Box 3 The impact of monetary policy on the current account

Certain claims have been heard recently that the Central Bank's tight monetary stance has played a large role in the present large current account deficit. In this light it is worth taking a closer look at the relation between monetary policy and the current account deficit, and the Central Bank's part in developments in recent periods.

The Central Bank's tight stance is reflected in the increase in its policy rate, which generally leads to a higher nominal exchange rate of the króna. If prices show short-run inertia, the nominal exchange rate appreciation will cause the real exchange rate to appreciate, but only in the short run. In the long run the higher nominal exchange rate will lead to a fall in domestic prices and the real exchange rate will return towards its long-term equilibrium value, which is known as the equilibrium real exchange rate.[1] Consequently, monetary policy can only impact the real exchange rate in the short term. In the long run the real exchange rate moves back towards its equilibrium value and the impact of monetary policy cancels out.

All things being equal, an appreciating real exchange rate following tighter monetary measures causes a contraction in exports and an increase in imports. Thus, the current account deficit increases, all other things being equal, when the monetary stance is tightened. However, this impact can only be temporary, since at some point domestic prices will begin to fall and the real exchange will move back towards its equilibrium value.

From 1996 to the first half of 2000 when it reached its peak, the real exchange rate rose by 10½%. To a large extent this increase can be attributed to the upswing of recent years. However, it is interesting to attempt to assess how large a part of this increase may be traced to monetary policy.

Three approaches are used for evaluating this impact. Firstly, we can assume that the part of the real exchange rate appreciation attributable to the Central Bank's measures corresponds to the nominal appreciation over the period, which was 5.9% from 1996 to the first half of 2000. This is tantamount to assuming that all the nominal appreciation can be attributed to monetary policy and ignores any impact it may have had on domestic prices. It can be assumed that the nominal appreciation, and monetary policy in general, have dampened domestic price rises and thereby counteracted the upward effect of the nominal appreciation on the real exchange rate. Therefore it is logical to assume that this evaluation produces an upper limit for the impact of monetary policy on the real exchange rate.

The second approach is based on the counteractive impact that changes in the nominal rate have on domestic prices. According to the Central Bank's inflation model, a 1% nominal appreciation of the króna causes a 0.4% reduction in domestic prices in the long run, since the proportion of imported goods in domestic consumer prices is 0.4. Assuming that domestic wages and foreign prices remain unchanged, the real appreciation due to monetary policy measures can therefore be calculated as 60% of the nominal appreciation. This is based on the assumption that the entire nominal appreciation can be attributed to monetary policy and that domestic prices have fallen as a result of the exchange rate appreciation in accordance with the Bank's econometric models.

The third method is based on the equilibrium conditions for domestic security and currency markets, whereby the real interest differential between domestic and foreign financial assets is equivalent to the expected change in the real exchange rate. Accordingly, a positive real interest differential corresponds to market expectations that the real exchange rate will depreciate to leave expected real returns on domestic and foreign assets equal. Assuming unchanged foreign real interest rates and a given expected future real exchange rate, monetary policy's share in the rise in real exchange rate can be measured as equal to the rise in the short-term real interest rate over the period. This approach is based on the assumption that the rise in short-term real interest rates can be entirely attributed to monetary policy.

To assess the Central Bank's contribution to the real appreciation of the króna over the period, the three-month T-bill rate was used as the short-term interest rate, while inflation expectations were measured using the spread between unindexed treasury bonds and indexed treasury bonds to calculate the short-term real interest rate. Over the period since 1996, short-term real interest rates measured in this way have risen by 2% and the nominal

1. A discussion of the equilibrium real exchange rate of the króna can be found in Arnór Sighvatsson, "Jafnvægisraungengi krónunnar", *Fjármálatíðindi*, 47, 2000, 5-22.

exchange rate has appreciated by 5.9%, as mentioned earlier.

According to this evaluation, a maximum of 6% of the real exchange rate appreciation can be attributed to monetary policy. As mentioned before, this assumes that the entire nominal appreciation of the króna can be attributed to monetary policy and ignores the fact that an appreciation in the nominal exchange rate contributes to lower inflation. A more realistic assessment is that these measures have caused a real exchange rate appreciation in the range 2-3½%. It should be reiterated that this impact can only be temporary. In the long run monetary policy cannot have an impact on real interest rates and the real rate exchange rate.

Much uncertainty surrounds the impact that changes in the real exchange rate have on Iceland's current account deficit, due to lack of research and the limitations of the National Economic Institute's macroeconomic model for forecasting long-term relations. Nonetheless, the macroeconomic model and simple statistical studies of the relation between the current account deficit and real exchange rate suggest that the abovementioned appreciations in real exchange rate widen the current account deficit by ½-2½% some 1-2 years later.

It must be emphasized that these findings are highly uncertain and therefore need to be interpreted with caution. However, they do suggest that only a relatively small part of the real exchange rate appreciation and deteriorating current account balance in recent years may be traced to monetary policy. A much larger share can therefore be attributed to the strong overheating which has prevailed in the Icelandic economy in recent years, which have been the very target of the Central Bank's measures.