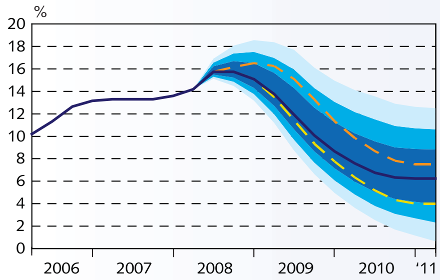
Box IX-2

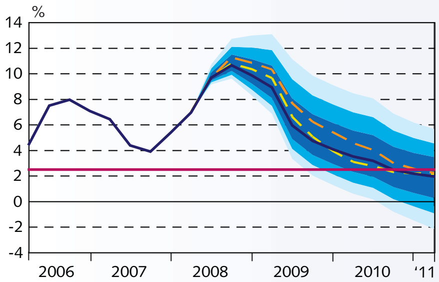
Alternative scenarios

Chart 1
Policy rate - alternative scenarios



Source: Central Bank of Iceland.

Chart 2
Inflation - alternative scenarios



Sources: Statistics Iceland, Central Bank of Iceland.

Unforeseen shocks and changes to important underlying assumptions can sometimes cause economic developments to deviate substantially from forecasts. It is therefore useful to analyse how sensitive the baseline forecast is to probable deviations in the development of various key economic aggregates. Potential deviations are numerous, of course, but an attempt is made to identify the principal risk factors and analyse more closely the effects of the two that are considered most important in each instance.

Previous forecasts have been accompanied by alternative scenarios describing the possible monetary policy response to the construction of an aluminium smelter at Helguvík, a sharp depreciation of the króna, and a less favourable outcome from the recent wage settlements than was assumed in the baseline forecast. All of these have either come to pass or are now considered likely enough to be included in the baseline scenario. At this point, the most important uncertainties are an adverse interaction between exchange rate developments and wage rises and a sharp contraction in the domestic housing market, which is linked to a weaker currency.

Continued depreciation of the króna and further wage rises could necessitate a higher policy rate

The last *Monetary Bulletin* discussed the possible monetary policy responses to a dramatic depreciation of the króna and an increase in the interest rate spread on Icelandic residents' foreign liabilities. In the main, it can be said that this alternative scenario was realised, though it is important not to view alternative scenarios as actual forecasts. The real exchange rate has fallen considerably since November, reducing the likelihood of a further depreciation of the króna. Nonetheless, even more adverse exchange rate developments than the baseline forecast allows for cannot be ruled out. Given the current financial market conditions and the position of the banking system, it can be asserted that there is a considerable risk that exchange rate developments will be less favourable than assumed in the baseline forecast. A weaker króna entails the risk of greater wage increases than the baseline scenario assumes. In the worst case scenario, a vicious cycle of falling exchange rate and escalating wage demands could trigger steadily mounting inflation pressures if monetary policy does not immediately break such a chain of events and anchor inflation expectations firmly.

This alternative scenario assumes that the króna will remain weak and will not appreciate early on, as is assumed in the baseline forecast. The exchange rate index remains between 150 and 160 throughout the forecast horizon. The baseline forecast assumes that wage renegotiation early in 2009 will induce a rather modest additional increase in wages, but the risk is that the demands for pay hikes will become more vociferous as the króna continues to weaken. This alternative scenario assumes that wages will rise by nearly three percentage points over and above the baseline forecast early in 2009.

The inflation outlook is therefore considerably less favourable in this scenario than in the baseline forecast. Inflation is nearly a full percentage point higher in Q4/2008 than in the baseline forecast, with the difference between alternative scenario and baseline forecast peaking at 1½ percentage points in mid-2009. In order to prevent this negative inflation outlook from becoming entrenched, the Central Bank must respond by raising the policy rate. The policy rate is raised in mid-2008 by a total of 0.5 percentage points over and above the baseline forecast and does not begin to fall until early in 2009. Furthermore, the subsequent easing cycle is more gradual than in the baseline scenario. The divergence in the policy rate between the two paths peaks in mid-2009, when the policy rate in the alternative scenario is three percentage points higher than in the baseline forecast (see Chart 1). At the end of the horizon, the policy rate is also higher than in the baseline scenario. This policy rate path ensures that the inflation target is attained near the end of the forecast horizon (see Chart 2).

More severe housing market slump offers the possibility of a more rapid policy rate easing

In the past decade, residential housing prices in the greater Reykjavík area and elsewhere in Iceland have more than doubled in real terms. They rose especially quickly in 2004 and 2005. A similar housing boom has occurred in many parts of the world, but price increases in Iceland have been among the steepest. In several countries, housing inflation has already begun to reverse, at least in real terms, while in a few countries – for example, the US and Ireland – nominal prices have fallen considerably.[1] In addition, residential investment has declined and unemployment in the construction industry has risen.

In the baseline forecast, as in all of the Bank's forecasts over the past year, it is assumed that nominal real estate prices will begin to fall toward the end of the current year. As the outlook is for considerably high inflation, the decline in real house prices over the next two years will be even greater. The baseline forecast also assumes that residential investment will contract somewhat. Although the drop in house prices seems large, by the end of the forecast horizon real house prices will only have returned to the 1995-2007 average; however, the increase over and above general price levels since 2003 will have been more or less reversed. Residential investment as a proportion of GDP will nonetheless approach 6% by year-end 2010, down slightly from its peak of 7% at the end of 2007. This is a bit above what has been considered the long-term equilibrium ratio of residential investment to GDP. That ratio is thought to have reached 7% in the 1970s, when large new neighbourhoods in the Reykjavík area were under construction, but it tapered off gradually to about 4% by the mid-1990s.[2]

The alternative scenario assumes that the credit squeeze and rising risk premia will trigger a deeper downturn in the housing market and a weaker króna than is assumed in the baseline forecast. House prices therefore decline more than in the baseline scenario, and the contraction in the construction sector will be considerably more pronounced. The near-term decline in real house prices will therefore be greater, but real prices will approach their long-term equilibrium at the end of the horizon. In all, real house prices fall by nearly 40% over the forecast horizon, which is similar to the reversals in some of the Nordic countries in the early 1990s. However, the decline in nominal prices would be smaller due to higher projected inflation in Iceland. Residential investment as a share of GDP is projected to fall gradually to about 3% by year-end 2010. Employment levels in the construction sector will fall, but as a result of repatriation of foreign workers, the increase in unemployment will not be correspondingly large. According to this scenario, unemployment will average 5% in 2010, whereas it is projected to approach 6% at the end of the forecast horizon. The contraction in domestic demand is therefore somewhat greater than in the baseline forecast. This is offset, however, by a weaker króna than in the baseline sce-

1. According to the Case-Schiller index, real estate prices in major urban areas of the United States have dropped by some 11% in the past year. In some cities, the decline has been considerably greater.
2. See Lúdvík Elíasson and Thórarinn G. Pétursson (2008), "The residential housing market in Iceland: Analysing the effects of the recent mortgage market restructuring", *Housing Studies*, forthcoming.

nario. Instead of appreciating slightly in the early part of the forecast horizon, as it does in the baseline forecast, the króna continues to depreciate throughout the horizon, and at the end of the forecast horizon it is 11% below the baseline path.

In this alternative scenario, the problem facing the Central Bank is that inflation expectations have not been anchored adequately. This limits the Bank's scope to respond quickly to a housing slump. The spillover into the labour market and from there to private consumption will therefore be greater than it would otherwise be. Initially, the effects of a weaker currency outweigh the effects of the weaker housing market; therefore, inflation is higher than in the baseline forecast until the latter half of 2009. At that point, however, the impact of a weaker economy begins to emerge more strongly. The policy rate is the same as in the baseline forecast until the first quarter of 2009, whereupon it begins to ease, ultimately falling more rapidly than in the baseline scenario. In the fourth quarter of 2009, the policy rate has fallen to roughly one percentage point below the level in the baseline forecast, and at the end of the forecast horizon, it is about two percentage points lower (see Chart 1). This policy rate path is conducive to bringing inflation to target in the third quarter of 2010 (see Chart 2).

The Central Bank's scope for response to shocks depends on the credibility of monetary policy

The above alternative scenarios demonstrate in a nutshell the problems that monetary policy in Iceland faces in the fight against inflation. On the one hand, the Bank risks losing control of inflation, which may ultimately cause a spiral of falling exchange rate versus rising wages and prices. On the other hand, the Bank may be faced with a sharp decline in demand, which it would be desirable to mitigate. However, the Bank's room for manoeuvre is limited due to high and unstable inflation expectations.

The alternative scenarios should not be viewed as forecasts in themselves, but rather as a way to show how some major risks to the baseline forecast could alter the inflation outlook and affect the monetary policy path. The strength of the response required will be determined to an extent by the credibility of monetary policy. If the Central Bank's ability and willingness to keep inflation at target is in question, a firmer policy response is needed. The alternative scenarios show how the Central Bank could respond to uncertainties in a systematic and predictable manner.