Box IX-1

Inflation developments in the face of a large króna depreciation

The development of the exchange rate is one of the main uncertainties in the forecast paths presented in the current *Monetary Bulletin*. It is derived using the Central Bank's macroeconomic model from the policy interest rate path on which each forecast is based. In the baseline forecast, the króna is expected to depreciate gradually across the forecast horizon, while in the alternative scenarios with their tighter monetary stance it appreciates over the same period.

Forecasting of exchange rate movements is notoriously difficult, if not impossible. Iceland's current economic climate is not conducive to making this task any easier. It is also obvious that exchange rate movements can have a substantial impact on a small, open economy like Iceland. Uncertainty about exchange rate developments therefore complicate forecasting and implementation of forward-looking monetary policy.

Experience shows that the exchange rate can be highly volatile. Unexpected exchange rate movements have occasionally rendered forecasts worthless and their pass-through to prices has sometimes quickly eroded the monetary policy stance. The rapid depreciation of the króna earlier this year is a case in point. Thus it is important to be aware of the possible impact that the main uncertainties may have on economic developments and take them into account in monetary policy-making.

Impact of a 20% depreciation in Q1/2007

This Box examines the impact of a hypothetical 20% depreciation of the króna in Q1/2007. It compares three forecast paths generated by simulations using the macroeconomic model. The first is a path based on monetary responses without the exchange rate shock. This is the second alternative scenario discussed in the main text of the current *Monetary Bulletin*. Second, an inflation path is examined which is based on the same assumption for the development of the policy rate, but incorporating the hypothetical depreciation in Q1/2007. The third path is based on a monetary policy response to the inflationary impact of the shock by tightening the stance even further.

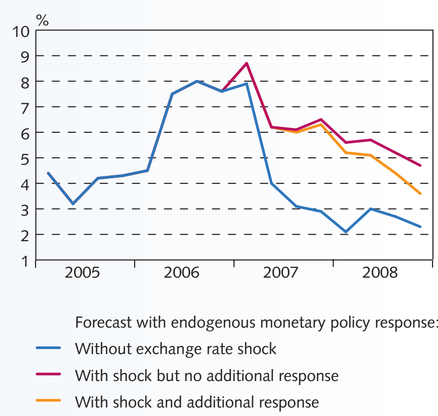
Inflation would be high and persistent, calling for a firm tightening of the policy stance ...

It is not surprising that inflation developments would be extremely unfavourable if the króna were to depreciate by 20% in Q1/2007. Instead of decreasing briskly, inflation would still run at 7% in 2007, which is broadly the same as forecast for the current year. In the absence of further monetary policy responses to the shock, inflation would still measure almost 5% at the forecast horizon and the target would not be attained until towards the end of the present decade. An even longer path to target cannot be ruled out if high inflation expectations become entrenched due to insufficient monetary policy responses. Clearly the Central Bank could never allow such a scenario to unfold without responding. Swifter disinflation is shown in scenarios with further monetary policy responses, but because of the lag in their transmission the inflation outlook would remain broadly unchanged until mid-2008. The target would then be attained in the first half of 2009 by raising the policy rate to 18% in the space of a few months and keeping it unchanged until the end of 2008.

... which could cause a sharp economic contraction

The hypothetical depreciation would have a positive effect on export growth while the tighter monetary stance would amplify the contraction in domestic demand, especially in 2008 and 2009. The export effect would predominate in 2007 with a correspondingly higher rate of output growth that year. However, the contraction in domestic demand would weigh much heavier further ahead, to leave a much bleaker outlook from mid-2008 until the end of the decade in the depreciation scenario.

Chart 1
Inflationary impact of a 20% depreciation in Q1/2007



Source: Central Bank of Iceland.

1. The exchange rate is then assumed to develop according to the model, implying a subsequent appreciation to varying degrees depending upon the underlying policy rate path.