensen: A two-pillar Phillips curve for Switzerland, mimeo, 2006.

<sup>7</sup> See O Issing: The role of macroeconomic projections within the monetary policy strategy of the ECB, Economic Modelling, Vol. 21, 2004, p 725.

in practice it has to date proved difficult to capture statistically, in a sufficiently reliable way, the longer-term price effects of monetary policy on the basis of available macroeconomic models.”<sup>8</sup>

In recent years, several papers have come to the conclusion that monetary and credit aggregates – or variables which rely heavily on money growth such as the so-called “money gap” – provide valuable information for future inflation in the euro area. This is particularly true for the longer forecasting horizon, confirming the claim that monetary development is key to understanding inflation in the long run. In a recent Bundesbank discussion paper, Boris Hofmann shows that the relationship between money and prices seems to continue.<sup>9</sup>

In my view, the two-pillar approach of the ECB does not only show that there is a special relationship between the choice of a strategy and the need for forecasts. The use of a particular concept for monetary policy also has consequences for the efforts a central bank makes to improve its forecasting abilities. For the ECB one possible extension might be found in a more strongly formalised combined assessment of the information included in both pillars for future inflation developments at various time horizons.

When I point to the fact that different strategies in monetary policy require different forecasting approaches I don't want to deny that all central banks face a lot of similar forecasting problems. They all want to reduce the limits of forecasting. I hope that our conference has made a contribution to this aim.

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<sup>8</sup> See L Papademos: Macroeconomic theory and monetary policy: the contributions of Franco Modigliani and the ongoing debate, BNL Quarterly Review, Vol. LVIII, June-September 2005, pp 187-214.

<sup>9</sup> See B Hofmann: Do monetary indicators still predict euro area inflation?, Bundesbank discussion paper, 2006, forthcoming.