Box VIII-3

New presentation of the macroeconomic and inflation forecast

The Central Bank's macroeconomic and inflation forecast is presented in a new form in this edition of *Monetary Bulletin*. A forecast based on market expectations of the policy rate path, and on an exchange rate path based on this and calculated using the Central Bank's macroeconomic model, now constitutes the baseline forecast. The previous baseline forecast, based on an inflation path assuming an unchanged policy rate, is now presented as an alternative scenario.[1] Another alternative scenario is presented showing the interest rate path based on an endogenous monetary policy rule. An overview of the baseline forecast results is presented in the Tables and Charts appendix. Also, the different paths for GDP and its components are discussed from a different perspective in section IV on Domestic demand and output. The new inflation forecast presentation is modelled on that of many major European central banks, including the Bank of England and Sweden's Sveriges Riksbank. Its aim is to enhance the Central Bank of Iceland's monetary policy transparency even further.

Problems posed by assuming an unchanged policy rate

Monetary policy is basically about managing expectations. Although a central bank's policy rate directly affects only a very limited group of financial market agents, the expected future policy rate path has important effects on long-term interest rates, and therefore on expenditure decisions of households and firms. By signalling the potential future policy rate path, a central bank can therefore exert much more impact on the shape of the yield curve in order to facilitate the monetary policy transmission to the economy. This is particularly relevant in a financial system such as Iceland's where a large proportion of financial liabilities bear fixed interest.

A forecast conditioned on a constant policy rate does not give a clear signal about the future policy rate path, and therefore has only a limited effect on market expectations about that path. Neither is such a forecast internally consistent, because it either uncouples or dampens an important transmission channel of monetary policy, namely the monetary policy response to economic developments and its transmission via expectations about how policy rate developments will influence long-term interest rates. Various problems in forecasting can therefore result. The forecast may become unstable, especially over longer horizons. Interpreting the forecast can therefore become problematic, limiting its usefulness.

Central banks can enhance the effectiveness of monetary policy by influencing expectations

Instead of assuming an unchanged policy rate across the forecast horizon, a central bank can attempt to influence expectations about the policy rate path by conditioning its forecast on market expectations about the path. One way for the central bank to have such an influence is to state its view on how realistic these expectations are from the perspective of attaining the inflation target within a specific period.[2] This is the approach adopted by, for example, the Bank of England since August 2004, Sveriges Riksbank since October 2005 and Norges Bank of Norway until it began forecasting its own policy rate in November 2005.

1. The Central Bank's macroeconomic model is discussed in New quarterly economic model, *Monetary Bulletin* 2006/1, Appendix 1, 59-61, and the Bank's forecasting methods in Central Bank inflation forecasting methods, *Monetary Bulletin* 2006/1, Box VIII-1, 46-7.

2. This approach is also more likely to ensure internally consistent forecasting, even though a central bank needs to be careful in using external expectations of its decisions as an input in its decision-making, as the danger is that nothing will anchor those expectations, leading to indeterminacy problems (see Bernanke and Woodford, 1997).

Inflation forecasting using an internal policy rate forecast
Another option is the precedent set by the Reserve Bank of New Zealand (RBNZ) and Norges Bank, which present an internal policy rate path for the forecast, i.e. the path that the central bank itself deems most likely to enable the inflation target to be attained. The RBNZ was the first to present this kind of forecast in 1998, and Norges Bank followed suit in November 2005. From a theoretical viewpoint, this is the most natural policy rate assumption for the forecast. It ensures an internally consistent forecast and facilitates its interpretation. Svensson (2005) and Woodford (2004), for example, argue that a central bank can have a substantial effect on market expectations, as well as enhancing their credibility because the forecast always approaches target within the horizon. A stronger impact on expectations will greatly enhance the effectiveness of monetary policy. Others, such as Goodhart (2001) and Mishkin (2004), have doubted the benefits of going this far, fearing that the central bank's message will become too complex and that the policy rate path will be interpreted as a commitment to a given medium-term interest rate path rather than as a conditional forecast which will change in line with changing economic conditions. The experience of New Zealand and Norway, however, does not suggest that this is a problem. It may therefore be quite feasible for the Central Bank of Iceland to adopt this approach as well when more experience has been gained from its new macroeconomic model and the results of pioneers in this field. By presenting a policy rate path based on endogenous monetary policy responses alongside its other scenarios, the Central Bank has already taken an important step in this direction, although the baseline forecast is still conditioned on a policy rate path.

The baseline forecast has hitherto assumed an unchanged interest rate and exchange rate
Hitherto, the Central Bank of Iceland has presented a macroeconomic and inflation forecast assuming an unchanged policy rate and exchange rate from the day of forecast. This baseline forecast has been described in more detail than other projections or alternative scenarios which have also been presented. The chief aim of the baseline forecast has been to indicate the probable way that economic events will unfold if the policy rate is not changed and the exchange rate remains constant. Above all, the baseline forecast has therefore signalled whether the policy rate level at any given time is sufficient to ensure that the inflation target will be attained, thereby contributing to the Bank's assessment of the need to change the policy rate. The assumption of a constant exchange rate has also been justified on the basis of the near-random walk properties of exchange rates.

An unchanged policy rate and exchange rate are implausible in the current climate
When the economy is in reasonable balance a forecast assuming an unchanged policy rate and exchange rate may give a fairly accurate picture of the economic outlook one to two years ahead. In a climate with as pronounced macroeconomic imbalances as at present – inflation way above target and a bleak inflation outlook – an inflation path based on such assumptions is extremely unrealistic. The greater the imbalances, the less informative is the baseline forecast. Although it does indicate whether or not the policy rate needs to be adjusted, it says little about the scale or timing of such changes or their likely impact on economic developments, as discussed in previous editions of *Monetary Bulletin*.

New presentation of the macroeconomic and inflation forecast
In an effort to address this problem, *Monetary Bulletin* has presented alternative scenarios using a variable interest rate and exchange rate alongside the baseline forecast. This may be quite important when the exchange rate of the króna appears likely to have deviated far from long-term equilibrium and an unchanged policy rate would not ensure that inflation will trend towards target within the forecast horizon. The advantage of such a presentation of the macroeconomic and inflation forecast is that its assumptions for monetary policy responses to a poor inflation outlook are more realistic than in the baseline forecast.

This edition of *Monetary Bulletin* presents a new baseline forecast conditioned on similar assumptions to the previous alternative scenario, with its individual components discussed in rather more detail. However, this is not to suggest that its results are necessarily considered to be the most likely course for economic developments to take, unless the assumptions hold on which it is based. The assumptions in the new baseline forecast include the market and analysts' expectations about the medium-term development of the policy rate. Based on that interest rate path, an exchange rate path is determined by the interaction of uncovered interest rate parity and purchasing power parity. The new presentation gives a considerably more realistic picture of the Central Bank's monetary policy response to prevailing macroeconomic conditions across the forecast horizon. Assigning a certain weight to purchasing power parity takes into account the impact that an exceptionally strong or weak króna will have on the inflation outlook.

Two alternative scenarios
Two alternative scenarios to the baseline forecast are presented. One assumes an unchanged policy rate and exchange rate across the forecast horizon, and is comparable with the Central Bank's previous baseline forecast. The second alternative scenario uses the Central Bank's macroeconomic model to forecast the policy rate by applying an endogenous monetary policy rule. In the model, the monetary policy response is determined by the output gap and the deviation of inflation from target. The exchange rate is forecast by the same method as in the baseline forecast, i.e. using the macroeconomic model. As pointed out above, the Central Bank may give this alternative scenario a higher profile in the future.

References
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