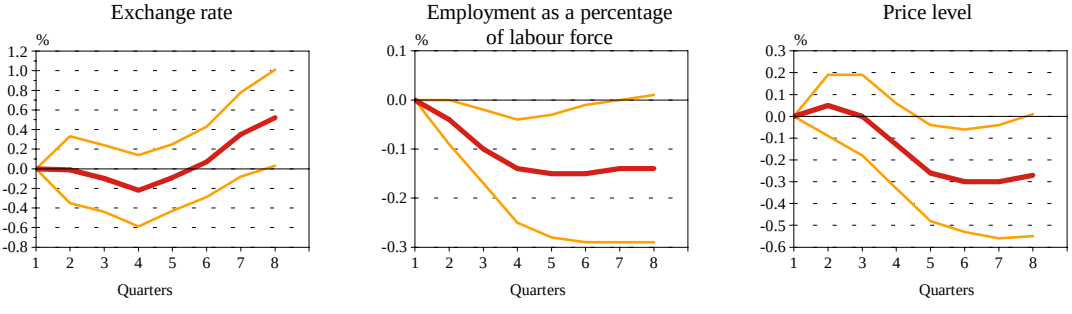
Box 2 The effects of Central Bank monetary policy on the economy

The time that it takes for Central Bank of Iceland interest rate changes to have an impact on economic activity and inflation is subject to uncertainties in the same way as the financial market pass-through. It could even be argued that this uncertainty increases, the further we travel along the transmission mechanism. As the main text suggests, the time lags depend on factors such as the extent to which agents foresaw the actions, how they interpret their impact on future economic prospects and their predictions of the Central Bank's future actions. Thus the time lags probably vary from one period to another.

According to this analysis, monetary policy has little initial impact on the exchange rate of the króna, employment and prices. After a while the króna gradually begins to appreciate (as the exchange rate index falls) and the maximum impact has emerged after just under one year, with an appreciation by roughly 0.2% from the baseline. From then on the króna starts to depreciate again, which is broadly consistent with standard theories of the relationship between exchange rates and interest rates, i.e. a positive interest rate differential vis-à-vis abroad corresponds to an expected future depreciation of the exchange rate. The initial appreciation of the króna takes place somewhat later than in standard models, but is consistent with the findings of Eichenbaum and Evans (1995) for other countries. The estimation results are, however, subject to considerable uncertainty and the exchange rate effect is not found statistically significant from zero. This probably reflects the relatively short data period on which the estimation results are based (the data only cover 1-1½ business cycles). Also, for most of the period monetary policy was based on an exchange rate peg. A depreciation of the

Impact on the economy of an unexpected 1% rise in Central Bank interest rate

Percentage deviation from baseline with 90% confidence bands



The figure above shows an estimation of the typical impact of an unexpected 1% rise in the policy rate on the exchange rate (log of the effective exchange rate index), employment (as a proportion of the labour force) and prices (log of the CPI). The estimation is based on a VAR analysis which includes foreign short-term interest rates (weighted average) and international commodity prices in order to adjust for the impact of supply shocks, plus the above variables. It is based on quarterly data covering the period from 1989 to 2000. The figure only shows a typical response of the economy to an unexpected rise in the policy rate over the past ten years and should not be interpreted as a forecast of responses to Bank's actions in the future.

króna was countered by interest rate rises which would suggest a negative relation between interest rates and the exchange rate if the causation was misinterpreted.

The interest rate rise gradually leads to lower employment, with a statistically significant effect occurring after roughly half a year. The effect peaks after one year when unemployment has increased by 0.15% of the labour force (deviation from baseline). The effect gradually decreases and has vanished after roughly 1½ years, based on the confidence bands. A statistically significant effect on prices occurs roughly one year after the interest rate rise. The effects peaks after about 1½ years when prices have fallen by roughly 0.3% from the baseline. This corresponds to a maximum impact on the annual rate of inflation after some 15 months, when inflation has fallen by 0.35 percentage points from the baseline.