

Improved inflation outlook but risk of more unfavourable developments

Inflation increased rapidly this summer, although not as fast as the Central Bank had forecast in July. It slowed down in September and October, mainly due to lower energy prices and the base effect of the retail price war in summer 2005 passing out of the consumer price index in September. Prices of public services have also been held down in spite of rising costs. Core inflation has been less volatile. It is now apparent that GDP growth in 2005 has been underestimated. Domestic demand growth remains fairly robust although it has eased broadly in line with the July forecast. Exports, on the other hand, have fallen by more than expected. Decreasing exports are one factor behind the wider current account deficit than was forecast in July. However, the wider deficit may also reflect stronger demand than is currently being measured and therefore indicate long-term inflationary pressures. As before, the labour market is tight, with labour shortages and a sizeable risk of further wage drift. Although the short-term inflation outlook has improved – even if the impact of proposed cuts in indirect taxes is excluded – the long-term prospects are far from acceptable if the policy rate path follows market expectations. The output gap is likely to shrink significantly over the next two years if no new investments are made in the power and aluminium sectors. Much uncertainty surrounds the way that economic developments will unfold later next year through the interaction of the current account deficit, exchange rate, interest rates and housing prices. The forecasts presented in this edition of Monetary Bulletin show that a realistic effort to attain the inflation target within an acceptable timeframe demands a tighter, more sustained monetary stance than the markets currently assume.

I Overview of macroeconomic and inflation forecast

As in the last edition of *Monetary Bulletin* in July 2006, three inflation paths are presented based on different assumptions for the development of the policy interest rate over the forecast horizon. The baseline forecast uses a policy rate path reflecting market expectations, based on forward interest rates and on market analysts' forecasts for the policy rate path over the next two years. One of the two alternative scenarios assumes an unchanged policy rate across the forecast horizon, and the second applies monetary policy responses to ensure that the inflation target will be attained over the forecast period.

The economic outlook is discussed against these three paths and some further scenarios are presented to shed light on probable deviations from the baseline forecast path. Publishing different inflation paths plays down the focus on individual scenarios and underlines the uncertainty concerning the economic outlook, especially in the current climate.

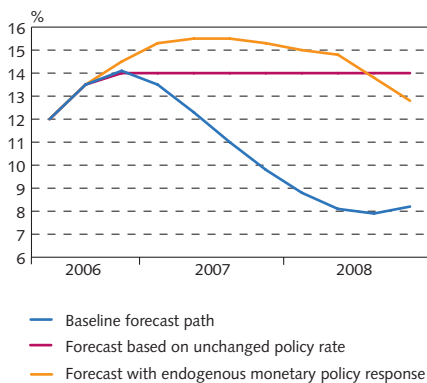
This edition of *Monetary Bulletin* presents an inflation forecast until Q4/2008 and a macroeconomic forecast for the whole of 2008. An overview of the main variables in the baseline forecast and the forecast assuming a policy rate path that attains the inflation target are given in Table 1a and 1b in the Tables and charts section.

Adjustment of the economy is slower than expected

The rate of growth in the economy has repeatedly come as a surprise. Domestic demand growth also appears to be shrinking more slowly

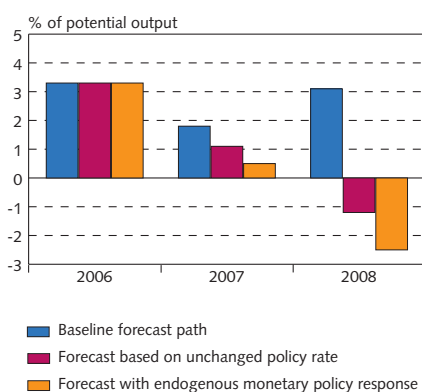
1. This article uses data available on October 31, 2006 but the forecast is based on data until October 17.

Chart I-1
Different policy rate paths



Source: Central Bank of Iceland.

Chart I-2
Output gap 2006-2008



Source: Central Bank of Iceland.

this year than forecast in July, mainly due to a hefty increase in investment. Private consumption in 2006, however, has developed in line with earlier Central Bank forecasts.

Due to the slower adjustment this year, domestic demand is likely to shrink by more in the following years than previously forecast. If the current forecast is realised, national expenditure will contract by just over 6% in 2007, the sharpest reduction in a single year since 1983. However, this contraction must be viewed in the context of exceptionally rapid growth in domestic demand in recent years. Growth over 2002-2006 was the highest four-year average recorded since the early 1970s.

Some output growth is forecast for 2007 in spite of lower domestic demand, driven by rapid export growth and a substantial contraction in imports. In the baseline forecast, output growth will pick up again in 2008. According to the policy rate path in the baseline forecast, the monetary stance will be lax by then even though substantial imbalances remain. Thus the positive output gap will increase again with a sizeable current account deficit.

A tighter stance in the alternative scenarios has a substantial effect on economic developments and the nature of the adjustment

The policy rate path in the baseline forecast has shifted since June. Market agents and analysts appear to assume that the current round of hikes is over and expect rapid reductions next year. The monetary stance will therefore be laxer next year and in 2008 than was forecast in July. This is the main explanation for the considerable upward revision for output growth in 2008, but this will prove short-lived. An easier monetary stance can provide only a temporary boost to output growth and the subsequent contraction will be correspondingly deeper and more persistent.

A far tighter monetary stance is shown in the alternative scenarios. Some further increase in the policy rate is projected in the path ensuring that the inflation target is attained over the forecast horizon. It remains around 15% or more until the end of 2007 before heading downwards. A tighter stance is thus shown for most of this scenario than if the policy rate is assumed unchanged at 14% for the entire period. From mid-2008, however, the policy rate is lower if policy responds earlier.

The higher policy rate leads to a weaker output growth outlook than in the baseline forecast. In the policy response scenario, growth is zero for next year and output falls by just over 1½% in 2008. However, growth will pick up sooner in the alternative scenarios with a brighter outlook towards the end of the decade. When macroeconomic balance has been restored and inflation expectations have been anchored, monetary policy will have more scope for supporting the recovery. In the baseline forecast, on the other hand, underlying balances are still being tackled towards the end of the decade. The output gap narrows more quickly in the alternative scenarios and is considerably smaller in 2007 than in the baseline forecast. It turns negative by 2008, while in the baseline forecast it remains positive by roughly 3%. The current account is broadly in balance at the end of the forecast horizon in the alternative scenarios, but a substantial deficit remains in the baseline forecast.

Lower indirect taxes will delay the necessary adjustment

As the Central Bank has repeatedly pointed out, the most important economic policy task at present is to unwind the strong macroeconomic imbalances reflected in the positive output gap, labour shortages, massive current account deficit and inflation far in excess of the target. This task will probably fall mainly to the Central Bank to tackle.

The temporary tightening of public sector investment announced in mid-year was eased too soon to have any significant effect. Cuts in indirect taxes and commodity taxes will delay the inevitable adjustment, and it is untimely to relax lending rules for the Housing Financing Fund (HFF) again. The tight monetary stance will then need to be maintained for longer than otherwise, because these measures ease the fiscal stance, other things being equal, and raise real disposable income by roughly the equivalent of the reduction in price level resulting from the tax cuts. The measures will therefore stimulate demand and delay the macroeconomic adjustment which is a precondition for bringing inflation under control in the long run. Output growth will increase by roughly half a percentage point over the next two years unless counteracting fiscal measures are introduced or the monetary stance is tightened correspondingly. Admittedly measured inflation will drop for some while, until the impact of the lower price level fades out a year after the tax cuts take effect. Underlying inflationary pressures are not dampened, however. On the contrary, they will increase over the forecast period as the impact of increased demand begins to be felt. The scenario applying monetary policy responses therefore ignores the first-round effect of lower indirect taxes and commodity taxes on inflation,² but responds to the expansionary impact of the measures when it passes through in 2008. In order to attain the inflation target at the end of the forecast horizon, the policy rate will need to be 0.25-0.5 percentage points higher over the entire period than if indirect taxes and commodity taxes had not been cut.

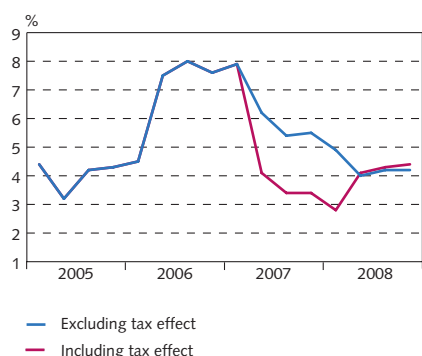
Cost-push inflation appears to have been overestimated

The Central Bank's July forecast assumed that the depreciation of the króna in the first half of 2006 and the additional labour costs resulting from the review of wage settlements in June would soon be transmitted to higher inflation which would peak at 11% in mid-2007. Now it is evident that the Central Bank overforecast inflation in Q3/2006. Also, the aggregate cost-push shock appears to have been overestimated and has been adjusted for in the current forecast. A sizeable impact is still expected, however, and it could turn out to be greater than assumed here.

The outlook is now for around 7½% inflation in Q4/2006, rising to almost 8% in Q1/2007. Thus inflation prospects over the next six months have improved significantly since the July forecast, even though inflation will still be well above target.

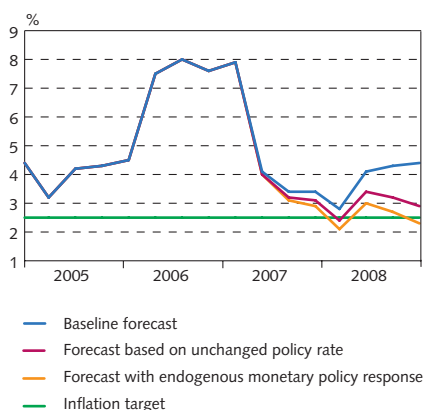
2. Such measures can have a second-round effect through wage developments, but this is unlikely in the present case with sizeable further wage rises already agreed.

Chart I-3
Tax effect on the baseline inflation forecast



Source: Central Bank of Iceland.

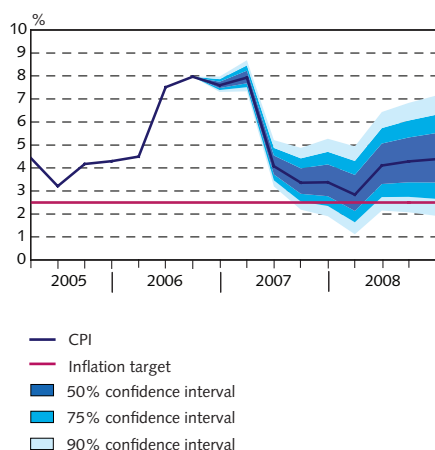
Chart I-4
Different inflation paths



Source: Central Bank of Iceland.

Chart I-5
Current Central Bank inflation forecast
– baseline scenario

Forecasting period: Q4/2006 - Q4/2008



Source: Central Bank of Iceland.

Long-term inflation outlook has improved but a higher policy rate is needed to attain the target over the forecast horizon

Further ahead, the inflation outlook has also improved since the July forecast. The baseline forecast for measured inflation is now 3½% one year ahead, but was 8% before. Less than half this difference derives from the above reassessment of cost-push inflation and the remainder from the impact of lower indirect taxes and commodity taxes. Underlying inflation one year hence is forecast somewhat higher, at 5½%.

While the direct effect of lower consumption taxes will disappear from the CPI in Q2/2008, the demand impulse from higher disposable income will remain. In the baseline forecast, inflation is 4.4% after two years, but 4.2% if the government's measures are excluded (see Chart I-3).

The interest rate path in the alternative scenarios produces an earlier and permanent unwinding of the imbalances in the economy, which is a precondition for constraining inflation and inflation expectations. With the policy responses path, inflation will be 3% one year ahead and the inflation target will be attained at the end of 2008. Inflation expectations will also be in line with the target then. As shown in Chart I-4 and Table I-1, the inflation target is attained somewhat later in the scenario based on an unchanged policy rate path, but the policy rate needs to be higher for a more sustained period.

Table I-1 Inflation developments and outlook

Year-on-year changes in the CPI (%)

Quarter	Baseline forecast	Alternative scenario with unchanged policy rate	Alternative scenario with monetary policy response
2006:1	4.5	4.5	4.5
2006:2	7.5	7.5	7.5
2006:3	8.0	8.0	8.0
2006:4	7.6	7.6	7.6
Annual average	6.9	6.9	6.9
2007:1	7.9	7.9	7.9
2007:2	4.1	4.0	4.0
2007:3	3.4	3.2	3.1
2007:4	3.4	3.1	2.9
Annual average	4.6	4.5	4.4
2008:1	2.8	2.4	2.1
2008:2	4.1	3.4	3.0
2008:3	4.3	3.2	2.7
2008:4	4.4	2.9	2.3
Annual average	3.9	3.0	2.5

Inflation outlook still fraught with uncertainties

As in recent forecasts, the exchange rate is the main uncertainty. The króna has appreciated since the last forecast in July. It depreciates slightly across the horizon in the baseline forecast but, supported by a higher policy rate in the alternative scenarios, the currency appreciates somewhat. As this year's experience shows, however, minor events may trigger sharp changes in the exchange rate.

Other uncertainties remain broadly unchanged. Once again inflation one year ahead is more likely to be underforecast than overforecast, and this risk is now deemed greater than in July. The risk profile two years ahead is now tilted to the upside, while in the July forecast it was symmetric.

II External conditions and exports

External conditions of the economy are still to a large extent favourable. Output growth has increased in the most important market regions. Inflation is less of a concern following the downturn in energy prices in the autumn. As a result, long-term interest rates have fallen in many parts of the world, boosting carry trades. These global trends, coupled with higher policy rates, have contributed to a strengthening of the króna and other high interest-rate currencies. However, the foundation for these favourable external conditions may be rather shaky. The global macroeconomic imbalances discussed in recent editions of *Monetary Bulletin* are still present. A glut of savings in Asia and the oil-producing countries is still funding the current account deficit and private consumption in the US and elsewhere, including Iceland. A rapid adjustment of the global economy may provoke a hard landing in countries where surging growth is driven by favourable global financial conditions. The forecasts presented here assume that this adjustment will be a slow process and not deliver major shocks to the Icelandic economy. Such an outcome is by no means certain, however.

Favourable conditions in main markets are reflected in high export prices, which outweigh high prices for energy imports. Fish catches and marine exports have been depressed this year, however, and the outlook for the next two years is not particularly bright. Nonetheless, increased aluminium production will soon produce a jump in export growth.

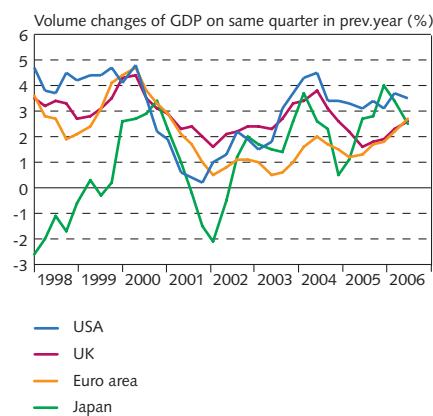
Buoyant global output growth looks set to continue

The recovery in Europe is continuing, but output growth has slowed considerably in the US. Japan reported less growth in Q2, but lending there is beginning to pick up after a contraction lasting many years. The Bank of Japan is slowly abandoning its hyper-accommodative monetary stance, which could subsequently have a sizeable impact on carry trades and thereby on the exchange rate of the króna. However, developments in Europe are probably most crucial.

Global output growth outperformed forecasts in the first half of 2006. The rapid expansion of global trade and favourable international financial conditions have been major drivers of output growth in recent years. The IMF forecasts only marginally less growth of above 5% in 2006. If this holds, the current global growth episode will be the greatest since the early 1970s. Rapid growth has led to a strong build-up in inflationary pressures recently. The boom in many emerging market economies has sent demand for most commodities and oil soaring and has driven up global prices, although the increases have partly unwound recently. So far, higher prices have not had a marked impact on core inflation in the industrial countries, where competition in manufacturing sectors is fierce – another offshoot of the globalisation which has caused a large inflow of additional labour into the global economy.

Chart II-1
International economic developments
Q1/1998 - Q2/2006¹

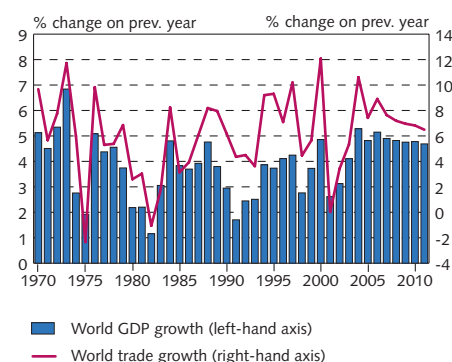
Economic growth in main trading areas



1. Data for 2006 are preliminary.
Source: Reuters EcoWin.

Chart II-2
International economic developments
1970 - 2011¹

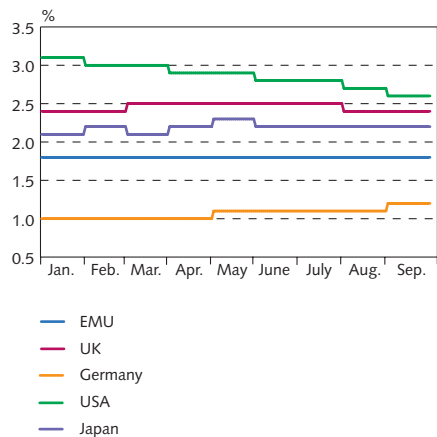
World GDP and trade growth, change on previous year



1. Data for 2005-2011 are IMF forecasts.
Source: IMF.

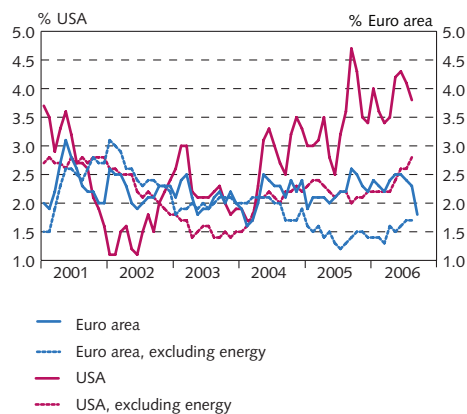
Chart II-3
Output growth forecasts for main trade
areas 2007

Time axis shows month of forecast



Source: Consensus Forecasts.

Chart II-4
Inflation in the US and euro area
January 2001 - August 2006¹
Inflation with and without energy prices



1. Preliminary estimate for euro area inflation in September.
Source: Reuters EcoWin.

US output growth slows down but core inflation is climbing

So far in 2006, expectations about US output growth in 2007 have been steadily coming down (see Chart II-3) alongside a marked rise in inflation during the year. Second-quarter figures for GDP point firmly to a significant slowdown in the US economy in recent months. Annualised quarterly growth in Q2/2006 measured only 2.6%, compared with 5.6% in the previous quarter. In spite of this decrease, year-on-year GDP growth was 3.5% in Q2/2006, compared with just under 2.8% in Q2/2005. The main factor behind the second-quarter slowdown is subdued private consumption, largely in consumer durables. Real estate prices have also been rising less and there has been a drop in residential investment, which has long been one of the main drivers of growth. Falling housing prices are likely to dampen private consumption growth even further in the medium term. However, the recent downturn in oil prices could have a counter-effect and also help to constrain inflation, which gained pace this summer and remained above 4% until August. Core inflation has also climbed since the beginning of this year (see Chart II-4).

Growth has strengthened in the euro area and underlying inflation remains low

GDP in the euro area, which is by far the largest market area for Iceland, increased by 2.6% year-on-year in Q2/2006 – the highest growth rate there since the beginning of 2001. Growth jumped quite sharply from the previous quarter and was more than double the rate a year before. There was a slightly smaller increase in private and public consumption in Q2 but the main contribution came from a 4.6% year-on-year jump in investment.

Inflation has decreased in the euro area since July. Core inflation has stayed close to 1½% since the summer, after slowing in the spring. Higher oil and electricity prices have so far not provoked general wage and price rises in the euro countries on the scale witnessed in the US, since they still have excess capacity and the euro is strong. The European Central Bank has gradually been tightening its monetary policy and has raised its minimum bid rate four times in 2006, most recently by 0.25 percentage points at the beginning of October. Although HICP inflation measured only 1.7% in September, a further policy rate hike is thought likely before the end of the year.

Growth up in the UK and stable outlook in the Nordic countries

In the UK, GDP growth went up to 2.6% in Q2/2006, the largest quarterly increase for two years. It was most pronounced in the services sector, while the contribution of the manufacturing sector declined. Private consumption also increased quarter-on-quarter, in spite of half a percentage point higher unemployment in the course of this year. Contrary to the trend in the US, most indications are that housing prices are still on the increase in the UK after a minor cooling of the market in the summer. Housing prices have risen by more than 1% a month for the past two months and the twelve-month increase in the Halifax house price index is currently 8%. Inflation has gained momentum since the last *Monetary Bulletin* was published in July and

measured 2.4% in September, up by half a percentage point since the beginning of the year.

Economic prospects in the other Nordic countries are broadly favourable. In Q2/2006, output growth increased in Finland, Sweden and Norway, but slowed down slightly in Denmark. Inflation has remained steady at around 2% in Denmark and Norway so far this year, but has risen in Finland and Sweden where it is now also approaching 2% (see Chart II-6).

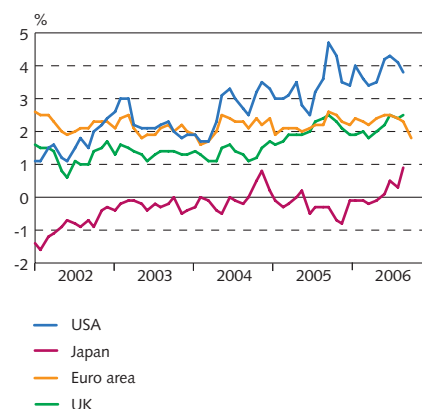
End in sight for deflation in Japan

After a long battle with persistent deflation, in July the Bank of Japan raised its uncollateralised overnight call rate, which had been held at zero since March 2001. There are many indications that the Japanese economy is picking up, but the recovery is still fraught with uncertainties. Inflation is just below 1% and has been positive since May. However, price increases have been almost entirely confined to food, petrol and utilities, while other items have risen by much less or even fallen. Excluding food prices, the twelve-month rise in the CPI was 0.3%. A new core CPI excluding food and energy prices shows slight deflation so far this year. The dip in oil prices in recent months could temporarily cause deflation if other index components do not increase. On the other hand, credit growth was quite substantial in Japan in Q3/2006 and has been positive throughout the year. Output growth is forecast at 2.7% over 2006, largely driven by business investment. Very moderate wage rises in the recent term have kept private consumption sluggish. If domestic demand rallies, the accommodative monetary stance is likely to be tightened with faster policy rate rises than currently expected. This could have some impact on high interest-rate currencies, including the króna, in connection with carry trades.

Growth still surging in emerging Asian and European market economies

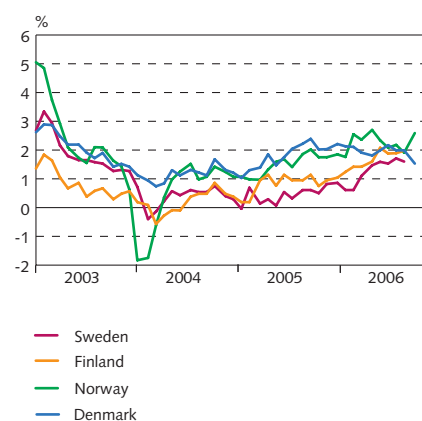
Although the bulk of Iceland's international trade is conducted with its traditional market areas of western Europe and the US, the share of certain emerging market economies is increasing. Their growing profile in the global economy also has indirect effects. Brisk growth in a number of emerging market economies in Asia, for example, has been instrumental in the increase in commodity prices in recent years. China's surging growth, driven by massive exports and investment, is a major factor. The IMF forecasts roughly 10% output growth in China in 2006 and broadly the same next year. Growth has slowed down somewhat in other Asian countries such as India and Pakistan, particularly as a result of high oil prices and their tighter monetary stances. Central Europe has also witnessed rapid growth recently, although the economic situation varies from one country to the next. Poland has experienced significant growth, which ran at 5.5% in Q2/2006 while inflation measured only 1.4%. Growth is also robust in many other countries. It has soared in recent years in Russia, where domestic demand appears to be on the verge of a boom. Despite the broadly favourable outlook, it is not certain how well the emerging

Chart II-5
Inflation in the USA, UK, Japan and euro area
January 2002 - August 2006¹



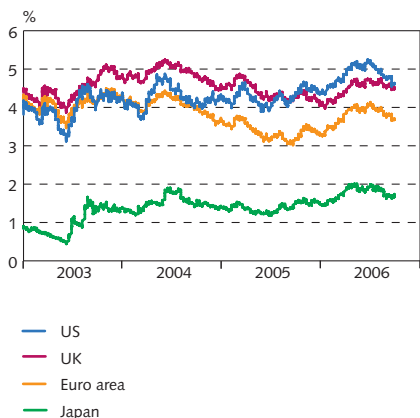
1. Preliminary estimate for euro area inflation in September.
Source: Reuters EcoWin.

Chart II-6
Inflation in the Nordic countries
January 2003 - September 2006¹



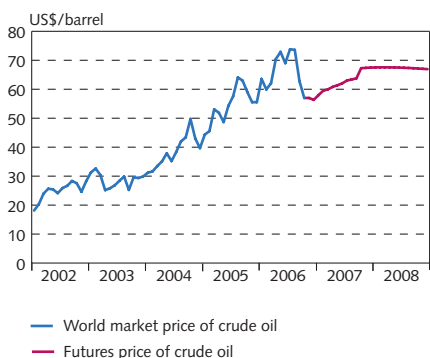
1. September data are not available for Finland and Sweden.
Source: Reuters EcoWin.

Chart II-7
Yield on 10-year government bonds
Daily data January 1, 2003 - October 3, 2006.



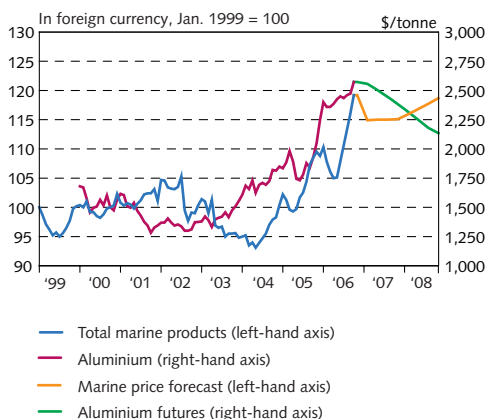
Source: Reuters EcoWin.

Chart II-8
World market price of oil
Monthly data January 2002 - December 2008



Sources: Bloomberg, NYMEX, Reuters EcoWin.

Chart II-9
Prices of marine exports and aluminium



Sources: London Metal Exchange, NYMEX, Statistics Iceland, Central Bank of Iceland.

market economies are equipped to withstand tighter conditions for international trade and in global financial markets.

Short-term interest rates heading upwards, while long-term rates have slipped

Many central banks have responded to mounting inflationary pressures by raising their policy rates. Of nineteen central banks in OECD countries, sixteen have raised their policy rates since the end of May. Short-term interest rates have tracked higher policy rates, but long-term rates have come down since mid-summer. In the G-8 countries, long-term interest rates followed an upward path during 2006 until the beginning of July when they began going down (see Chart II-7). One possible explanation may be lower expectations for US growth. The shift in demand by Asian central banks towards long-term rather than short-term government bonds may also partly explain the respective rate movements. Investor expectations that rises in the US federal funds rate have reached or are approaching their end may also explain the trend for long-term rates.

Oil prices on the way down?

Oil prices have fallen considerably since the last *Monetary Bulletin* in July. Whether this is a permanent decrease is uncertain, because demand traditionally hits a low in autumn, after heavy petrol consumption in the summer vacation months but before demand for oil increases for winter heating in the northern hemisphere. Weaker demand for oil could also indicate a slowdown in global output growth. Whatever the explanation, lower oil prices should clearly ease the inflationary pressures generated by sharp hikes in the first part of this year.

Sluggish fish catches so far this year

The outlook is for a decrease in fish catches in 2006 and a drop in the export value of marine products in real terms for the second consecutive year. Data from Statistics Iceland show a 5% contraction in the fish catch over the first eight months of 2006. The main explanation is that the capelin catch is down by 410 thousand tonnes (69%) year-on-year. On the other hand, the much more valuable demersal harvests are up by 13 thousand tonnes (2%). As the year wears on and the winter fishing season gets under way, the lower capelin catch will carry less weight, and marine product exports are expected to contract by 3% in 2006. Prospects for the capelin stock are known to be bleak and this species has not even been detected in research surveys in recent months. Thus the outlook for the 2007 capelin catch is uncertain. Quotas for haddock and cod have also been lowered for the current fishing year, which began on September 1. Redfish stocks also appear to be in poor shape and the harvest will probably fall in the years to come. Demersal fisheries will therefore contract in 2007. As a result, marine product exports are forecast to decline next year by 2% in real terms, the third consecutive year of contraction. The outlook for catches and export value of marine products in 2008 is difficult to assess, given the uncertain state of the capelin stock over

the next few years and the unlikelihood that main demersal catches will increase that year. For the purposes of this forecast, catches and export value are therefore assumed to remain unchanged.

Outlook remains favourable for marine product export prices

Market prices of marine products have been highly favourable over the past 18 months. In 2005 they rose by 14% year-on-year in foreign currency terms and an average increase of 8% is expected in 2006. Signs have emerged that prices of main demersal species are close to overstretched, so no major additional rises can be expected over the next few months. Demersal prices are forecast either to remain unchanged or increase only slightly, depending upon species. Prices of fish meal and fish oil have soared in recent months. Fish meal prices have almost doubled since the spring. Virtually no correlation is found in the development of fish meal and fish oil prices relative to demersal fish, which is closer to the retail market. Meal and oil prices are expected to stay buoyant into next year. In light of these factors, marine product prices are expected to rise by 3% year-on-year in 2007.

This autumn, marine producers have enjoyed favourable market prospects and a strong competitive position. Most main trading partner countries are in good economic shape with rising real wages, as outlined above. Powerful retail promotions and intense marketing, backed up by an increasing freshness and health focus, have boosted fish consumption. For example, the largest UK retail chain has recorded 70% growth in its sales of marine products over the past three years and fish consumption in Germany increased by 7% in 2005 after many years of stagnation or decline.

Real effective exchange rate has risen considerably

The real effective exchange rate, based on relative consumer prices, has risen sharply since the last Central Bank forecast. Since June it has appreciated by 8%, although it is still 11% lower than in January. Thus despite the firming of the real effective exchange rate in recent months, the position of export sectors has improved substantially during 2006, although this volatility has exacerbated operational uncertainties.

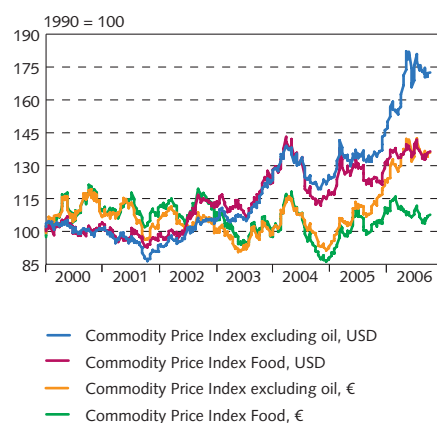
Main uncertainties in external conditions

In spite of broadly favourable external conditions at present, a number of potential threats loom. These include the risks of a surge in oil prices, rising inflation and a disorderly adjustment in the global economy caused by a sudden shift in international financial conditions after a prolonged period of imbalances.

Exports will decline in 2006 but increase in the years to come

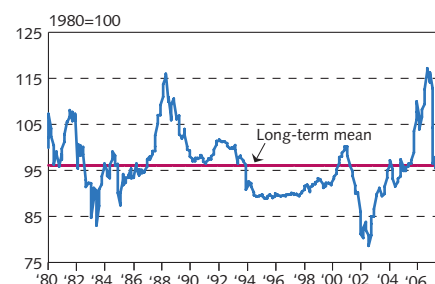
The outlook for exports of goods and services has deteriorated since the last *Monetary Bulletin* was published in July. The forecast has been revised downwards from 1½% growth to a contraction of almost 3%. The reason is a greater fall in forecast marine export production, which is now estimated at 3% instead of 2% before. A

Chart II-10
World market commodity prices
Weekly data January 7, 2000 - October 20, 2006



Source: Reuters EcoWin.

Chart II-11
Real effective exchange rate of the króna
January 1980 - September 2006
Monthly data, based on relative consumer prices



Source: Central Bank of Iceland.

greater decrease in services income is also expected, almost entirely due to a projected drop in transport sector revenue. Forecast export value of aluminium is unchanged but exports of goods and services are expected to increase by 13% in 2007, up from 11% in the July baseline forecast. The projected increase in aluminium exports in 2007 has been revised upwards to 73% from the 60% forecast in July. General manufacturing exports are expected to remain unchanged between the years. However, service exports are forecast to increase in 2007, led by tourism with some growth in transport as well. The outlook for 2008 is broadly unchanged, except that aluminium production is now expected to be roughly 2% higher.

Table II-1 Main assumptions for developments in external conditions

	Current forecast ¹			Change from previous forecast (percentage points) ²		
	2006	2007	2008	2006	2007	2008
Exports of goods and services	-2.9	13.5	14.2	-4.3	2.3	0.2
Marine production for export	-3.0	-2.0	0.0	-1.0	0.1	-
Aluminium production for export	26.7	73.1	35.0	-0.2	13.2	2.0
Export prices of marine products	8.0	3.0	2.0	-2.0	-1.0	-
Aluminium prices in USD ³	31.4	-0.4	-10.8	-7.6	2.6	-13.8
Foreign fuel prices ⁴	21.2	0.2	2.0	-4.8	-4.8	5.0
Global inflation ⁵	2.5	2.2	1.9	0.4	0.2	-0.3
Terms of trade for goods and services	-1.3	-1.2	-2.9	-12.3	-2.2	-4.8
Foreign short-term interest rates ⁶	3.0	3.1	3.2	-0.5	-0.8	-0.9

1. Percentage change year-on-year, except for interest rates. 2. Change since *Monetary Bulletin* 2006/2. 3. Based on aluminium futures. 4. Based on fuel futures. 5. Consensus Forecasts. 6. Based on weighted average forward interest rates of Iceland's main trading partner countries.

Sources: Bloomberg, Consensus Forecasts, IMF, New York Mercantile Exchange, Statistics Iceland, Central Bank of Iceland.

III Financial conditions

The policy rate has risen in real terms since the summer, reflecting both nominal hikes and lower inflation expectations. Consequently, the monetary stance has tightened. Forward interest rates and forecasts by commercial banks indicate that financial market agents and analysts generally expect that the policy rate has reached a high and will soon enter a fairly steep path downward. The short-term interest rate differential with abroad has continued to widen while the long-term differential, based on five-year Treasury notes, has decreased and is broadly the same as at the beginning of the year. Issuance of glacier bonds (króna-denominated Eurobonds) has picked up and had a discernible impact on both the bond market and the exchange rate of the króna. Household debt has continued to mount and the depreciation of the króna appears to have encouraged household borrowing in foreign currencies so far this year. Growth in lending to businesses has slowed down. Money in circulation is still increasing but at a rather slower rate – although sharp monthly fluctuations are common.

The monetary stance has tightened

Since the last *Monetary Bulletin* was published in July, the Central Bank has raised its policy interest rate by 1.75 percentage points. Measured in real terms against the breakeven interest rate on five-year Treasury notes, the policy rate has risen by just over 4 percentage points. The monetary stance has likewise tightened in real terms relative to past inflation and to corporate and household inflation expectations. Unlike the muted response of short-term real interest rates to hefty policy rate hikes in the first half of 2006, recent monetary policy measures have therefore been quite effectively transmitted.

Market agents and analysts expect swift cuts in the policy rate

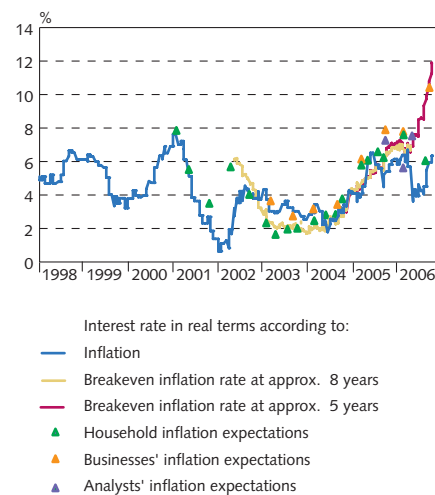
In spite of a sizeable rise in the policy rate since the summer, long-term nominal Treasury note yields have gone down by 1.2-1.3 percentage points on average from June to October. Broadly speaking, the fall in yields reflects expectations that the policy rate will soon be lowered. This is evident from forecasts for the medium-term policy rate path by most analysts, who expect that it has now peaked. As discussed in Box VIII-1 on pp. 42-43, on average they expect that the policy rate will have been cut to just under 11% one year ahead and 9.5% two years ahead. In the last *Monetary Bulletin* in July they forecast a policy rate of just under 9% at the end of the horizon in summer 2008, which is close to their current average forecast.

However, analysts are not unanimous about the probable two-year policy rate path. The three largest commercial banks' forecasts are broadly in line until mid-2008, when one expects the policy rate to be raised again, reflecting the assumption – which is not made by the others – that a new wave of investments in the power and aluminium sectors is pending. The fourth analyst forecasts that the policy rate will be raised by 0.5 percentage points when the current *Monetary Bulletin* is published and then remain broadly unchanged until the

Chart III-1

Central Bank policy interest rate in real terms

Weekly data January 7, 1998 - October 31, 2006

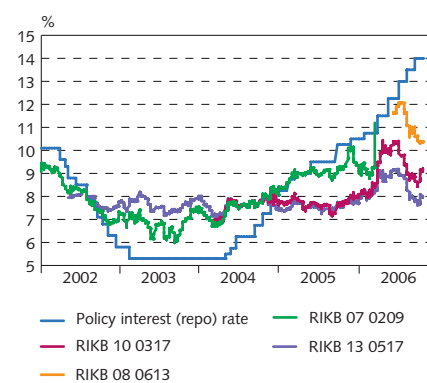


Source: Central Bank of Iceland.

Chart III-2

Nominal Treasury note yields and the Central Bank repo rate

Daily data January 3, 2002 - October 31, 2006

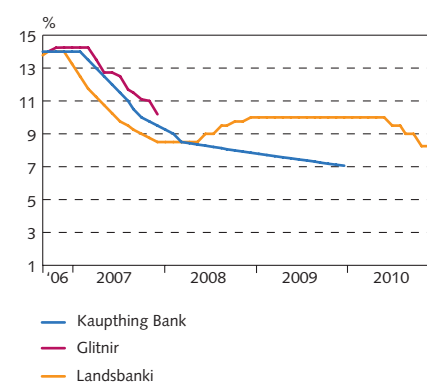


Source: Central Bank of Iceland.

Chart III-3

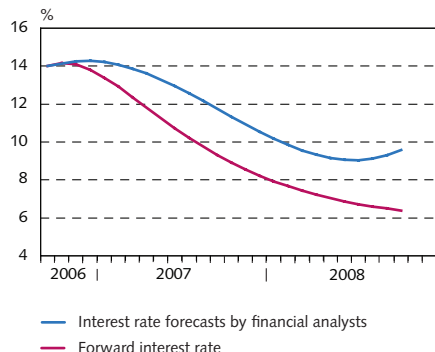
Latest policy rate forecasts by main commercial banks

Monthly averages



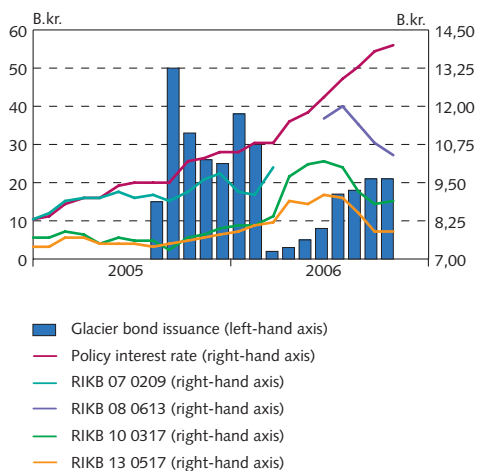
Sources: Glitnir, Kaupthing Bank, Landsbanki.

Chart III-4
Central Bank policy rate based on forward
rates and analysts' projections
September 2006 - October 2008



Source: Central Bank of Iceland.

Chart III-5
Glacier bond issuance¹
August 2005 - October 2006



1. Data until October 31, 2006 inclusive.
Sources: Reuters, Central Bank of Iceland.

end of 2008, which is based on the assumption of higher inflation than the other forecasters over the next two years (see further Box VIII-1).

Forward interest rates imply that investors agree that the policy rate hikes are over, but they expect faster reductions than the analysts. Investors apparently expect the policy rate to be down to 9% one year ahead and 6.5% a year later. This downward path is also much faster than could be read from forward interest rates in July, which implied a policy rate of 10.5% one year hence and 8.5% two years ahead – even though the policy rate at the start of the current forecast period is one percentage point higher than the expected peak in the path then.

As in the last Central Bank macroeconomic and inflation forecast in July, the policy rate path in the baseline forecast is the average of the paths shown in Chart III-4. On this assumption, the policy rate will be just over 10% one year ahead and roughly 8% two years hence. This implies an average policy rate over the year of 12½% in 2006, 11½% in 2007 and just over 8% in 2008.

Glacier bond issuance increases again

Increased issuance of glacier bonds has probably had some impact on interest rate developments in Iceland, coinciding with the global fall in long-term rates. The situation resembles the surge in demand for nominal Treasury notes from August 2005 to February 2006, to use in swaps in connection with glacier bond issuance. Policy rate hikes had more impact on nominal bond yields when issuance slowed down towards the end of February. At the end of August, non-residents held more than half of the stock of nominal Treasury notes, probably with the main purpose of hedging against exchange rate risks related to glacier bond issuance.

Divergent development of indexed yields according to maturity

After *Monetary Bulletin* was published in July, yields on indexed Housing Financing Fund (HFF) bonds went down for most of the time, especially on the two longer series maturing in 2034 and 2044. A considerable rise has taken place since then, however, most noticeably in the shortest series maturing in 2014. The tighter monetary stance and the government's planned cuts in indirect taxes probably both explain this development. Both factors will tend to subdue demand for shorter indexed notes, thus driving up yields on them. The impact is less pronounced in longer maturities, where the underlying long-term economic growth outlook weighs heavier.

Uncertainty about the supply of indexed government bonds or Treasury guarantees on them may conceivably have driven up demand for them temporarily. The future of the HFF and government guarantee on its debt are highly uncertain. A cooling of the housing market can lead to less HFF bond issuance. The Treasury's strong balance at present also means that it has little need to issue bonds. Investors therefore foresee a shortage of indexed bonds, which will keep yields down.

Short-term interest rate differential at a historical high

The differential on three-month interbank market interest rates with abroad has widened significantly since mid-2003. At the end of October 2006 it was more than 10 percentage points, the largest since the Central Bank began daily fixing of interbank interest rates in 1998. Measured in terms of five-year Treasury notes, the differential widened in the first half of this year but has narrowed again. It is currently about 5 percentage points, broadly the same as at the beginning of the year. This is largely explained by rising long-term rates in Iceland until the beginning of July, which unwound fairly swiftly back to approximately the early April level. As discussed in Section II, policy rates have continued to rise among Iceland's main trading partner countries. The European Central Bank has twice raised its rates by a total of 0.5 percentage points since July, the Bank of England by 0.25 percentage points at the beginning of August and the US Federal Reserve by 0.25 percentage points at the end of June, although has kept them unchanged since then. The Bank of Japan ended its formal zero interest rate policy in July with a hike of 0.25 percentage points. However, markets now expect slower rises in policy rates than they did in the summer. Interest rate developments in Japan need to be monitored closely for their indirect effect on carry trades in high interest-rate countries such as Iceland.

The króna has appreciated again

The króna has appreciated since the end of June. In October the exchange rate index was 8.8% lower than in June. The first glacier bonds matured on September 15 to a total of 40 b.kr., but apparently had little effect on the exchange rate. Probably this is because issuance has increased again and other issues were extended. Also, some investors presumably hedged their positions earlier in the year.

The depreciation of the króna in the first half of this year made new foreign currency-denominated borrowing relatively more favourable again, but increased debt service on existing loans. As a share of total corporate borrowing, foreign currency-denominated borrowing does not seem to track movements in the króna exchange rate very closely. Many businesses have income in other currencies and can hedge against exchange rate risk with swaps more easily than households. Glacier bond issuance has also sharply reduced the cost of such swaps.

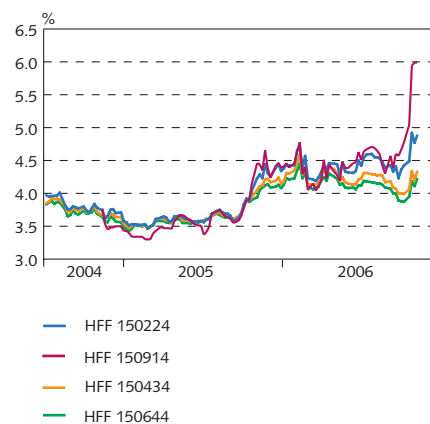
Financial conditions of households and businesses

Foreign-denominated lending to households has increased quite significantly in recent months, even after adjustment for exchange rate effects. Part of the explanation lies in more favourable conditions for foreign currency borrowing in the first half of 2006, although growth has not unwound since the króna began to recover. The share of foreign currency-denominated loans in total household borrowing was 4½% in August, compared with 2% in January.

Household lending by the credit system grew by 29% year-on-year in Q2/2006, the fifth successive quarterly increase. Growth in lending by deposit money banks (DMBs) to households has slowed

Chart III-6
HFF bond yields

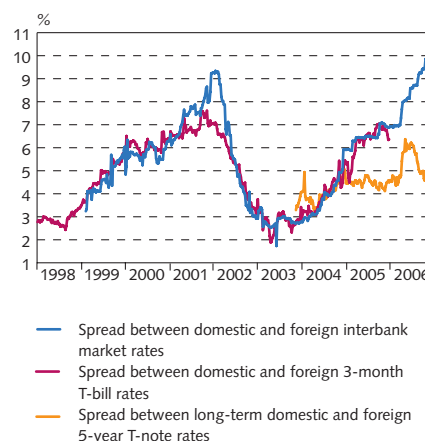
Weekly data July 8, 2004 - October 31, 2006



Source: Central Bank of Iceland.

Chart III-7
Short-term interest rate differential with abroad

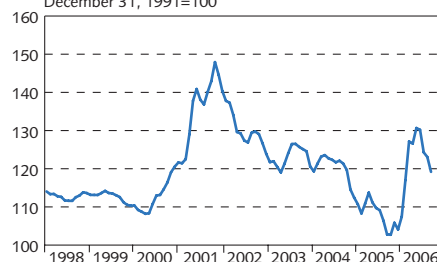
Weekly data January 7, 1998 - October 31, 2006



Source: Central Bank of Iceland.

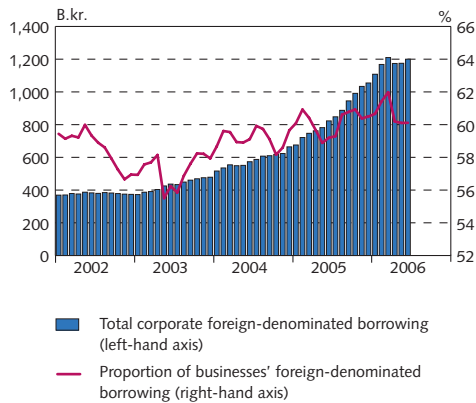
Chart III-8
Exchange rate index

Monthly average January 1998 - October 2006
December 31, 1991=100



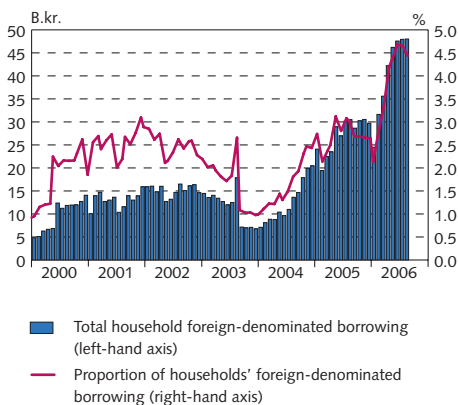
Source: Central Bank of Iceland.

Chart III-9
Corporate foreign currency-denominated borrowing, and as a share of total lending 2002 - 2006¹



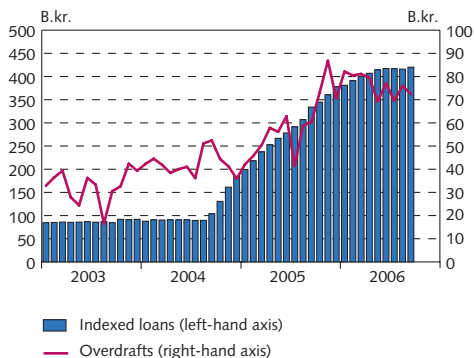
1. Corporate foreign currency-denominated borrowing (direct and from other credit institutions) as a share of DMB lending. Foreign currency-denominated loans have been adjusted for estimated exchange rate movements.
Source: Central Bank of Iceland.

Chart III-10
Foreign currency-denominated borrowing by households and as a share of their total borrowing January 2000 - August 2005¹



1. Foreign currency-denominated borrowing by households as a share of lending by DMBs, the HFF and pension funds at end of month. Foreign currency-denominated loans have been adjusted for estimated exchange rate movements.
Source: Central Bank of Iceland.

Chart III-11
DMB lending to households¹
January 2003 - September 2006



1. Adjusted for price indexation on bonds.
Source: Central Bank of Iceland.

down since February this year, however, as refinancing of housing mortgages dwindles. New mortgage lending by DMBs in September 2006 was down by nearly 79% year-on-year. However, much of the new mortgage borrowing is likely to be a pure increase in debt rather than refinancing.

At the height of the refinancing boom, many borrowers took advantage of the opportunity to increase their mortgages in order to pay off less favourable overdraft debt. Household overdrafts amounted to 69 b.kr. at the end of September 2006, but were 60 b.kr. at the end of August 2004 when commercial banks and savings banks entered the mortgage market.

On the whole, the financial conditions of households are likely to have deteriorated. Interest rates on new mortgages have gone up and overdraft charges have also increased. In the first half of 2006, debt service on foreign borrowing increased when the króna depreciated. On the other hand, households would since have found new foreign borrowing more attractive than before, although this was probably only a minor consideration and has unwound to some extent.

In light of the recent trend in indexed HFF bond yields, interest rates on HFF mortgage loans could rise in the near future. At its last auction, the HFF accepted bids for its two longer series, but the outcome of the next auctions is uncertain. Financial conditions of households could worsen further if interest rates on new mortgage loans go up, and also if higher mortgage rates drive housing prices down.

In Q2/2006, corporate lending growth by the credit system dropped from the previous quarter for the first time since Q2/2004. However, growth is still surging ahead, at 53%. Business overdrafts have been increasing in recent months and in September the twelve-month growth rate was 32.7% (an increase of almost 29 b.kr.). The last *Monetary Bulletin* in July reported soaring money supply growth over the preceding months. It is still increasing rapidly, although at a slightly slower rate now. It should be borne in mind that money supply is prone to very sharp monthly fluctuations.

IV Domestic demand and production

Recent Central Bank of Iceland macroeconomic forecasts have presented scenarios for the necessary adjustment of the economy at the end of the episode of overheating. It has been assumed that domestic demand growth will slow down quite sharply. Revised national accounts figures from Statistics Iceland show that GDP growth over the past two years was much more robust than previously estimated. Iceland has not witnessed a two-year period of growth on such a scale since the early 1970s. These data have a sizeable impact on the Central Bank's estimation of the output gap, which has been revised upwards for 2005 from the June forecast and downwards for the current year. When the output gap will close, however, depends very much on the policy interest path assumption. The baseline forecast and alternative scenarios diverge markedly in this respect.

Divergent domestic demand adjustment in baseline forecast and alternative scenario

As in the last *Monetary Bulletin* in July, the baseline forecast assumes that the policy interest rate will develop in line with market agents' and analysts' expectations and forecasts. Two alternative scenarios are calculated. One keeps the policy rate unchanged, while the other presents a calculated policy rate path based on monetary policy responses to bring inflation to target two years ahead. The difference in monetary tightness between the baseline forecast and the alternative scenarios greatly influences the nature of the domestic demand adjustment. All three paths will be considered in the following discussion of the economic outlook.

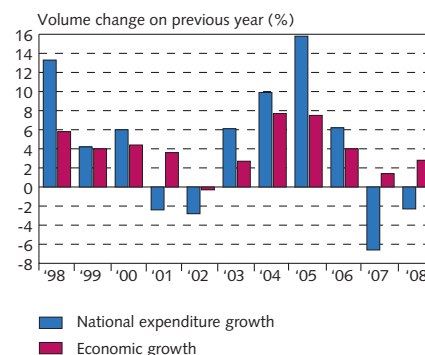
An increase in the investment growth forecast will delay the adjustment of domestic demand

Investment growth in 2006 will probably be more robust than the Central Bank forecast in July. The earlier forecast that investment would contract year-on-year in Q3 and Q4 is unlikely to hold. Private consumption, on the other hand, is in line with the July forecast. Domestic demand will therefore adjust later than was previously expected. In the July baseline forecast, domestic demand was expected to remain broadly unchanged in the second half of 2006 and contract in 2007 and 2008. Now, however, it is forecast to grow by 2½% in the second half of this year but shrink by more in 2007 – by 6½% instead of just over 4%.

Will final investment growth in 2006 once again exceed preliminary estimates?

The upward revision for GDP growth in recent years calls for closer examination of various uncertainties which could affect the way that near-term economic developments unfold. Gross fixed capital formation calls for particular attention, because Statistics Iceland has repeatedly revised investment growth figures upwards in recent years when more reliable data become available from companies' annual reports after some lag. The Central Bank's investment forecasts have therefore

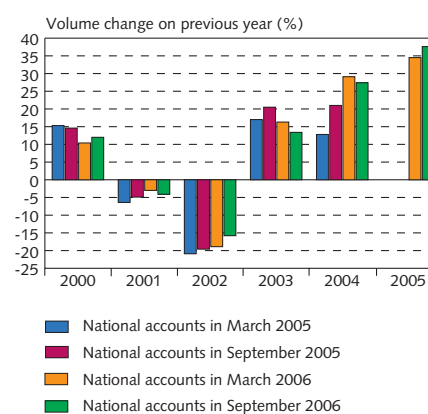
Mynd IV-1

National expenditure growth and economic growth 1998-2008¹

1. Central Bank baseline forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-2

Revision of gross fixed capital formation growth



Source: Statistics Iceland.

Table IV-1 Indicators of private consumption 2005-2006

% year-on-year change unless otherwise stated	Quarterly figures				Most recent period		
					Change based on		
	Q4/2005	Q1/2006	Q2/2006	Q3/2006	Month	same period in prev. year	year-to-date figures
Groceries turnover (in real terms)	9.5	7.4	6.6	3.8	Sept.	3.6	5.8
Payment card turnover (in real terms)	13.3	15.8	8.0	4.4	Sept.	2.9	9.9
of which domestic	14.5	18.9	16.8	15.4	Sept.	15.9	17.3
of which abroad	49.7	34.6	16.4	12.2	Sept.	21.7	22.5
Domestic retail debit card turnover	12.5	12.8	0.7	-4.8	Sept.	-6.7	3.3
Car registrations (increase in number)	43.3	37.2	-15.4	-25.4	Sept.	-22.6	-3.1
General imports (volume change) ¹	24.0	30.0	22.4	16.2	August	.	16.2
Imports of consumer goods (volume change) ¹	27.1	23.3	9.3	5.0	August	.	5.0
Private motor vehicles ¹	54.9	51.9	10.9	1.5	August	.	1.5
Consumer durables, e.g. household appliances ¹	35.7	12.6	9.3	4.6	August	.	4.6
Consumer semi-durables, e.g. clothing ¹	20.6	12.4	12.2	10.0	August	.	10.0
Food and beverages ¹	12.4	6.1	5.8	6.8	August	.	6.8
Imports of investment goods excluding ships and aircraft (volume change) ¹	42.7	48.8	47.7	36.5	August	.	36.5
Gallup confidence index	7.1	3.7	-1.5	.	Sept.	-1.5	-3.1
Current situation	28.8	14.6	8.5	.	Sept.	8.5	-7.8
Expectations six months ahead	8.1	-4.3	-9.0	.	Sept.	-9.0	1.7

1. Quarterly figures are year-to-date.

Sources: Cement producers, Federation of Trade and Services, Housing Financing Fund, IMG Gallup, Land Registry of Iceland, Motor Dealers' and Services Federation, Statistics Iceland, Central Bank of Iceland.

tended to be based on an underestimation of historical developments. While data on investment developments for the power and aluminium sectors have proved reasonably reliable, other investment has turned out far above forecasts or Statistics Iceland's preliminary estimates. In light of experience, some reservations need to be made about the preliminary figures for investment growth in 2006, and thereby about forecasts based on them. Growth could prove much higher than initially shown and a greatly underforecast current account deficit could be the first sign. If this suspicion is correct, the domestic demand adjustment both at the end of 2006 and in 2007 could end up slower than forecast here.

Another important uncertainty is household and business expectations. Gallup's consumer confidence surveys have been more upbeat in recent months with brighter expectations about unfolding economic events. Business sentiment shows the same pattern.¹ This development in expectations could indicate a slower adjustment of domestic demand than assumed here.

The exchange rate is the main forecasting uncertainty

Last but not least, significant uncertainties surround near-term exchange rate developments. The rapid depreciation earlier this year shows how swift and heavy an impact this can have on a small open economy such as Iceland. The króna has regained a good part of its strength since *Monetary Bulletin* was published in July and subsequent developments are highly uncertain, as discussed in Section VII.

1. Survey conducted in September by Gallup on behalf of the Central Bank, Ministry of Finance and Confederation of Employers.

It is interesting to compare the baseline forecast and alternative scenarios in this respect. In the baseline forecast the króna depreciates steadily across the forecast horizon. The narrowing interest rate differential with abroad caused by the assumed swift reduction in Iceland's policy rate goes hand in hand with a wide current account, which calls for an exchange rate adjustment. In the alternative scenarios, on the other hand, the króna appreciates due to the tighter monetary stance.

Private consumption

Soaring private consumption growth has characterised the Icelandic economy in recent years. According to Central Bank forecasts, average growth of private consumption in 2002-2006 will be the highest for any period since 1971-1974. Growth has been driven by increased disposable income and net household assets, much easier access to credit, higher mortgage leverage and expectations of ongoing growth in labour demand and GDP.

Private consumption growth appears to have peaked in Q2/2005 when it measured 15% year-on-year. Since then growth has slowed down somewhat, in line with Central Bank forecasts. However, the rate of increase was still very rapid in Q1/2006, at almost 12% according to the national accounts. Consumer confidence perked up at the beginning of this year, partly boosted by media coverage of ideas for further investment in the aluminium and power sectors. This optimism was then dashed by turbulence in the financial markets and the depreciation of the króna. According to the national accounts, private consumption increased by 4.6% in Q2/2006, in line with the Central Bank's July forecast.

Unchanged outlook for private consumption until the end of 2007

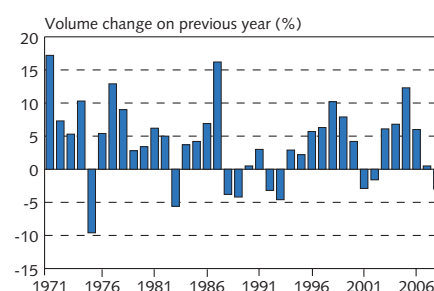
The baseline forecasts in *Monetary Bulletin* this year have presented a fairly consistent picture of private consumption developments. Annualised growth is projected to drop fairly swiftly until mid-2007, when it will begin to contract for the rest of the forecast period. The baseline forecast broadly follows this pattern until the end of 2007, but its assumption of a rapid reduction in the policy rate eases the contraction significantly towards the end of the horizon. Likewise, real disposable income is higher across the forecast horizon than was expected in July, due to lower inflation and the government's measures to cut food prices. These factors outweigh the downward revision of wage growth.

In July, the Central Bank forecast 6.2% growth in private consumption in 2006, stagnation next year and a contraction of 7.7% in 2008. Private consumption is now expected to increase by 6% in 2006 and ½% next year, then shrink by 3% in 2008. A much sharper contraction in 2008 is shown in the two alternative scenarios, with their considerably tighter monetary stance.

Renewed household confidence

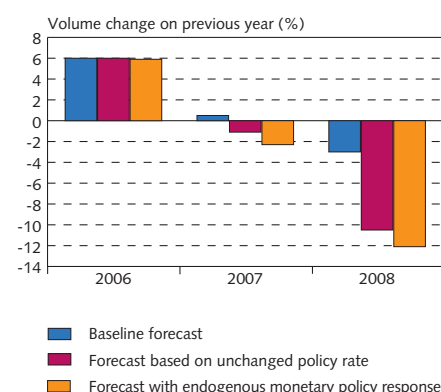
Most pointers indicate that private consumption growth has been slowing down this year, as forecast (see Table IV-1). However, the

Chart IV-3
Private consumption growth 1971-2008¹



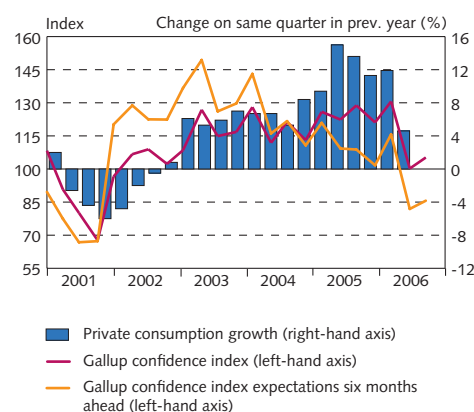
1. Central Bank baseline forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-4
Private consumption growth 2006-2008



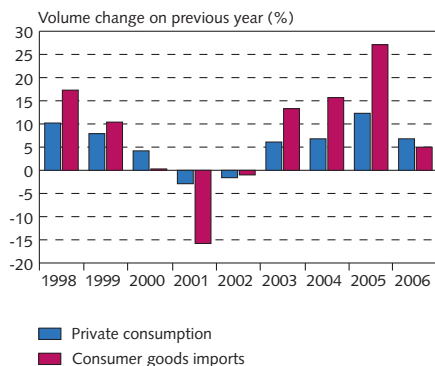
Source: Central Bank of Iceland.

Chart IV-5
Private consumption and consumer confidence¹
Q1/2001 - Q3/2006



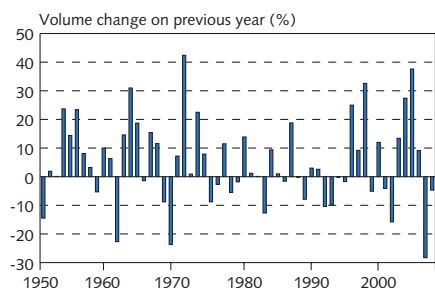
1. Confidence index at end of each quarter.
Sources: Capacent Gallup, Statistics Iceland.

Chart IV-6
Private consumption and consumer goods imports 1998-2005 and 2006/Q1-3¹



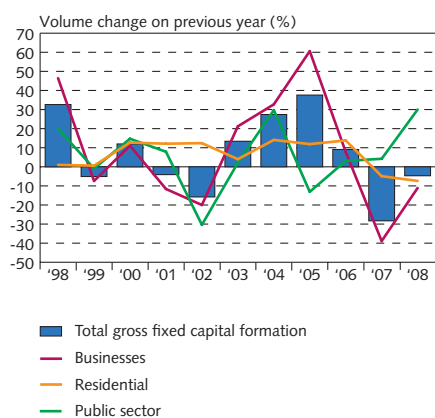
1. For 2006, growth of consumer goods imports is for the first eight months of the year, and private consumption for the first three quarters according to the baseline forecast.
Source: Statistics Iceland, Central Bank of Iceland.

Chart IV-7
Gross fixed capital formation growth 1950-2008¹



1. Central Bank baseline forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-8
Gross fixed capital formation growth and its main segments 1998-2008¹



1. Central Bank baseline forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Gallup confidence index has given rather ambiguous messages. After an almost continuous decline since February, the index stood at just above 88 in July, when Icelandic consumers were at their most pessimistic about the economic and labour market situation since the beginning of 2002. Over the past two months, however, the confidence index has added more than 30 points, with expectations about the future and the economic situation rising most markedly. Given its correlation with the confidence index, private consumption may decline more slowly than other indicators imply.

Public consumption

In July, the Central Bank forecast that public consumption would grow by 2.9% this year, just under 4% in 2007 and 2.8% in 2008. The forecasts for this year and 2007 have been revised downwards, but the outlook for 2008 is broadly unchanged.

Since public consumption was up by 3.4% in the first half of 2006, only a small increase is needed in the second half for the Central Bank's forecast of 2.2% growth over the year to hold. While the development of central government expenditure over the first eight months indicates that it has slowed down considerably in the course of 2006, a larger increase in public consumption cannot be ruled out. The Ministry of Finance, for example, forecasts 2.7%. In July, the Central Bank forecast hefty growth in public consumption in 2007, partly with the takeover of security tasks following the departure of the US-manned Iceland Defence Force. In its autumn macroeconomic forecast (The Icelandic Economy), the Finance Ministry announced its aim of exercising more restraint than previously intended, in order to keep the annual increase in public consumption in line with the medium-term objective of 2%. The Central Bank's growth forecast for public consumption in 2007 has now been revised downwards to 3%. Although this is somewhat higher than the Ministry of Finance's estimate, next year's general election is a contributing factor to bear in mind.

Gross fixed capital formation

Soaring investment has been one of the main drivers of robust GDP growth in recent years. Gross fixed capital formation increased by 37½% in 2005 on the back of 27½% and 13½% growth in the preceding two years. This is the largest three-year average for investment growth in the postwar era. As pointed out above, investment growth has declined by less than the Central Bank had forecast, with a projection of 9% for the year in the current baseline forecast but just under 5% in July. According to the national accounts, twelve-month investment growth was 36½% in Q1/2006 and 6½% in Q2.

Next year's contraction in investment has been revised to just over 28% in the baseline forecast, from just under 20% in July. The outlook for 2008 has altered somewhat due to the much lower policy rate path assumption now. A higher level of forecast investment is normal, given that finance costs are correspondingly lower. Investment is therefore forecast to shrink by just under 5% in 2008, instead of 11%.

More business investment growth this year and a sharper contraction in 2007, compared with the July forecast

Business investment growth peaked in 2005 at 60%, on the back of a 33% increase the year before. In July the Central Bank forecast a 3% increase this year, and a contraction of 32% and 22% in 2007 and 2008 respectively. This year's forecast has been revised upwards and the contraction is greater in 2007 and less in 2008.

According to the national accounts, business investment grew year-on-year by 48½% in Q1/2006 and almost 6% in Q2. The Central Bank now forecasts virtually unchanged investment in the second half of 2006 and almost 8% growth over the year as a whole. A larger contraction is projected for 2007 in the baseline forecast, at almost 40%. The contraction in 2008 is smaller than expected in July in the baseline forecast due to its laxer monetary stance assumption, but greater in the alternative forecasts with their higher policy rate path.

Investment in the power and aluminium sectors peaks this year

Investment in the power and aluminium sectors accounts for almost half of total business investment in 2005 and 2006. It peaked this year and is expected to amount to 110 b.kr., which is just under 4 b.kr. less than forecast in July. By the end of 2006, around 80% of the current aluminium and power sector investment programme will be completed. A further 42.5 b.kr. is expected next year and only 13 b.kr. in 2008. Hefty increases in business investment imply that projects in the power and aluminium sectors exerted no significant crowding-out effect. They therefore fuelled overheating of the economy by correspondingly more than was expected.

Stepped-up investment in shopping malls and supermarkets

Plans are afoot for major investments in new shopping malls and supermarkets in many parts of Iceland in the near future. Their scope is difficult to estimate but could easily amount to 10 b.kr. a year over the next few years. Also, a new combined conference centre and concert hall in the centre of Reykjavik is estimated to cost roughly 10 b.kr. per year over the next four years.

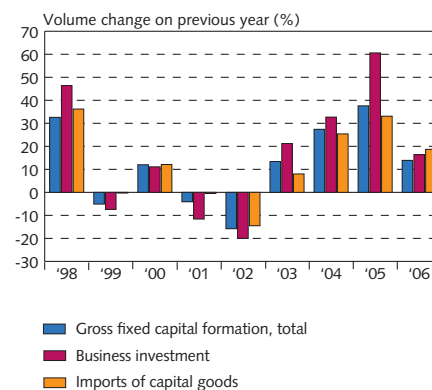
Business sentiment perks up

In a Gallup survey of business sentiment conducted among Iceland's largest companies in September, executives are generally more upbeat about the economic situation than in the previous survey in May. A greater number now expect the economic situation to improve in the medium term, which is reflected in an increased appetite for investment, especially in the construction, power, travel and transport sectors.

As in the May survey, a majority of executives report being understaffed, reflecting strong pressures in the labour market and the historically low level of unemployment. However, a growing number expect staffing levels to remain unchanged over the next six months. Optimism is running higher about the development of domestic demand, with more executives expecting an increase over

Chart IV-9

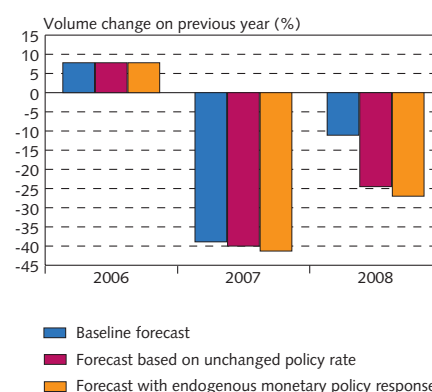
Gross fixed capital formation and imports of capital goods 1998-2005 and Q1-3/2006¹



1. For 2006, growth of capital goods imports is for the first eight months of the year, and gross fixed capital formation for the first three quarters according to the baseline forecast.
Source: Statistics Iceland, Central Bank of Iceland.

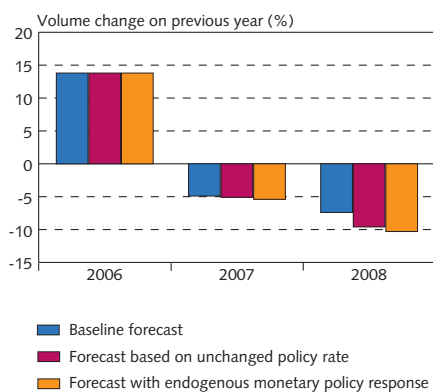
Chart IV-10

Business investment growth 2006-2008



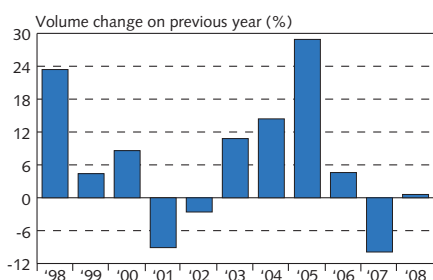
Source: Central Bank of Iceland.

Chart IV-11
Residential investment growth 2006-2008



Source: Central Bank of Iceland.

Chart IV-12
Import growth 1998-2008¹



1. Central Bank baseline forecast for 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

the next six months. Exporters, however, are more downbeat about foreign demand developments after the króna began appreciating again in recent months.

In light of sharp wage rises in 2005, it is interesting to note that the large majority of executives – and considerably more than in May – expect average wages to rise over the next six months.

Public sector investment to increase in 2006, and not contract as previously forecast

In July the Central Bank forecast that public sector investment would contract by 10% in 2006 but increase by more than a quarter in 2007 and 17½% in 2008. Since that forecast was presented before the government announced a tighter investment policy in order to help cool the economy, a downward revision might have been expected now, but public sector investment growth has actually turned out to have been underforecast. The national accounts show an increase of almost 3% in the first half of the year, and the Central Bank now forecasts that public investment will grow by just over 3% in 2006 instead of contracting by 10%.

The forecast for public sector investment in 2007 has also been revised to just over 4% growth instead of the earlier 26%, due to deferred investments to the tune of 9 b.kr. Investment will therefore increase by correspondingly more in 2008, or 30%.

Residential investment is forecast to contract over the next two years, but developments are uncertain

The Central Bank's July forecast for residential investment entailed an increase of 15% in 2006 and almost 4% in 2007, with a ½% contraction in 2008. Residential investment growth was expected to peak in Q3/2006 and then slow down to zero in the second half of next year. The current forecast is for 14% growth in 2006 and a decline of 5% in 2007 and 7½% in 2008. This year's forecast is in line with Statistics Iceland's 13.7% growth figure for the first half of this year. The forecast contraction over the next two years is based on a number of indicators showing a fairly marked cooling in the housing market and less allocation of new plots of building land. However, it is impossible to rule out that the adjustment will be slower than shown in the baseline forecast, with some growth continuing in 2007.

Imports

In July the Central Bank forecast 3½% import growth this year, followed by a contraction of 6% in 2007 and just over 2% in 2008. This forecast has been revised upwards by one percentage point for 2006, with a much sharper contraction in 2007 but a return to growth of ½% in 2008. The main factor behind this revision is changed assumptions about the outlook for growth of national expenditure in the baseline forecast.

Slower import growth still forecast in 2006

Year-on-year import growth was 15% in the first half of 2006. This is broadly the same increase as forecast in July, but the quarterly distribution has shifted. Imports increased by 23½% year-on-year in

Q1/2006, which is rather more than previous figures had implied. However, the national accounts show that imports increased by 6¼% in Q2/2006, compared with the July forecast of 10%. Growth is down for both goods and services imports. Imports are expected to contract year-on-year in the second half of 2006 to produce a growth figure of 4½% for the whole year, according to the baseline forecast. An upward revision of investment since July explains the greater-than-expected increase in imports.

Sharp contraction in imports in 2007

In 2007, imports are expected to decline by 10%. This is a considerably sharper contraction than was forecast in July, mainly reflecting less investment. The two alternative scenarios project slightly lower imports, reflecting a marginally larger contraction in investments and a decline in private consumption instead of the slight increase that was originally forecast.

A small increase in imports is now forecast for 2008 instead of the decrease forecast in July. The more accommodative monetary stance explains this revision, whereby rapid reductions in the policy rate will cause private consumption and investment in 2008 to contract by less than previously forecast, which will spur imports. Imports continue to decrease in 2008 in the alternative scenarios, where the monetary stance is tighter, causing the current account deficit to close more quickly.

GDP growth and the output gap

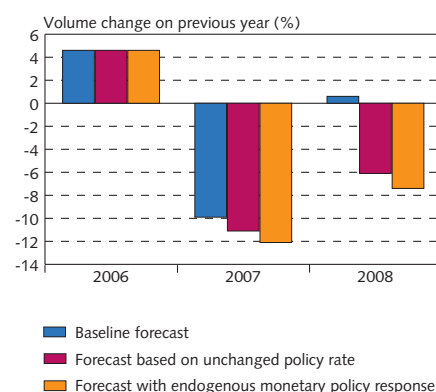
Assessments of GDP are beset by uncertainties involving both methodology and underlying data. Estimates and provisional figures for GDP growth have diverged widely in recent years. For example, the preliminary estimate for GDP growth in 2004 was 5.2%. This figure was revised to 8.2% at the beginning of this year then again to the current 7.7%. The pattern was repeated for GDP growth in 2005, with a preliminary estimate of 5.5% which was revised to 7.5% in the latest preliminary figures.² Such uncertainty, compounded by other forecasting uncertainties, makes the growth and inflation outlook difficult to assess and increases uncertainty in monetary policy action. Output gap estimates have changed substantially due to the revision of GDP figures.

Slightly lower short-term GDP growth outlook ...

In July, the Central Bank forecast GDP growth of 4.8% this year and just under 2% in 2007, followed by a ½% contraction in 2008. The forecast for 2006 and 2007 has now been revised downwards. For 2008, an increase of almost 3% is now expected instead of a decline. The alternative scenarios are closer to the July forecast,

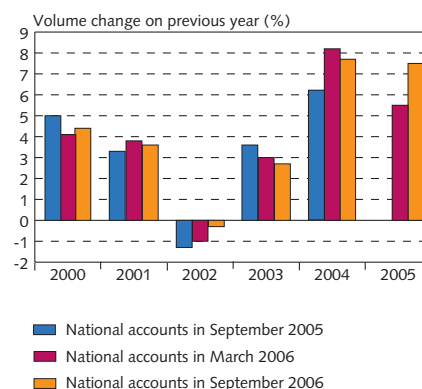
2. Estimates and provisional figures for GDP in 2002 and 2003 have also changed. The preliminary estimate for 2002 showed a contraction of ½%, which was revised to 2.1% at the beginning of 2005. Statistics Iceland's revision of GDP figures for 1990-2003, published in autumn 2005, showed a decrease of 1½%, but this was revised again this autumn to 0.3%, which is very close to the initial estimate. Estimated GDP growth in 2003 has also been revised from 4% to 2.7%.

Chart IV-13
Import growth 2006-2008



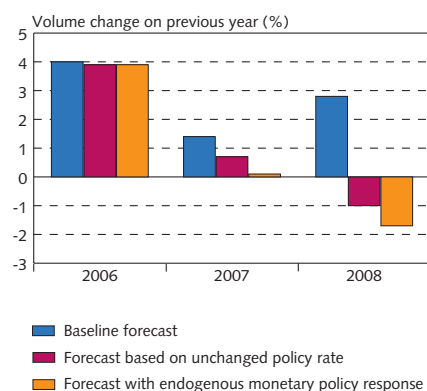
Source: Central Bank of Iceland.

Chart IV-14
Revision of economic growth



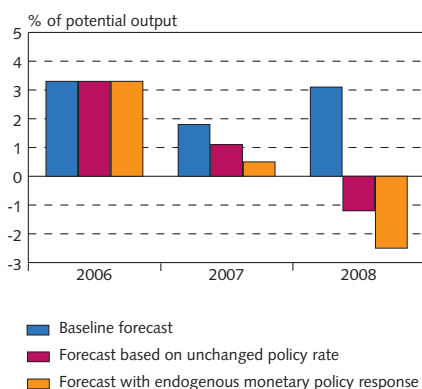
Source: Statistics Iceland.

Chart IV-15
Economic growth 2006-2008



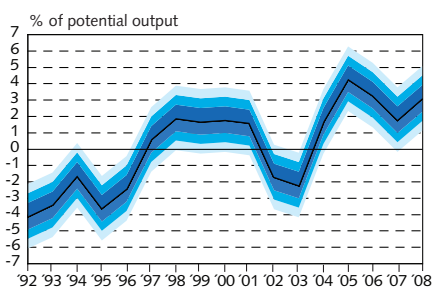
Source: Central Bank of Iceland.

Chart IV-16
Output gap 2006-2008



Source: Central Bank of Iceland.

Chart IV-17
The output gap in the baseline scenario
1992-2008¹



1. Confidence intervals for the output gap showing 50%, 75% and 90% probability that the output gap will lie within them, based on the average standard deviation of various measurement methodologies since 1981.

Source: Central Bank of Iceland.

since they project a higher policy rate path.

Although national expenditure growth is now forecast higher than in July, the GDP forecast has been revised downwards due to unfavourable foreign trade developments. Exports are now expected to decrease instead of the minor increase forecast in July, and imports to grow by more. In 2006 the negative contribution of foreign trade will therefore outweigh the higher figure for national expenditure growth. This trend is reversed in 2007 with GDP increasing by 1½% in the baseline forecast. Export growth has been revised upwards since July along with a sharper decline in imports, but these factors are outweighed by a greater contraction in demand than previously expected.

... but considerably more growth in 2008, caused by the more accommodative baseline forecast

GDP is forecast to increase by almost 3% in 2008, which is a significant turnaround from the ½% decrease forecast in July. The main explanation lies in divergent policy interest rate paths, as pointed out above. Rapid reductions in the policy rate will deliver a short-lived boost to GDP, but this will unwind because substantial macroeconomic imbalances will still remain. The output gap will therefore turn more positive once more. The short-term outlook for GDP growth is less favourable in the alternative scenarios. On a long-range projection, however, GDP picks up sooner than in the baseline forecast. Fairly robust GDP growth emerges in 2010 in the scenario based on monetary policy responses – inflation and inflation expectations will have been anchored by that time, enabling monetary policy to support growth. In the baseline forecast, on the other hand, a contraction will already have begun in 2009 and will continue in 2010.

The estimated output gap is wider in 2005 but narrower this year than in the July baseline forecast

Statistics Iceland's revision of GDP growth has had a substantial effect on the Central Bank's output gap estimates, as mentioned earlier. Revised population figures have also had an impact. The latest data show that the population increased by more in 2005 than Statistics Iceland had previously forecast, which serves to make the output gap less positive.³

According to the baseline forecast, the output gap in 2005 is now estimated to be more positive than was assumed in July due to more GDP growth that year, in spite of the counter-effect of higher population growth. However, the output gap in 2006 is less positive than in the July forecast because GDP growth has been revised downwards and population growth upwards. The baseline forecast diverges markedly from the alternative scenarios as to when the output gap will close. If monetary policy responses are made to attain the inflation target within the forecast horizon, the output gap will have virtually disappeared by the end of 2007.

3. The methodology for estimating the output gap is described in Box IV-3, Estimating the output gap, *Monetary Bulletin* 2006/1, 29-30.

V Public sector finances

Improved balance this year after record surplus in 2005

Compared with the forecast published in *Monetary Bulletin* in July the public sector balance appears set to improve considerably. This year's surplus is heading for 7% of GDP instead of the previously forecast 3%. The outlook for 2007 and 2008 is also much more favourable. Instead of a public sector deficit for both years, a surplus of 4% is now expected in 2007 and 1½% in 2008.

This year's improved outlook is primarily driven by a larger Treasury surplus in 2005 than previously expected. It could reach as high as 5½% of GDP. However, estimated changes year-on-year are broadly the same as in the last forecast. The local government balance looks similar but with a slowly growing deficit which could approach 1% of GDP in 2006.

Supplementary budget bill indicates a considerable improvement in the Treasury balance for 2006

According to the supplementary budget for 2006, Treasury revenues will increase by 40 b.kr. from the original budget assumptions and by 30 b.kr. in real terms. Expenditures will increase by 12 b.kr. but remain unchanged in real terms. In spite of these additional revenues, the supplementary budget bill still assumes that regular Treasury revenues will decrease year-on-year by 2% in real terms, or 7 b.kr., with indirect taxes falling by 4½% (8 b.kr.). The bill also assumes that real expenditures will increase by 1% (3 b.kr.). If this estimate holds, it will leave a Treasury surplus of 45 b.kr., equivalent to 4% of GDP.

Central Bank forecasts even greater improvement

The Central Bank's forecast suggests that the Treasury balance will be considerably better than the supplementary budget implies, with a surplus equivalent to 7% of GDP. In particular, the deviation is explained by probable higher revenue from corporate income tax and tax on personal financial income than assumed in the supplementary budget, while indirect tax revenues are unlikely to decrease substantially in real terms year-on-year in 2006.

Revenues from personal financial income tax and corporate income tax are highly cyclical. Profits of companies listed on Iceland Stock Exchange doubled year-on-year in 2004 and again in 2005. In the first half of 2006 they had already reached 80% of profits in the

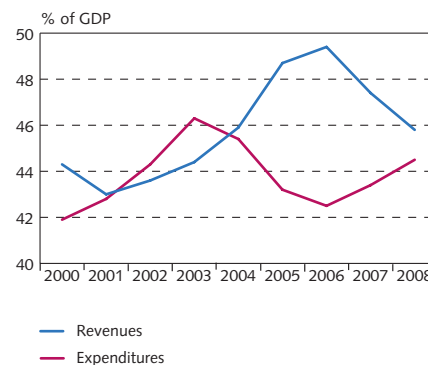
Table V-1 Public sector 2005-2008¹

% of GDP	2005	2006	2007	2008
Public sector revenues	48.7	49.4	47.4	45.8
Public sector expenditures	43.2	42.5	43.4	44.5
Public sector balance	5.5	7.0	4.0	1.3
Public sector structural balance	3.4	5.4	3.1	-0.1
Net public sector debt ²	5.0	-1.4	-4.8	-5.5
Total public sector debt	25.8	19.4	15.5	14.6

1. National accounts presentation. 2. Including Treasury liquidity but excluding pension fund commitments.

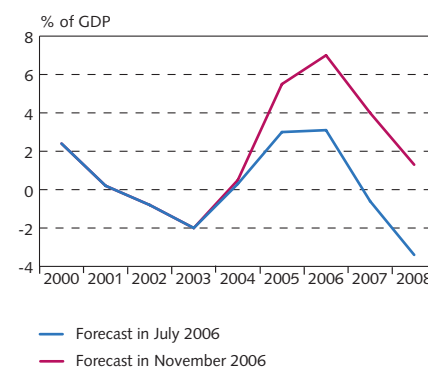
Sources: Ministry of Finance, State Accounts, Statistics Iceland, Central Bank baseline forecast 2006-8.

Chart V-1
Public sector revenues and expenditures
2000-2008



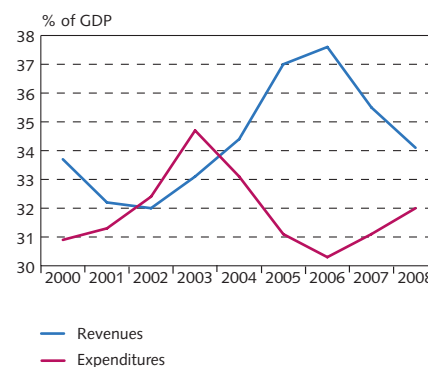
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

Chart V-2
Public sector fiscal balance forecast
2006-2008



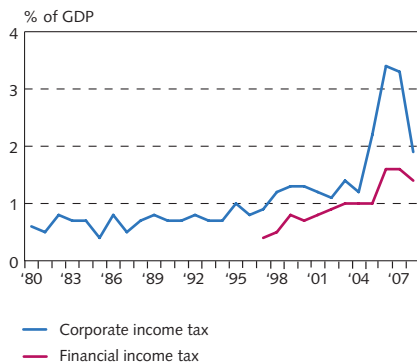
Source: Central Bank of Iceland.

Chart V-3
Treasury revenues and expenditures
2000-2008



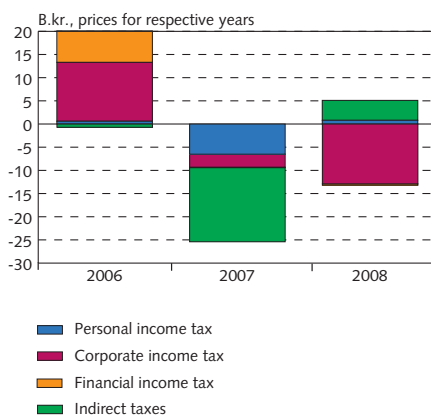
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

Chart V-4
Taxes on corporate income and personal financial incomes 1980-2008



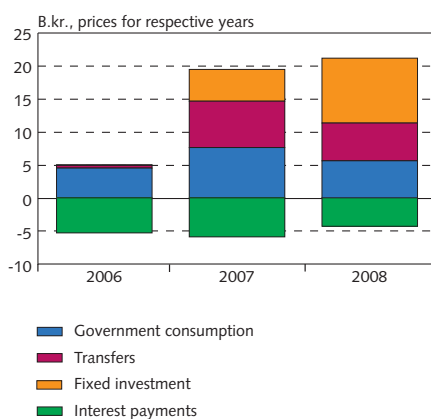
Sources: State accounts, Central Bank of Iceland baseline forecast.

Chart V-5
Main changes in Treasury revenues 2005-2008
Change from previous year



Source: Central Bank of Iceland baseline forecast.

Chart V-6
Main changes in Treasury expenditures 2005-2008
Change from previous year



Source: Central Bank of Iceland baseline forecast.

whole of the previous year. Treasury revenues from corporate income tax (levied on income in 2004) doubled year-on-year in 2005 to 23 b.kr. Revenues from these taxes are forecast to increase by 50% this year to 38 b.kr. and remain unchanged next year.

In 2005, revenues from personal financial income tax (excluding the Treasury's own tax payments) amounted to 14½ b.kr. Some 56% of financial income stated on tax returns was accounted for by sales gains, 22% by dividends and 20% by interest. All three categories soared in 2005 and have increased even further so far this year. Since personal financial income tax reflects profits and the interest rate level, revenues this year are forecast to increase by more than a quarter, to 18½ b.kr., then remain broadly unchanged in 2007 and fall slightly in 2008.

Smaller Treasury surplus in 2007 ...

The budget for 2007 was presented to parliament on October 2. It assumes a 15 b.kr. Treasury surplus for the year, but when the tax cuts announced on October 9 are taken into account, this estimate falls below 10 b.kr. The planned tax cuts and others already decided will reduce Treasury revenues by 6% year-on-year in real terms, based on the price assumptions made in the budget – the equivalent of 20 b.kr.

Regular Treasury expenditures are expected to increase by 4% in real terms (15 b.kr.).¹ Half this amount is accounted for by government commitments connected with the recent review of private sector wage settlements and a government package announced after negotiations with senior citizens. These changes will cause the Treasury balance to deteriorate by 35 b.kr. from the previous year.

Central Bank forecasts show similar year-on-year changes, with a 5% contraction in real revenues and a 3% increase in real expenditures. The surplus will be reduced accordingly by 35 b.kr. in real terms and stand at 50 b.kr.

Table V-II Treasury 2005-2008¹

% of GDP	2005	2006	2007	2008
Treasury revenues	37.0	37.6	35.5	34.1
Treasury expenditures	31.1	30.3	31.1	32.0
Treasury balance	5.9	7.3	4.3	2.1
Structural balance	4.3	6.1	3.7	1.1
Treasury credit balance	11.6	6.9	4.1	1.9
Net Treasury debt ²	2.9	-3.5	-7.0	-8.6
Total Treasury debt	18.3	11.9	7.7	6.1

1. National accounts presentation. 2. Including Treasury liquidity but excluding pension fund commitments.

Sources: Ministry of Finance, State Accounts, Statistics Iceland, Central Bank baseline forecast 2006-8.

1. Assuming average tax write-offs and pension fund contributions, but excluding Treasury tax payments on asset sales.

... and again in 2008

In 2008, the Treasury balance is forecast to deteriorate further, but will still show a surplus of 25 b.kr., equivalent to 2% of GDP. The year-on-year changes in the Central Bank's forecast are broadly in line with the Treasury's medium-term programme. Revenues will fall by 2½% in real terms, largely due to less corporate income tax revenue. Expenditures are projected to rise by 4%, mostly on account of increased investment under the medium-term programme and assumptions for public consumption in this forecast. Transfers will also increase, including benefits due to greater unemployment.

Local government finances

Local governments have shown a deficit equivalent to 0.4%-0.8% of GDP in recent years while their debt ratio has remained broadly unchanged since the early 1990s, at 5½%.

Preliminary estimates published by Statistics Iceland in September show a local government deficit of 4 b.kr. (0.4% of GDP) in 2005. The Association of Local Authorities' survey of their budgets for the current year estimated that local government revenues would increase by 14% year-on-year in 2006, which could hold in light of data available so far. However, as a result of higher inflation than generally assumed when the budgets were approved, revenues will increase by less in real terms. The Central Bank forecasts that local government revenues will increase by just under 4% (5 b.kr.) in real terms, and expenditures on a similar scale. On the whole, broadly the same development is expected in 2007. A downturn is forecast for 2008, with municipal tax revenues remaining unchanged due to a contraction in employment and a drop in revenues from real estate tax as housing prices fall. Local government consumption is expected to grow by 3% in real terms in 2008 and investment by 10%. This would leave a local government deficit of 10 b.kr., equivalent to 0.8% of GDP.

Cyclical impulse for the Treasury

The Treasury balance is procyclical and generally improves during the expansion phase of the business cycle. Personal income tends to increase by more than the personal tax-free threshold and income tax is paid on a larger proportion of total earnings. As a rule, private consumption growth exceeds that of GDP, as shown by the blue line in Chart V-9. Imports increase and the composition of consumption changes as the króna appreciates, as it tends to do during upswings. More luxury goods in high tax brackets are purchased, so that indi-

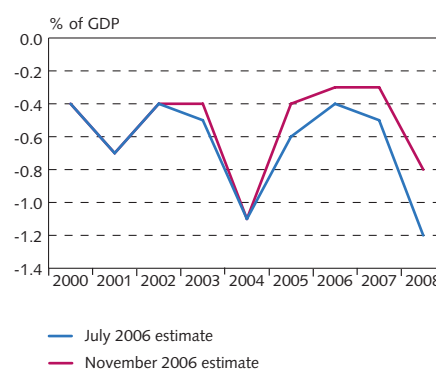
Table V-3 Local government 2005-2008¹

% of GDP	2005	2006	2007	2008
Local government revenues	12.4	12.6	12.6	12.3
Local government expenditures	12.8	12.9	12.9	13.1
Local government balance	-0.4	-0.3	-0.3	-0.8
Net local government debt	4.4	4.5	4.6	5.3
Total local government debt	7.5	7.6	7.8	8.5

1. National accounts presentation.

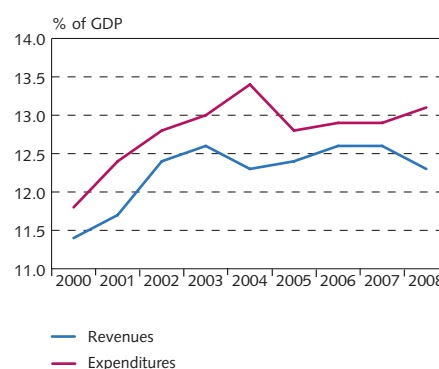
Sources: Ministry of Finance, State Accounts, Statistics Iceland, Central Bank baseline forecast 2006-8.

Chart V-7
Fiscal balance of municipalities 2000-2008



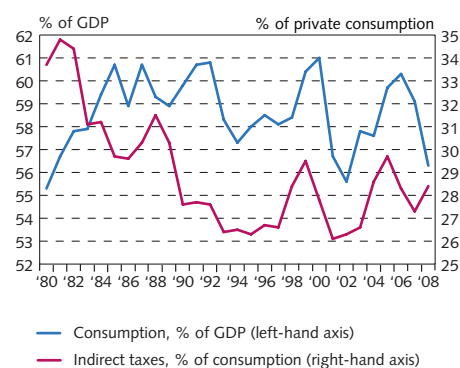
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

Chart V-8
Revenues and expenditures of municipalities 2000-2008



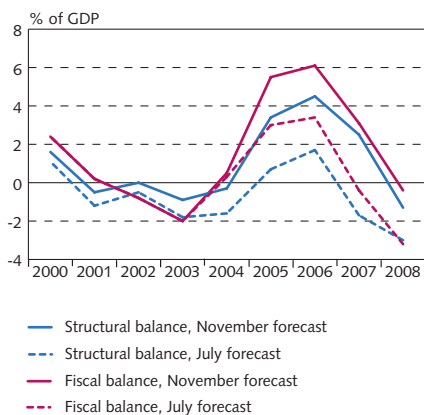
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

Chart V-9
Cyclical sensitivity of indirect taxes 1980-2008



Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

Chart V-10
Public sector structural balance
Forecasts in July and November 2006



Source: Central Bank of Iceland.

rect tax revenues increase by more than private consumption, as shown by the red line in V-9. Cyclicalities has much less effect on the local government balance and is primarily transmitted through real estate taxes which account for around 10% of their revenues.

Chart V-10 shows the structural budget balance according to the Central Bank's current baseline forecast and the forecast in July. The improvement is mainly the result of the more positive balance in 2005. However, the deviation of the structural from the actual balance for 2007 is marginally smaller than forecast in July, because of a less positive output gap. In 2008 the opposite applies. A wider output gap in the baseline forecast than estimated in July increases the deviation of the structural from the actual deficit.

Tighter monetary stance leads to deterioration in the fiscal balance

According to the scenario based on monetary policy responses, the public sector balance deteriorates sharply in 2007 and 2008. The combined deficit for both years would be 20 b.kr instead of the 60 b.kr surplus in the baseline forecast. The main factor at work is a drop in indirect tax revenues (60 b.kr. combined), because the total projected contraction under the scenario is 11½ percentage points greater than in the baseline forecast. These findings underline the crucial impact that sustained economic growth has on the strong fiscal balance. The increasing impact of corporate income tax on Treasury revenues may make it more prone to cyclicalities than before.

VI Labour market and wage developments

Unemployment is probably close to the lowest point it will reach during the current growth episode. Demand for labour is still robust, especially in the services sector. In a survey among the largest employers in September, the majority still report labour shortages, although fewer in the manufacturing sector wanted to recruit extra staff than in May. The inflow of foreign labour indicates that only a small part of excess demand for labour will be met domestically. Even though the increase in foreign labour in recent months has been well above forecast, sizeable wage pressures are likely to persist in the medium term.

Unemployment has reached a low

So far this year unemployment has been in line with the Central Bank's forecast published in *Monetary Bulletin* in July 2006, at 1.4%. Registered unemployment fell to 1% in September but the seasonally adjusted figure has remained unchanged since March at 1.3%. Unemployment over the whole of 2006 is forecast close to the current figure but will inch up next year and reach 3.5% in 2008.

Low unemployment is incompatible with price stability

The relation between unemployment and inflation in the current and previous upswings confirms that unemployment below the equilibrium rate of around 2½% is incompatible with the inflation target (see Chart VI-2).¹ Unemployment has been below 2% since the middle of 2005 and appears to have reached a low, while inflation has risen from just under 3% to 7.2% over the same period. A similar development was seen in the last upswing when unemployment plunged in spring 1999 and hit a seasonally adjusted low of 1.1% in October 2000. Inflation increased at the same time and was up to 6% a year later.

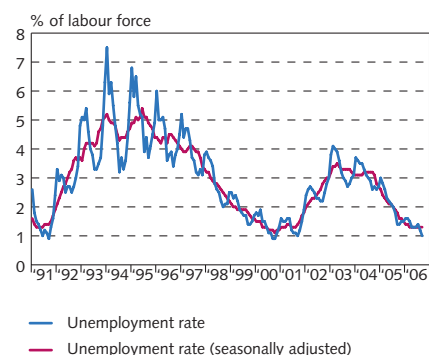
Domestic labour use is still on the increase ...

Statistics Iceland's labour market survey for Q3/2006 indicates considerable further growth in labour use according to all criteria. The number of employed increased by 5.7% from the corresponding quarter in 2005 and the participation rate by 1.1 percentage point to 84.2%. The outlook is that the participation rate for the whole of 2006 will be close to the peak of 83.6% in 2001. Total hours worked were up by 6.2%, outpacing the growth in the number of employed due to an increase of 0.3 in average hours worked per week. Labour use, measured in terms of total hours worked, increased by considerably more in the Greater Reykjavik Area (7.9%) than in regional Iceland (3.2%).

... and growth in foreign labour remains buoyant ...

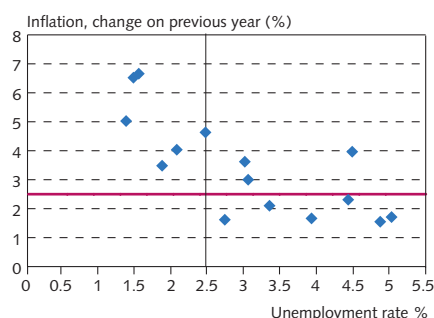
Recent statistics reveal how excess demand for labour in recent years has been met by labour imports. In 2005, more than 9,000 foreign

Chart VI-1
Unemployment rate
January 1991 - September 2006



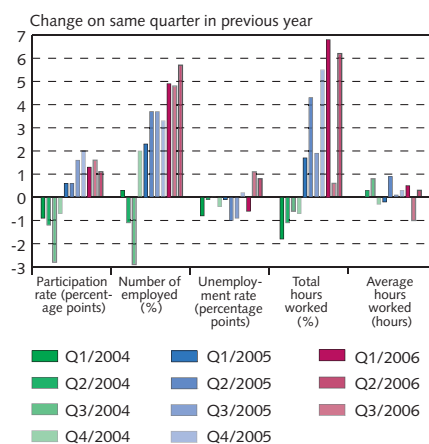
Sources: Directorate of Labour, Central Bank of Iceland.

Chart VI-2
Unemployment and inflation 1991-2005



Sources: Directorate of Labour, Statistics Iceland.

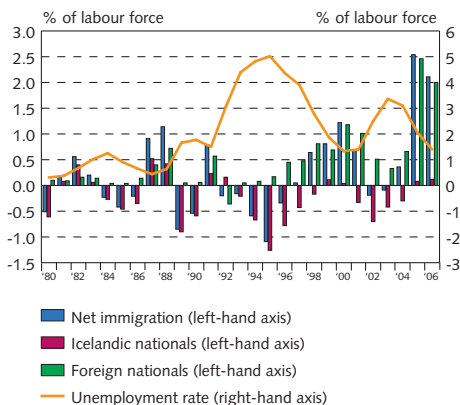
Chart VI-3
Changes in labour market
2003-2006



Source: Statistics Iceland.

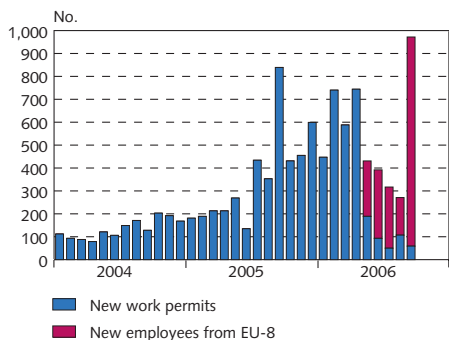
1. See e. g. Box 1, Equilibrium unemployment and labour market pressures, *Monetary Bulletin* 2001/4, 6-7.

Chart VI-4
Net immigration and unemployment
1980 - June 2006



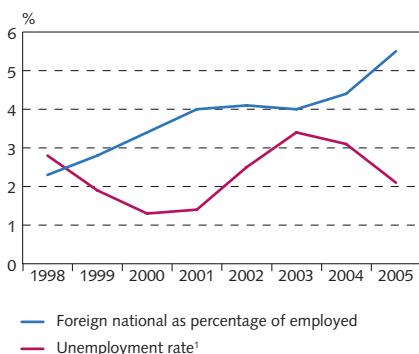
Sources: Directorate of Labour, Statistics Iceland.

Chart VI-5
Issuance of new work permits and new employees from EU-8 accession countries
January 2004 - September 2006



Source: Directorate of Labour.

Chart VI-6
Unemployment and foreign nationals as percentage of employed 1998-2005



1. % of labour force.
Sources: Directorate of Labour, Statistics Iceland.

nationals were employed in Iceland, or 5.5% of the total number of employed in the labour market. Net immigration of foreign nationals amounted to 3,000 in the first half of 2006, compared with 3,700 over the whole of the previous year. Also, more Icelandic nationals have returned than emigrated both this year and in 2005, but as in the last upswing this group accounted for only a fraction of the labour force, at around 0.1%.

Since May 1, 2006, nationals of the new EU accession countries (EU-8) do not need work permits in Iceland, but their employers are obliged to notify the Directorate of Labour about their recruitment.² From May 1 to the end of September, more than 2,500 notifications were made and almost 1,900 of these employees were newcomers to the Icelandic labour market. Adding this figure to the number of temporary work permits issued produces an increase in labour registration of almost 2,400 (17%) compared with the same period in 2005. Furthermore, at the end of September over 800 employees were registered with temporary employment agencies.

... despite less demand from the power and aluminium sectors

More than 30% of new work permits in the first four months of 2006 were issued for employees working for Bechtel or Impregilo on projects in the power and aluminium sectors in east Iceland, and a further 10% in connection with other construction activities in the region. Construction contractors elsewhere in Iceland accounted for 23% of permits, and the retail and services sector for almost 20%.

The change in work permit rules on May 1 has caused a marked shift in the destination of foreign employees arriving in Iceland. In recent weeks only 10% of new ID numbers have been issued to foreign nationals living in east Iceland. By comparison, this group accounted for more than 40% of new work permits issued in the first four months of this year, which is a similar level to 2004-2005. These figures are consistent with the estimated labour requirement for projects in the power and aluminium sectors in east Iceland, which was expected to peak in Q2/2006.

Permanent immigration increases

EU-8 nationals accounted for 70% of new work permits issued in 2005, and 84% in 2006 until the legislative change on May 1. From the summer until the end of August, around 4,000 ID numbers were issued to foreign nationals who were not permanent residents in Iceland, with EU-8 nationals accounting for 60%.³

The main change for EU-8 workers after May 1 is that they can now enter Iceland without arranging a job in advance, and a growing number appear to be doing so. National registry figures also indicate that some are arriving with their whole families, whereas previously it

2. With the accession of 10 new states to the EU on May 1, 2004, free movement of labour was immediately allowed for nationals of Cyprus and Malta but postponed for nationals of the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.
3. While ID numbers are not issued solely to immigrants who intend to work in Iceland, the majority can be expected to do so.

was most common for the breadwinner to arrive first and the family to follow.⁴ Foreign nationals may therefore be expected to remain in Iceland in growing numbers even if demand for their labour shrinks. During the economic downturn of 2001-2003, the number of employed foreign nationals remained unchanged.

Almost 40% of businesses still want to recruit

A survey conducted in September among the 400 largest businesses in Iceland revealed that fewer plan to recruit extra employees in the next few months than in the May survey, and more want to keep their staffing level unchanged.⁵ Nonetheless, almost 40% of businesses still want to recruit. The proportion wanting more staff is virtually unchanged in the Greater Reykjavík Area but has declined in regional Iceland.

The sharpest turnaround in sentiment has been in the construction and power utility sectors. In September only one out of four companies wanted to take on more employees, compared with just over 56% in May. Some 16% of construction businesses now want to cut back their staff numbers, as against only 4% before. Manufacturing companies showed considerably less interest in extra staff in September than in May. However, half the companies in the retail sector wanted to recruit, but only one out of four in the previous survey.

Wage rises surpass the peak of 2002

Following the agreement between the Federation of Labour (ASÍ) and Confederation of Employers (SA) on a reviewed wage settlement effective from July 1, private sector wages rose by 3.9% from Q2/2006 to Q3. The twelve-month increase in the wage index for the entire labour market measured 10.8% in September, which is higher than when wage inflation peaked in 2002. Sharp nominal increases boosted real wages by more in Q3/2006 than the preceding quarter, in spite of a rise in inflation from 7% to 8.2%.

One consequence of the ASÍ-SA wage agreement has been considerably higher wage increases than were forecast at the beginning of 2006 without a corresponding increase in productivity. According to the current Central Bank forecast, unit labour costs will increase by 8.2% year-on-year. This increase is somewhat less than in the previous forecast, as a result of two factors. First, the unexpected surge in foreign labour since May has been taken into account in the current forecast, causing lower wage drift. Second, wages have changed by less from July until September than previously forecast. The Central Bank's estimate for the increase in unit labour costs has been revised downwards accordingly. Due to intense labour market pressures, some wage drift is still forecast as a result of the July agreement, but

4. A similar trend has taken place in other Nordic countries recently. See e.g. The Nordic Labour Market two years after the EU enlargement. *TemaNord* 2006:558.

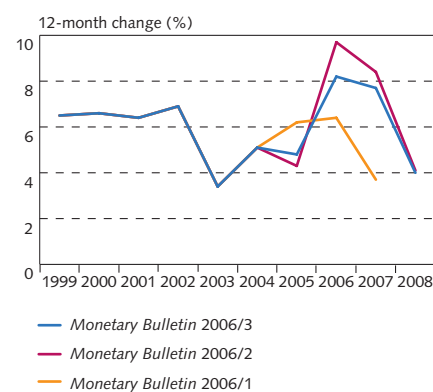
5. Gallup survey for the Central Bank, Ministry of Finance and Confederation of Employers (SA), September 2006.

Chart VI-7
Wage index and real wages
2000 - September 2006



Source: Statistics Iceland.

Chart VI-8
Unit labour cost 1999-2008¹



1. Estimated for 2005. Central Bank forecast 2006-2008.
Source: Central Bank of Iceland.

this is now expected to emerge later. Forecast growth in unit labour costs in 2007 has been revised downwards to 7.7%. For 2008, on the other hand, the same increase is expected as before.

Unit labour costs are incompatible with the inflation target, unless the monetary stance is tightened

Although lower in 2006 and 2007 than in the June forecast, the increase in unit labour costs is still well above what was expected at the beginning of this year. Inflation pressures from the domestic labour market will therefore remain strong, since labour costs will continue to increase at far too fast a rate to be compatible with the inflation target. In the alternative scenario based on monetary policy responses, growth of unit labour costs will align with the inflation target from mid-2008.

VII External balance

In the last *Monetary Bulletin* in July, the Central Bank forecast that the current account deficit would narrow in 2006 from the previous year. This will not turn out to be the case. The 2006 current account deficit is much higher, heading beyond one-fifth of GDP. Conceivably this indicates that domestic demand growth was underestimated, or that the timing of imports of capital goods for investments in the power and aluminium sectors has not followed the expected pattern. Imports of goods and services in the first half of the year were broadly in line with forecasts, but exports were down. Hefty goods imports in Q3/2006 may indicate more import growth than had been assumed.

The current account deficit continues to widen

The current account deficit in Q2/2006 amounted to more than 65 b.kr. and deteriorated by 7.2 b.kr. from the previous quarter. A deficit was shown on all main accounts and grew from Q1 (see Chart VII-1). The lion's share (4/5) of the increased deficit was explained by greater investment, but the share of private consumption was considerably larger in Q2.

Most of the current account deficit over the first six months of 2006 originated in trade in goods and services. However, the income account deficit doubled year-on-year as well. Interest payments increased by more than 10 b.kr. (42%) quarterly in Q2/2006. Since the external debt position increased by 15% over the same period, much of the rise in interest payments may be explained by exchange rate movements and poorer credit terms.

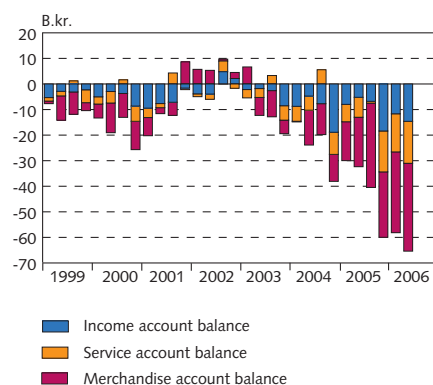
A total deficit of almost 95 b.kr. was shown on the merchandise account over the first eight months of 2006 compared with just over 63 b.kr. over the corresponding period in 2005, measured at constant exchange rates. As reported in *Monetary Bulletin* in July, the merchandise deficit is driven by surging import growth. Statistics Iceland calculations show that import volume has increased by almost 12% year-on-year but total import value by almost 30%. Over the same period, export volume has contracted by 6% but its nominal value grown by more than 15%. Capital and intermediate goods for aluminium-related investments still account for a large share of total imports, but investment has now peaked, so a sharp contraction is expected in this component of imports in the coming months. However, imports of consumer goods have not declined much this year and car imports, for example, are still brisk, even though year-on-year figures have been down in recent months.

The service account deficit stood at 31 b.kr. in the first half of 2006, having more than doubled year-on-year. Tourism revenues amounted to 10½ b.kr. over the first six months, while expenditure by Icelandic tourists abroad was in excess of 35 b.kr.

Foreign debt still increasing

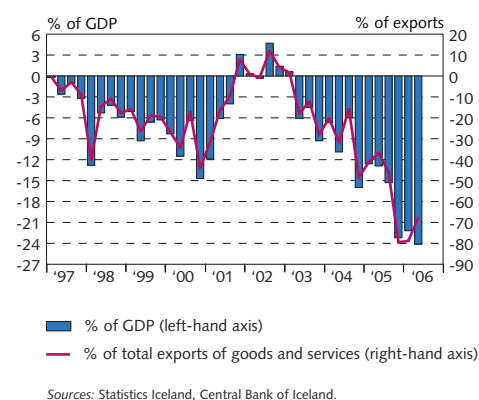
The wider current account deficit and depreciation of the króna since Q1/2006 caused the external position to deteriorate in Q2. The net external position was negative by the equivalent of 119% of estimat-

Chart VII-1
Current account balance components¹
Q1/1999 - Q2/2006



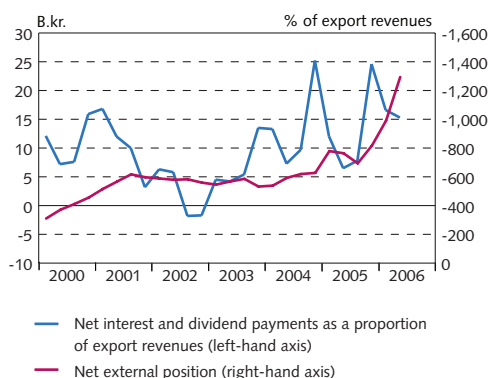
1. Net current transfer is included in balance on income.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VII-2
Quarterly current account balance
Q1/1997 - Q2/2006



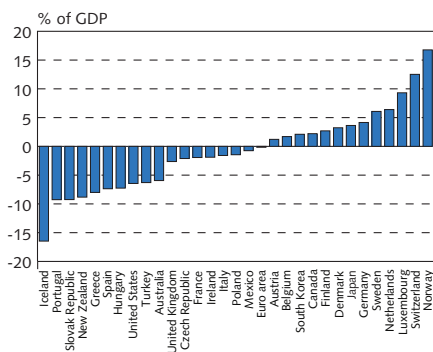
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VII-3
External position and payments
Q1/2000 - Q2/2006



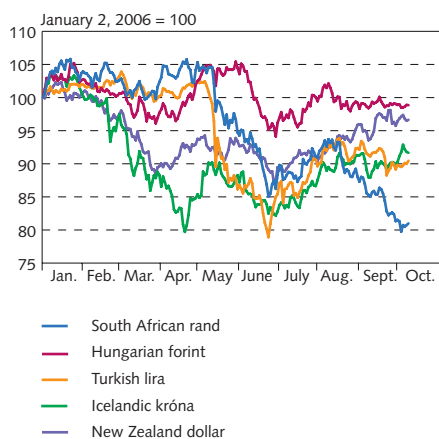
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VII-4
Current account balance of OECD countries as % of GDP 1991-2005



Sources: OECD, Reuters EcoWin

Chart VII-5
Exchange rate of selected high interest-rate countries against the US\$
January 2, 2006 - October 10, 2006



Source: Reuters EcoWin.

ed GDP for the year. Total external debt grew by 646 b.kr. over the first half of 2006. Foreign direct investment by residents was up by 75 b.kr. year-on-year in Q2, while non-residents increased their direct investments in Iceland by 35 b.kr. over the same period.

Net foreign interest and dividend payments have soared as a proportion of export revenues. In the first half of 2005 they were equivalent to just about 9% of Iceland's total export revenues, but were up to 16% in the first half of this year. Higher international interest rates will probably turn this trend even more negative in the near future. An offsetting factor is the expected increase in export revenues from aluminium production.

Unparalleled current account deficit among OECD countries

Iceland is unparalleled among OECD countries for the scale of its current account deficit (see Chart VII-4), even though many others are currently grappling with large foreign trade deficits. In 2005, Iceland's current account deficit was equivalent to 16.2% of GDP. Among OECD countries since 1960, the countries with the closest deficits have been Portugal with 15% in 1982, Ireland with just under 13% in 1981 and Norway with just over 12% in 1977.

Iceland's pronounced macroeconomic imbalances do not seem to have deterred international investors from issuing glacier bonds (króna-denominated Eurobonds). Issuance slumped at the end of Q1/2006 and remained low for the next quarter. Around mid-year, however, it picked up again and has been steadily increasing, although monthly issuance has not reached the peaks witnessed in autumn 2005 and the beginning of this year (see Chart VII-6). Higher short-term interest rates and a more upbeat appraisal of the position of Iceland's commercial banks may have encouraged issuance. However, the impulse is just as likely to have come from a global trend, because carry trades have also been rallying in other high interest-rate countries after a slump around the same time as in Iceland.

As discussed in Section III, the interest rate differential with abroad has widened sharply in recent months. Although policy rates have gone up in most OECD countries over this period, the Central Bank of Iceland's policy rate has been raised proportionally more. Since the beginning of June the Central Bank has raised its policy rate by 1.75 percentage points and the short-term interest rate differential with abroad has widened by almost 1.3 percentage points (see Chart VII-7).

It is difficult to determine the implications that carry trades have for the long-term strength of the króna. A major test of the stability of the currency came in mid-September when the first round of glacier bond maturities arrived. The króna weakened slightly on the day when 30 b.kr. matured, but had appreciated considerably in the preceding days. That week the króna appreciated by 1½% in all, so currency transfers in connection with glacier bond settlements that day had little discernible impact on the exchange rate. This is consistent with the experience of New Zealand, whose dollar has been used in carry trades for many years. Be that as it may, many investors perhaps closed their positions when the króna depreciated earlier in the year,

so that the impact of the maturities was transmitted well in advance. The same could happen in 2007.

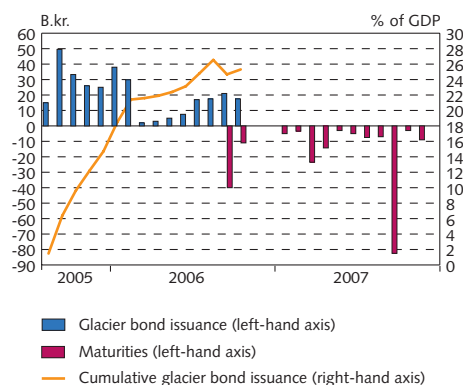
Exchange rate developments over the next few years will be determined by the interaction between the interest rate differential with abroad, expectations about domestic economic developments and global financial conditions. In Iceland's case developments in Europe will prove crucial, but distant economies such as China and Japan could possibly have a substantial indirect effect. Higher interest rates in Japan could severely subdue global carry trades and have a contagion effect in Iceland, even though most glacier bond investors are probably in Europe. There are many indications that further rises in foreign interest rates lie ahead, which other things being equal will reduce interest rate differentials. A slowdown in global economic growth could delay this scenario, however. The next major round of glacier bond maturities (80 b.kr. in September 2007) could have a sizeable impact on the exchange rate of the króna, especially if the interest rate differential narrows until then. However, the timing of this impact is difficult to estimate.

Iceland's enormous current account deficit ought to prompt investors to consider the risks of króna-denominated investments. Until now, most foreign investors have opted to ignore it. The strong Treasury position is one factor cited by Icelandic and international analysts as offsetting the major prevailing macroeconomic imbalances. Criticism of the large and growing current account deficit has been countered by pointing to the Treasury's substantial foreign borrowing capacity implied by its strong debt position and favourable balance. A fiscal deterioration could therefore significantly affect foreign investors' attitudes towards the current account deficit – and to the tightness of the monetary stance. Experience shows that investor risk assessments can change suddenly and exert a strong impact on the terms available to Icelandic borrowers abroad.

Current account deficit will peak this year but narrow quickly in 2007

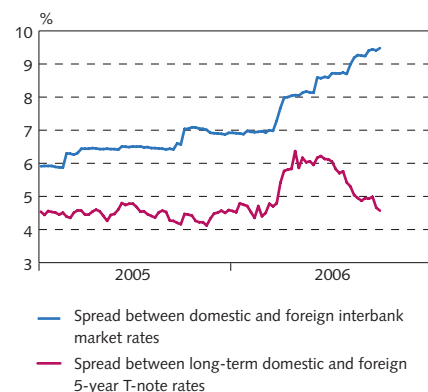
In the Central Bank's baseline forecast, the current account deficit in 2006 widens sharply year-on-year, contrary to the forecast in *Monetary Bulletin* in July. The deficit for the whole year is forecast to reach almost 21% of GDP for 2006, which is more than 5 percentage points above the July forecast, then to shrink sharply in 2007 and 2008, albeit remaining at a sizeable 8% of GDP at the end of the second year. In *Monetary Bulletin* in July, the greatest uncertainty involved possible drivers of a widening current account deficit, which has turned out to be the case. The dip in exports in Q2-Q4 is the main factor at work. Imports have also decreased more slowly than forecast, but the current forecast is for a faster contraction in 2007. The baseline forecast also assumes less increase in export prices this year and in 2007, and higher import prices.

Chart VII-6
Glacier bond issues¹



1. Data until October 10, 2006 inclusive.
Source: Reuters.

Chart VII-7
Interest rate differential with abroad
Weekly data January 4, 2005 - October 10, 2006



Source: Central Bank of Iceland.

Foreign trade imbalances will unwind much faster with a tighter monetary stance

If the Central Bank's policy rate follows the path assumed in the alternative scenario based on monetary policy responses, domestic demand will shrink much faster later on in the forecast period and thereby contribute to reducing imports. This would cause the current account deficit to narrow much faster than in the baseline forecast, to end up one percentage point smaller in 2007 and the equivalent of 4% of GDP in 2008, which is half the deficit in the baseline forecast.

VIII Inflation developments and inflation forecast

Inflation developments

Lower-than-expected inflation in Q3/2006

Inflation has turned out somewhat lower than the Central Bank forecast in July. In Q2/2006 it was marginally lower than forecast, at 7.5%.¹ In the third quarter, inflation measured 8%, which was 1.5 percentage points below the forecast. This is explained by the appreciation of the króna since July, along with a rather more favourable development of unit labour costs than was expected. Also, lower prices of energy and other irregular items have had a considerable impact on the CPI.

Base effect and volatile index components largely explain disinflation since August

The inflation rate has slowed down slightly since *Monetary Bulletin* was published in July, when it measured 8% after a surge since February. The twelve-month rise in the CPI peaked at 8.6% in August, but was down to 7.2% in October. Inflation is therefore almost 5 percentage points above the target, however.

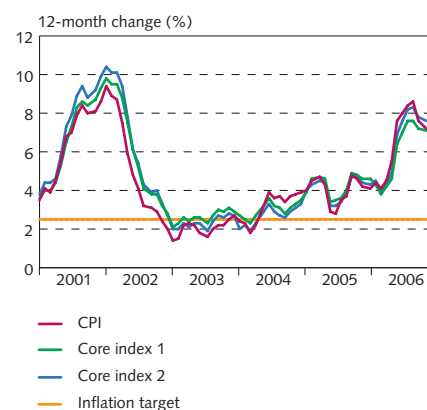
Lower inflation in September and October is mainly explained by the base effect of price rises a year before and a reduction in prices of certain volatile index components, especially petrol. The base effect of the 1.5% rise in the CPI in September 2005 has now passed out of the index. Disinflation over the past two months is therefore only a partial indication of easing inflationary pressures, although domestic demand growth is admittedly beginning to slow down and the recent appreciation of the króna has some dampening effect. In October, the króna was on average almost 12% stronger than at the beginning of July.

Broadly the same trend is shown by the CPI excluding housing prices. The twelve-month rate of increase rose to 7% in August but was down to 5.6% at the beginning of October. Housing costs have contributed marginally less to inflation since June, although they still account for 2.8 percentage points of the rise in the CPI over the past year.

In October, Core index 1 had risen by almost as much over the preceding twelve months as headline inflation, and Core Index 2 by somewhat more, at 7.6%.² Inflation has therefore spread more widely through the economy.

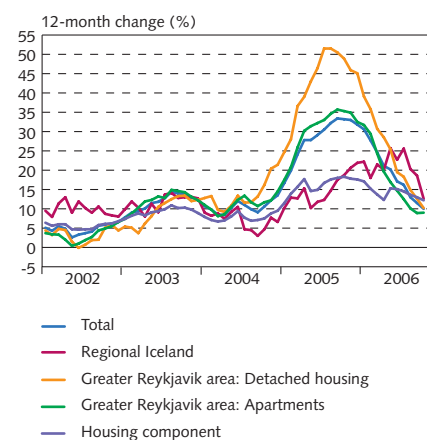
Despite the lower contribution of the housing component to inflation, an increase in the cost of owner-occupied housing was one of the main drivers of the rise in the CPI since *Monetary Bulletin* was published at the beginning of July. Increased prices of private sector services and domestic food and beverages (excluding agricultural products and vegetables) also had a substantial impact, but were offset by lower petrol prices.

Chart VIII-1
Inflation January 2001 - October 2006¹



1. The core indices are compiled on the same basis as the CPI, with Core index 1 excluding prices of vegetables, fruit, agricultural products and petrol, and Core index 2 also excluding prices of public services.
 Source: Statistics Iceland.

Chart VIII-2
The CPI housing component and market prices of housing January 2002 - Oct. 2006

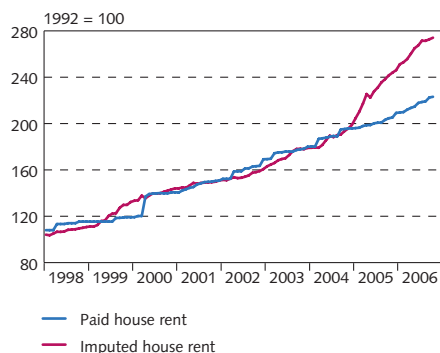


Source: Statistics Iceland.

1. This is 0.1 percentage point lower than in the forecast published in *Monetary Bulletin* in July, which was prepared when the second quarter was almost over.

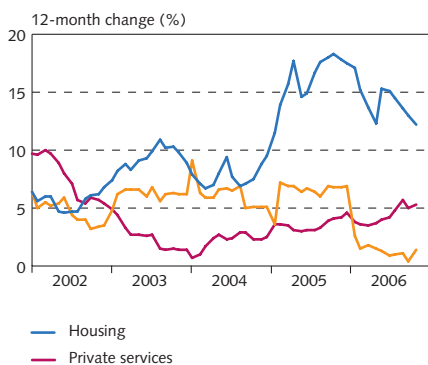
2. Core index 1 is the CPI excluding prices of vegetables, fruit, agricultural products and petrol, and Core index 2 also excludes prices of public services.

Chart VIII-3
Paid and imputed house rent
January 1998 - October 2006



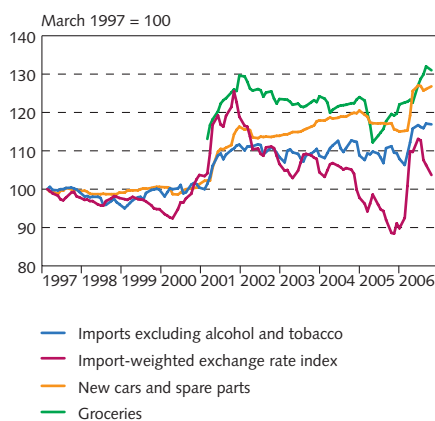
Source: Statistics Iceland.

Chart VIII-4
Prices of housing and services
January 2002 - October 2006



Source: Statistics Iceland.

Chart VIII-5
Import-weighted exchange rate and import prices
March 1997 - October 2006



Source: Statistics Iceland.

Gradual reduction in housing price inflation

Housing price inflation has been gradually decelerating in recent months after a spike in May. At the beginning of October the twelve-month rise in the housing component was just over 12%, compared with 15% in June. The spike in May was caused by the base effect of a change in the housing component twelve months before, which then passed out of the index. In May 2005, Statistics Iceland shortened the reference period for computing real interest costs of housing from five years to twelve months, which shaved 0.45 percentage points off the CPI. As a result of the new methodology, the impact of changes in mortgage interest rates is passed through to the index more quickly. Besides the disappearance of the base effect, the change in methodology is beginning to exert upward pressure on the CPI as mortgage interest rates climb.

Owner-equivalent (imputed) rent is calculated from the market price of housing and mortgage interest cost. Following the Central Bank's policy rate hikes, new mortgage rates have gone up. Their impact was first felt on the CPI at the end of 2005 and has been intensifying in recent months, adding almost 0.6 percentage points so far. In recent months, housing price inflation has been slowing down significantly. In October, the twelve-month rise in market prices of housing was 10%, compared with more than 17% when *Monetary Bulletin* was published in July. The composition of imputed rent has shifted as a result. Over the past three months, interest rate changes were the main driver of rises in imputed rent. When transmitted in full, the impact of higher interest rates on housing cost could add 0.6-1 percentage points to the CPI. Imputed rent could therefore rise even if housing prices remain unchanged or even drop.

Housing price disinflation has been slower than was forecast in July. Demand in the housing market still seems quite firm, which bolsters prices in spite of tighter credit supply, higher finance costs and high inflation. Market prices of housing have risen by 0.8% a month on average since the beginning of the year, but the rate of increase has slowed down significantly over the past quarter. New lending for housing purchases and the number of sale agreements have also declined. Stimulatory measures such as raising the Housing Financing Fund's (HFF) loan-to-value ceiling again, which has been under discussion, would boost purchasing power in the housing market and delay the adjustment, causing inflationary pressures.

Appreciation of the króna hampers the full pass-through to prices from the depreciation that preceded it

The sharp depreciation of the króna earlier this year was transmitted quite rapidly to prices and was felt in particular through prices of new motor vehicles, petrol and imported food and beverages. In recent months the króna has appreciated again in tandem with sizeable hikes in the policy rate, increased issuance of glacier bonds (króna-denominated Eurobonds) and more upbeat sentiment about the Icelandic economy. The exchange rate index has decreased steadily since the beginning of July and dipped below 120 early in October. This appreciation has already passed through to lower energy and food prices.

Other effects have been muted, probably because the impact of the depreciation earlier in the year had not been transmitted in full and domestic demand has remained relatively strong.

The twelve-month rise in prices of imported food and beverages peaked in August at almost 18% but had dropped below 10% in October. As may be expected, import price inflation has come down as the króna appreciates. In October, prices of imported food and beverage prices fell for the first time since March. Prices of new cars have remained virtually unchanged over the past three months. Petrol price changes are a major uncertainty in the inflation profile, since they are sensitive to two factors which have been very volatile in 2006: world market prices of oil and the exchange rate of the króna. The massive rise in petrol prices just over a year ago began to unwind in September, bringing the twelve-month rate of increase down from just over 15% to just over 6%, and in October it measured 4½%.³

Underlying inflationary pressures affect most index components

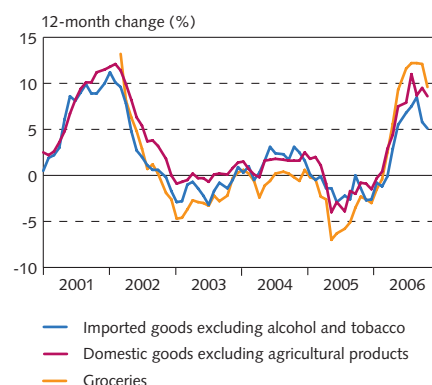
The impact of the depreciation of the króna earlier this year also appeared in prices of domestic goods, which rose quite sharply in the summer, especially for agricultural products, vegetables and other domestic food and beverages. In many cases, domestic production depends on imported raw materials which went up in price when the króna slid, and competition with foreign substitute goods also links prices to exchange rate developments. Wages have risen considerably as well, putting upward pressure on domestic prices. The twelve-month increase in domestic goods prices peaked in July at 10½%, but declined to just over 8½% after a surprise drop in food prices in October. Grocery prices fell by 0.7% then, lowering the CPI by 0.1 percentage point.

Price rises have gradually become more general in recent months instead of being confined to relatively few categories: a larger proportion of CPI components have shown monthly increases. Underlying inflationary pressures are clearly present in more index components than before, as groceries and imported goods take over from housing prices as the main driver of inflation.

Services price inflation could go even higher

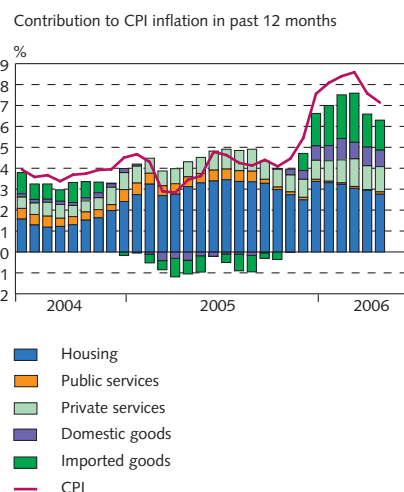
Prices of private sector services have been edging up in recent months to a twelve-month increase of more than 5%. Wage-related service components of the CPI jumped in August, after rises agreed in the settlement between the Federation of Labour (ASÍ) and Confederation of Employers (SA) which took effect on July 1. Increases in private sector services prices drove up the CPI by 0.3 percentage points. In Q3/2006, the private sector wage index rose by more than 11% year-on-year. During the last upswing, twelve-month wage rises peaked in Q1/2001. Private sector services followed suit and their twelve-month rate of increase peaked a year later, in Q1/2002. Nor are they immune to exchange rate movements. In recent years there has been a correlation between services inflation, wage rises and

Chart VIII-6
Goods prices January 2001 - October 2006



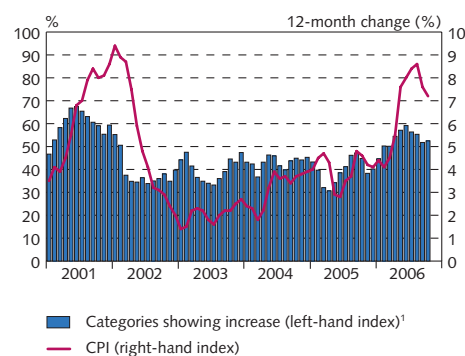
Source: Statistics Iceland.

Chart VIII-7
Components of the CPI
June 2004 - October 2006



Source: Statistics Iceland.

Chart VIII-8
Distribution of price increases in CPI
January 2001 - October 2006



1. 3-month average in central month.
Source: Statistics Iceland.

3. Petrol and fuel oil carry a weight of just over 6% in the CPI.

Box VIII-1

Financial market
analysts' assessments of
the economic outlook

The accompanying table shows the survey responses of financial market analysts in mid-October. Participants in the survey were the research departments of Glitnir (previously Íslandsbanki), Kaupthing Bank and Landsbanki, and Economic Consulting and Forecasting.

In addition to the information presented in the table, analysts were asked to give an assessment of the Central Bank's policy interest rate path, i.e. on the timing of the policy rate cycle's peak and trough within the forecast horizon, and what the Central Bank's next policy rate decision would be when the current *Monetary Bulletin* was published.

The main changes from the June survey (published in July) are that analysts have revised their forecast for output growth marginally downwards and expect considerably lower inflation, a lower policy rate and stronger króna in 2007. Forecasts for 2008 are also included in the survey.

Analysts forecast sharp drop in inflation in 2007

Analysts forecast year-on-year inflation in 2006 of just under 7%, which is slightly lower than their expectations in the previous survey in June. This is roughly the same inflation rate as in the Central Bank's baseline forecast, which incorporates analysts' forecasts for the medium-term policy rate path. In 2007, survey respondents expect an inflation rate of just over 3%, while the Central Bank's baseline forecast is considerably higher, at 4½%. Their forecast of 3½% year-on-year inflation in 2008 is also slightly lower than the baseline forecast, but higher than the alternative scenario based on monetary policy responses, which is close to the 2.5% inflation target.

One of the main changes since the June survey is that, on average, analysts expect the Central Bank to have attained the inflation target one year ahead. In fact, one respondent forecasts virtually zero inflation one year ahead. It should be borne in mind that the current forecast, unlike previous ones, takes into account planned government measures to cut food prices.

Marginally lower output growth outlook over the forecast period

Analysts have revised their forecast for output growth for 2006 and 2007 slightly downwards from the June survey. On average they expect 4% growth this year and just under 1% in 2007. The Central Bank's baseline forecast projects rather more growth (1½%) next year. Forecasters are unanimous about a sharp slowdown in economic activity in 2007 and one of them expects a contraction. They also agree that the economy will pick up in 2008, although their projections differ. On average they forecast growth of just over 3½% in 2008, with one projecting a 6% figure based on the assumption of further investment in the power and aluminium sectors. By comparison, the Central Bank's baseline growth forecast for 2008 is just under 3%, while the alternative scenario based on monetary policy responses projects a contraction of almost 2%.

Króna stable across the forecast horizon

The króna has strengthened again recently and analysts have upped their forecasts for next year compared with June. They foresee an exchange rate index of 125 both one and two years ahead. The majority expect it to lie in the range 122-130 across the forecast horizon, but one projects a slightly higher value.

Policy rate expected to have peaked

The Central Bank has raised its policy interest rate three times since the last *Monetary Bulletin* was published in July, by 1.75 percentage points in all to 14%. Analysts have revised their policy rate forecasts downwards for one year ahead but left their forecast two years ahead virtually unchanged. On average, they expect a policy rate of just over 11% one year ahead, dropping back to around 9½% two years hence. They were also asked to forecast the next policy rate decision, and the peak and trough of the policy rate over the next two years. Most forecast no change on the scheduled interest rate decision day of November 2 and a reduction in Q1/2007, but one expects a hike of 0.5 percentage points to 14.5% and a steady high rate across the horizon. The others expect the policy rate to reach a trough in 2008, in the range 7-8.5%. One forecaster assumes that new investments will be made in the power and aluminium sectors in 2008 and that the policy rate will begin to rise again that year.

Housing prices likely to fall in 2007

Conditions in the equity market have turned around in recent months. On October 18, Iceland Stock Exchange's ICEX-15 index stood at almost 6,500, up by close to 20% since the analysts' last forecast in June. Most respondents agree that equity prices will continue to climb and forecast an ICEX-15 index value of just over 7,100 on average one year ahead. However, one forecaster believes that equity prices will drop both one and two years ahead.

For the first time, analysts expect lower housing prices on average across the forecast horizon, with a 1½% fall in 2007.

Overview of forecasts by financial market analysts¹

	2006			2007			2008		
	Average	Lowest	Highest	Average	Lowest	Highest	Average	Lowest	Highest
Inflation (year-on-year)	6.9	6.8	7.0	3.1	2.5	3.7	3.4	2.7	4.3
GDP growth	4.0	3.2	5.1	0.8	-0.2	1.7	3.7	2.3	6.0
	One year ahead			Two years ahead					
Inflation	1.8	0.3	3.2	3.4	2.1	4.3			
Effective exchange rate index of foreign currencies vis-à-vis the króna (Dec. 31, 1991=100)	125	118	130	125	117	130			
Central Bank policy interest rate	11.2	9.5	14.3	9.6	7.0	14.5			
Nominal long-term interest rate ²	7.2	3.6	9.5	6.5	3.4	8.2			
Real long-term interest rate ³	4.8	3.5	7.6	4.5	3.5	7.2			
ICEX-15 share price index (12-month change)	7,173	6,000	7,800	8,013	6,000	9,100			
Housing prices (12-month change)	-1.5	-6.0	5.0	-0.1	-3.0	2.9			

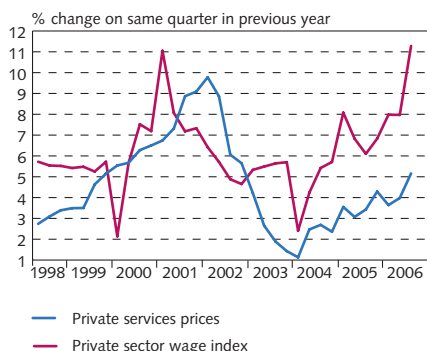
1. The table shows percentage changes between periods, except for interest rates (percentages) and the foreign exchange rate index and ICEX-15 index (index points). Participants in the survey were the research departments of Glitnir (previously named Íslandsbanki), Kaupthing Bank and Landsbanki, and Economic Consulting and Forecasting. 2. Based on yield in market makers' bids on non-indexed T-notes (RIKB 13 0517). 3. Based on yield in market makers' bids on indexed Housing Financing Fund bonds (HFF150644).

Source: Central Bank of Iceland.

Chart VIII-9

Private sector wage index and private services prices

Q2/1998 - Q3/2006

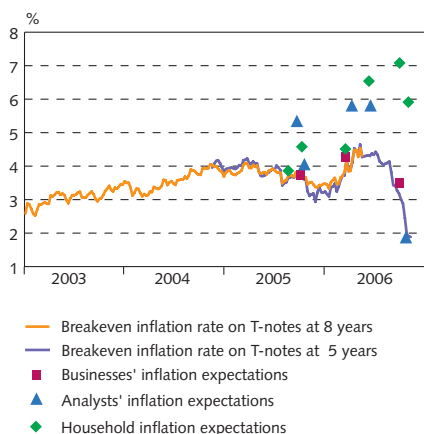


Source: Statistics Iceland.

Chart VIII-10

Inflation expectations

Weekly data January 7, 2003 - October 31, 2006

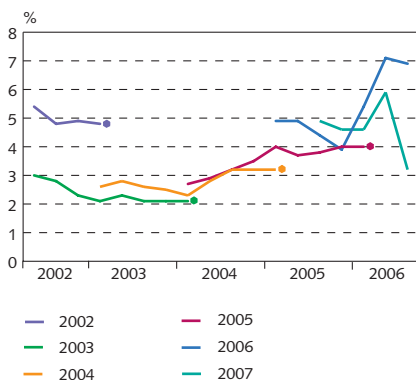


Household, business and analysts' expectations are based on inflation one year ahead.

Source: Central Bank of Iceland.

Chart VIII-11

Financial market analysts' forecasts for average year-on-year inflation¹



1. Points show actual rate of inflation for each year.

Source: Central Bank of Iceland.

currency depreciations. Historical experience and the development of underlying domestic cost pressures recently and in the near future could indicate that services price inflation will continue to increase in the next few months.

Public sector services prices have increased by only 1½% over the past twelve months. The main contributions recently have been an 8½% reduction in pre-primary education fees in September and an 8% rise in TV licence fees in October. Little change in public services prices is likely this winter, in the run-up to the general election next spring.

Inflation expectations have softened

Inflation expectations have softened recently, as reflected not only in spreads between nominal and indexed bonds but also in business sentiment and expectations of financial market analysts and households. Lower expectations probably reflect lower inflation in September and October, the government's announcement of measures to cut food prices and the tighter monetary stance.

In Gallup's household confidence survey conducted from October 5 to 18, households expected average inflation of just below 6% over the following twelve months, compared with 7.3% in the preceding survey in August. Business expectations of inflation are also down from early this year. A survey of business sentiment conducted among Iceland's largest companies from September 5 to 27 revealed that executives expect 3½% inflation on average over the next twelve months and 5½% in total over the next two years. This implies that inflation will be at the target in 2008. In a similar survey in February, they expected average inflation of more than 4% twelve months ahead.

The survey in Box VIII-1 on pp. 42-43, conducted in October, reveals a drop in financial market analysts' inflation expectations for 2006 and 2007 compared with the survey conducted in June for the July *Monetary Bulletin*. They now forecast year-on-year inflation of just below 7% on average in 2006 but expected slightly more before. For 2007 the analysts have slashed their forecast from almost 6% to just over 3%. Most of the drop in inflation expectations may be attributed to government measures to cut food prices, which will lead to a temporary downturn in measured inflation, as discussed below.

Measured by the breakeven inflation rate on bonds with a maturity of five years, expectations are also down. Market agents expected average inflation of just over 3% over the bonds' maturity between July 4 and October 31, compared with almost 4½% as reported in *Monetary Bulletin* in July.

Inflation forecast

Since the publication of the last forecast in July, the Central Bank has raised its policy rate three times, by a total of 1.75 percentage points to the current 14%. Over the same period the króna has appreciated by almost 12%. The current forecast shows once again a rate of inflation two years ahead which is incompatible with the target, but the outlook has improved since the previous forecast.

A new presentation of the macroeconomic and inflation forecast was introduced in the previous edition of *Monetary Bulletin* and is

continued here.⁴ The baseline forecast is conditioned on the policy rate path expected by market agents and financial analysts. Two alternative scenarios are presented. One is based on an unchanged policy rate (14%) across the forecast horizon, while the other is conditioned on an endogenous policy rate path that delivers the inflation target at the end of the forecast horizon. The current forecast horizon is until Q4/2008.

Inflation outlook has improved but is still unacceptable

In the baseline forecast, the policy rate has already peaked and will gradually decrease across the forecast horizon to end at just above 8% in Q4/2008. The forecast implies a gradual depreciation of the króna to an index value of 130 at the end of the forecast horizon, which is 2% stronger than in the same quarter in the last baseline forecast.

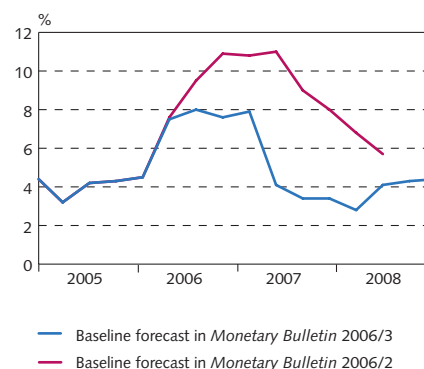
The baseline forecast projects a rate of inflation above the target for the entire forecast period. Nonetheless, the forecast for 2007 has been revised sharply downwards since July. It reaches a low of 2.8% in Q1/2008. Since the monetary stance is too lax, however, inflation picks up across the remainder of the forecast horizon to just under 4½% two years ahead. Thus the monetary stance needs to be considerably tighter than market agents and analysts expect if the target is to be achieved within the forecast period.

Cuts in indirect taxes will cause a temporary but sharp drop in measured inflation

Inflation prospects two years ahead are somewhat brighter than in the July forecast. This is particularly marked in 2007 and until mid-2008. The main explanation for the much lower measured inflation forecast for 2007 is the government's decision to reduce indirect taxes in order to lower food prices. These moves will reduce measured inflation from Q2/2007 to the same quarter of the following year, when their base effect passes back out of the CPI. As discussed in Section IX below, monetary policy should ignore the first-round effects of such actions, since they do not alter underlying inflation developments even though the headline figure changes.⁵

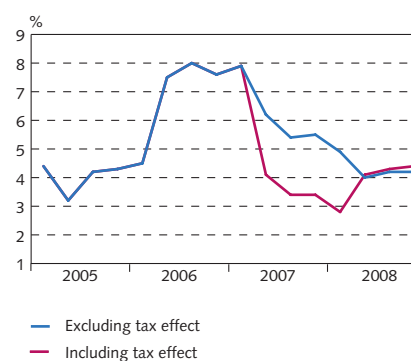
The normal measure of inflation under such circumstances would therefore be a core index excluding the impact of the tax cuts. Chart VIII-13 presents the effect of the tax reductions on the baseline forecast. It shows that measured inflation falls much faster than underlying inflation to remain two percentage points below it until Q2/2008, when the base effect passes out of the index.

Chart VIII-12
Revised inflation forecast



Source: Central Bank of Iceland.

Chart VIII-13
Tax effect on the baseline inflation forecast

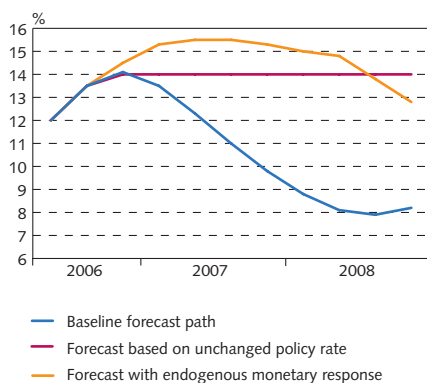


Source: Central Bank of Iceland.

4. Discussed in Box VIII-3, New presentation of the macroeconomic and inflation forecast, *Monetary Bulletin* 2006/2, 52-55.

5. According to the government's presentation of these proposed measures, they could result in a reduction in the CPI of as much as 2.7%. The Central Bank has not made an independent assessment of this impact since the proposals have not been specified in detail, in particular regarding lower tariffs on meat products. Also, their implementation could change when they are debated by parliament before March 1, when they are scheduled to take effect. The Central Bank's forecasts assume less impact than in the government's announcement of the measures and project that the CPI will be brought down by 2% in Q2/2007.

Chart VIII-14
Alternative policy rate paths



Source: Central Bank of Iceland.

However, the government's measures will increase real disposable income with a corresponding easing of the fiscal stance, unless mitigating action is taken. In the absence of fiscal counteraction or a tighter monetary stance, the tax cuts will add half a percentage point to output growth over the next two years. Their effect will therefore be to delay the adjustment of the economy and drive up inflation later in the forecast period, calling for a tightening of the monetary stance.

Underlying cost-push inflation revised downwards ...

As pointed out above, inflation in Q3/2006 turned out to be considerably lower than the Central Bank had forecast in July. This implies that the underlying cost pressures caused by the short-term inflationary impact of the depreciation of the króna, and by the private sector wage settlement that had just been made at that time, were overestimated. While some of the impact that did not emerge in the summer is expected to be felt over the next few months, the forecast increase in unit labour costs has been revised downwards since July. Lower wage pressures and an appreciation of the króna by almost 12% have created a much more favourable outlook for inflation than in the last forecast.

... but substantial inflationary pressures remain

In spite of the downward revision since July, unit labour costs are still forecast to increase at a rate that is far from compatible with the 2.5% inflation target, given the historically very low rate of unemployment and strong pressures in the labour market. Likewise, in the baseline forecast the output gap remains relatively wide – positive by more than 3% in 2006 and just under 2% in 2007. Pressures begin to build up again from the beginning of 2008 when the monetary stance has eased in the baseline forecast, as discussed above. At the same time, the króna is forecast to be depreciating and inflation expectations still above the target.

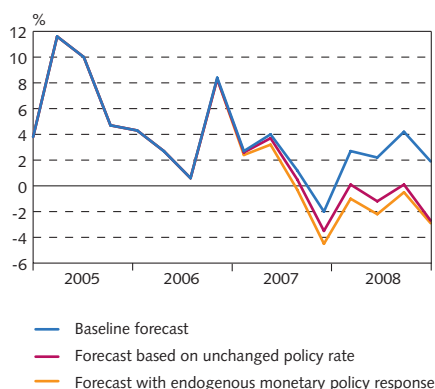
A tighter monetary stance results in a better inflation outlook two years ahead

Inflation prospects one year ahead are broadly the same in the baseline forecast and the two alternative scenarios, despite the wide divergence in their policy rate paths shown in Chart VIII-14, since monetary policy has little impact on the short-term outlook.

The alternative scenario based on attaining the target with monetary policy responses implies that some further rise in the policy rate is needed, to 15½% in mid-2007. According to this scenario, the policy rate gradually comes down in 2008 to just below 13% at the end of the forecast horizon in the fourth quarter of that year.

Chart VIII-15 shows a considerably weaker output growth path in the alternative scenarios than in the baseline forecast, which is based on an easier monetary stance. The outlook is for a contraction in output from Q3/2007 and over the whole of 2008 in the scenario based on endogenous policy responses. One year ahead the alternative scenarios show a much smaller output gap, which has already

Chart VIII-15
Different GDP growth paths



Sources: Statistics Iceland, Central Bank of Iceland.

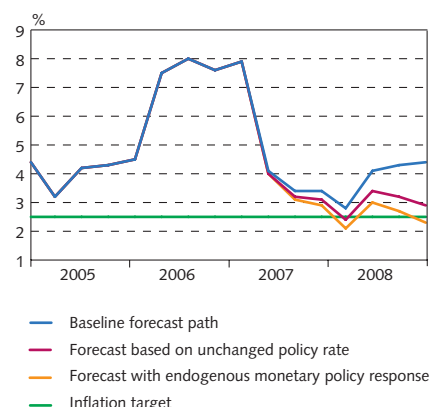
turned negative by 2008. The current account deficit has also almost completely unwound by then. By comparison, the output gap remains quite positive in 2008 in the baseline forecast and the current account deficit is still wide at the end of the forecast period.

The tighter policy rate in the alternative scenarios will further bolster the króna compared with the baseline forecast. The stronger króna, along with more excess capacity in the economy, causes the inflation outlook to improve as the forecast period progresses. In the alternative scenarios, inflation is temporarily brought back to target in Q1/2008 but rises again when the impact of the government's tax cuts fades. Unlike the baseline forecast, however, both scenarios show inflation returning to target, in Q4/2008 on the monetary policy response path and two quarters later on the path assuming an unchanged policy rate across the forecast horizon.

Greater risk of the króna weakening

The current risk factors are broadly unchanged since the July forecast. The main difference is a greater risk that the króna will weaken by more than was expected then, especially because of the hefty current

Chart VIII-16
Different inflation paths



Source: Central Bank of Iceland.

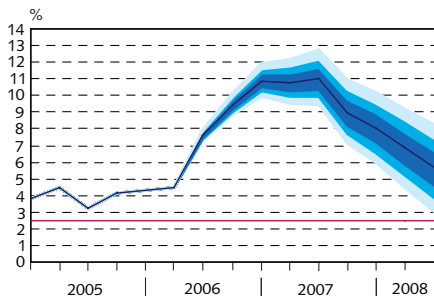
Table VIII-1 Main asymmetric uncertainties in the baseline forecast

Uncertainty	Explanation
Exchange rate developments	Wide current account deficit and expectations of increasing inflation in the coming years could exert downward pressure on the króna
Private consumption	Falling asset prices and growing debt service could curtail private consumption growth beyond what is shown in the baseline forecast
Public sector finances	The fiscal stance could turn out to be easier than assumed in the baseline forecast, especially with a forthcoming general election The impact of planned tax cuts on future income expectations could be underestimated
Wage costs	The wage drift impulse from the private sector wage agreement could be underestimated
Global economy	Foreign interest rates could rise faster and higher than assumed, increasing external debt service beyond what is shown in the baseline forecast
Transmission of monetary policy	If the transmission of monetary policy is stronger than assumed in the baseline forecast, inflation could decline faster
Planned investments in aluminium and power sectors	Decisions on investments in aluminium-related projects in 2008 could spur confidence and bolster the króna and domestic demand
<i>Central Bank risk profile</i>	<i>One year ahead</i> <i>Two years ahead</i>
<i>Monetary Bulletin 2006/1</i>	Upward Upward
<i>Monetary Bulletin 2006/2</i>	Upward Symmetric
<i>Monetary Bulletin 2006/3</i>	Upward Upward

Chart VIII-17

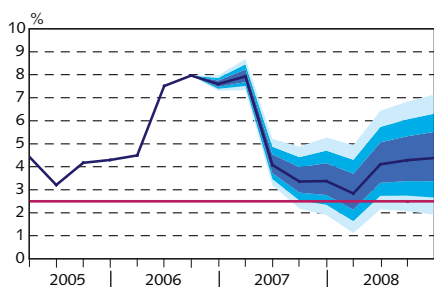
Previous Central Bank inflation forecast
– baseline forecast (in *Monetary Bulletin* 2006/2)

Forecasting period: Q2/2006 - Q2/2008



Current Central Bank inflation forecast
– baseline forecast

Forecasting period: Q4/2006 - Q4/2008



- CPI
- Inflation target
- 50% confidence interval
- 75% confidence interval
- 90% confidence interval

The charts present the estimated confidence intervals of the forecast for the next two years. The entire shaded area shows the 90% confidence interval; the two darkest ranges show the corresponding 75% confidence interval and the darkest range shows the 50% confidence interval. The uncertainty increases over the horizon of the forecast, as reflected in the widening of the confidence intervals. Uncertainty in the forecast is considered to be somewhat less than is shown by historical forecasting errors, which reflect volatile inflation in the period 2001-2002 immediately after Iceland moved on to an inflation target. A detailed description of how the probability distribution is calculated is given in Appendix 3 to Economic and monetary developments and prospects, *Monetary Bulletin* 2005/1.

Source: Central Bank of Iceland.

account deficit. If so, inflation could turn out higher than in the baseline forecast for the first part of the forecast period.

As before, falling asset prices, particularly real estate prices, could lead to a reduction in private consumption from the baseline forecast projection. Coupled with the risk of a faster-than-expected rise in international interest rates, this could drive down domestic demand in the second half of the forecast period. If further investment in the aluminium and power sectors is decided for 2008, this could boost confidence before the projects are actually launched, strengthening the króna and domestic demand by more than is expected in the baseline forecast. Other risk factors have not changed much since July. The main asymmetric risk factors to the forecast are presented in Table VIII-1.

Taking account of these changes from the previous forecast and the underlying uncertainties, the risk profile is tilted slightly more to the upside one year ahead compared with July. Likewise, there is more risk to the upside two years ahead and the probability distribution is also skewed to the upside but was broadly symmetric before. The explanation is that the heightened risk of a depreciation of the króna one year ahead has now spread over to the following year. Chart VIII-17 presents the confidence intervals for the baseline forecast. Given that macroeconomic imbalances are still present, it can be inferred that uncertainties about the inflation outlook across the forecast horizon have also increased.

The inflation target will not be attained over the forecast period unless the policy rate is raised

Table VIII-2 shows the probability ranges for inflation in the baseline forecast. As pointed out above, the monetary stance in the baseline forecast is not tight enough to attain the 2.5% inflation target over the forecast period. However, the probability that inflation will lie in the range 1-4% has increased substantially. Nonetheless, it is still highly unlikely that the target will be attained over the two-year baseline forecast horizon. If the monetary stance is tightened in line with the alternative scenario based on endogenous monetary policy responses, the probability of attaining the target is significantly greater.

Table VIII-2 Probability ranges for inflation over the next two years

Quarter	Inflation				
	Under 1%	In the range 1% - 2½%	Under 2½%	In the range 2½% - 4%	Over 4%
Q4/2006	<1	<1	<1	<1	99
Q3/2007	<1	10	10	63	27
Q3/2008	1	8	9	30	61

The table shows the Central Bank's assessments of the probability of inflation being in a given range, in percentages.

IX Monetary policy

The Central Bank of Iceland's policy rate is now at its highest since the repo rate was first recorded as a monetary policy instrument in 1997. Including the hike coinciding with the publication of the last *Monetary Bulletin*, the policy rate has been raised by 1.75 percentage points since the Central Bank presented its last inflation forecast in July. After surging in July and August but slowing down in September, the rate of inflation at the beginning of October was broadly the same as in June. Inflation in Q3/2006 turned out lower than forecast in July, but still far above target.

Relative to measured inflation, the policy rate has unquestionably risen in real terms. It has also gone up by most other criteria, because sizeable hikes have coincided with lower inflation expectations in the markets and among businesses. Household expectations in August, on the other hand, were at their highest since 2001. The interest rate differential with abroad has widened sharply and the króna has appreciated. However, the pass-through across the yield curve has been adverse in some respects. While the substantial reduction in yields on two- to five-year Treasury notes may be interpreted as indicating lower inflation expectations, yields on indexed bonds also came down until the impact of planned tax cuts was felt. Some of the drop in yields is probably due to international financial conditions and increased carry trades, since certain other high-interest currencies have appreciated at the same time as the króna. The government's planned measures to reduce VAT on food next year would also tend to channel investor demand away from indexed and towards nominal bonds, thereby pushing up indexed bond yields and reducing the breakeven inflation rate on nominal bonds.

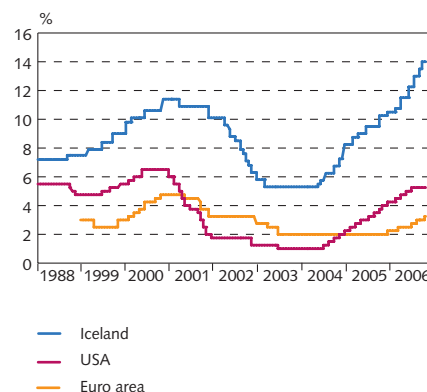
Provided that the króna does not undergo a disorderly adjustment in the medium term, the inflation outlook two years ahead appears rather brighter than the Central Bank's assessment in July, and short-term prospects particularly so. The main explanations are lower inflation in Q3 than was forecast in July and an appreciation of the króna from the value assumed then. Wage rises have been smaller than was forecast in July. On the other hand, the estimated output gap was rather more positive last year than had been assumed, although there are signs that it will close correspondingly more quickly in 2006 and 2007. In 2008 the output gap will turn more positive again, because according to the current baseline forecast the policy rate path at that time is somewhat lower than in July, reflecting investors' and analysts' expectations that the monetary stance will be rapidly eased. Inflation therefore gains momentum towards the end of the baseline forecast horizon, but even so the outlook two years ahead has improved. Nonetheless, inflation is still above target at the end of the forecast horizon, which is an important message. The policy rate path based on a monetary policy rule, on the other hand, indicates that the target can be attained with some additional tightening.

Exchange rate developments crucial for inflation prospects

Inflation prospects two years ahead depend crucially upon fairly favourable exchange rate developments. The strengthening of the

Chart IX-1
Central bank policy interest rates

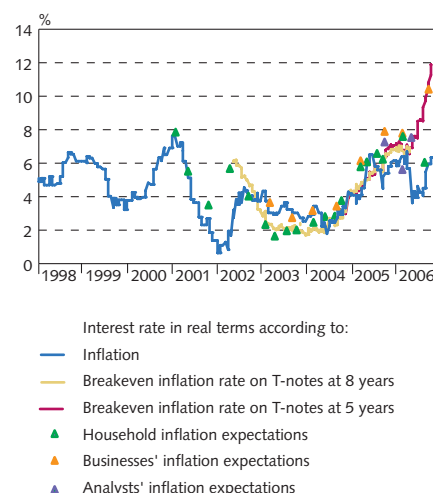
Daily data January 1, 1998 - October 18, 2006



Sources: Reuters EcoWin, Central Bank of Iceland.

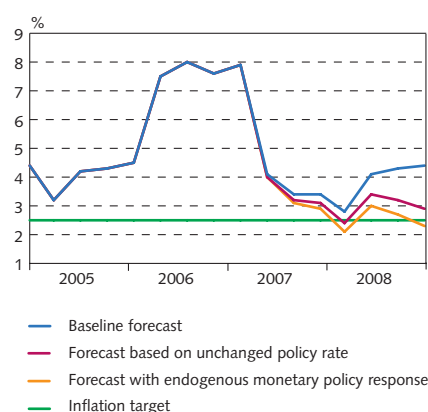
Chart IX-2
Central Bank policy interest rate in real terms

Weekly data January 7, 1998 - October 31, 2006



Source: Central Bank of Iceland.

Chart IX-3
Different inflation paths



Source: Central Bank of Iceland.

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 Q1/2007.¹ 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.

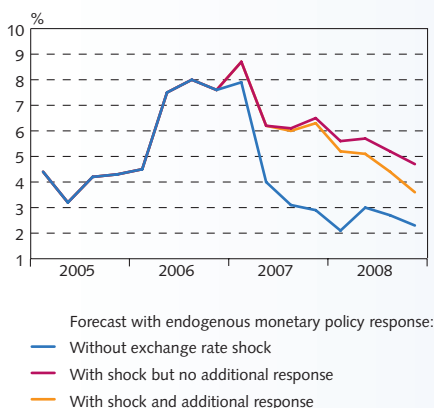
Inflation would be high and persistent, calling for a firm tightening of the policy stance ...

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.

króna was one factor contributing to disinflation in September and lower-than-forecast inflation in Q3, and its pass-through will be felt into 2007. However, it is highly uncertain that the króna will remain as strong in the long run as assumed in the current forecast. Global conditions that have caused several high interest-rate currencies to appreciate could easily unwind (see Section II, External conditions). The wider interest rate differential with abroad may be reversed if international interest rates go up while those in Iceland remain unchanged. Higher interest rates in Europe and Japan, in particular, could subdue carry trades which have strongly affected Iceland's monetary policy transmission over the past year.

A rise in international interest rates could have more effect in Iceland than most other countries because the forecast current account deficit in 2006 has been revised upwards since July. As the deficit becomes more expensive to fund, pressures on the króna will probably build up correspondingly. The enormous current account deficit, which is heading for one-fifth of GDP this year, may indicate that domestic demand growth has been underestimated, as was the case in 2004 and 2005. If this year's output gap is underestimated, so could inflationary pressures in 2007. Box IX-1 on p. 50 presents a less favourable scenario for exchange rate developments than is assumed in the current forecasts, which would result in either persistent inflation or a considerable hike in the policy rate, if the Central Bank makes an endogenous monetary policy response.

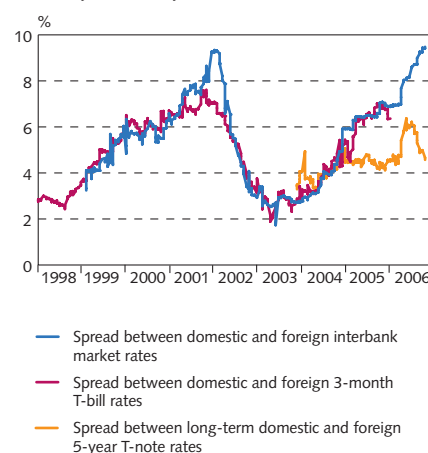
Monetary policy must look beyond short-lived fluctuations in inflation and other indicators

This position prompts questions about the desirable balance between short-term and long-term viewpoints in assessing how compatible monetary policy is with the target. Should the main focus be recent inflation, contemporary economic indicators, medium-term macro-economic and inflation forecasts or longer-term factors such as the current account deficit, asset price developments, credit developments and the growth of money supply?

There is a tendency in discussions of the Central Bank's monetary policy to focus excessively on the most recent indicators at any given time. Many commentators saw the slowdown in inflation in September as ample grounds for easing the monetary stance immediately. The volatility of the measured inflation rate and other monthly or more frequent indicators, e.g. from the housing market, must be borne in mind in monetary policy decisions. It is therefore necessary to wait for further confirmation before changing tack. It is also important to analyse the underlying drivers of monthly fluctuations. For example, the decrease in the twelve-month rate of inflation in September was largely caused by the base effect when a rise in the index a year before had passed out of the twelve-month measurement, and by other movements that are likely to be short-lived. It would be inappropriate for monetary policy to respond strongly to short-term fluctuations in the inflation rate, since the Central Bank cannot influence past inflation.

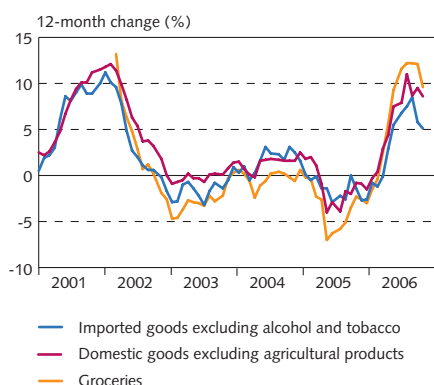
This is not to say that recent inflation is completely irrelevant. Assessments of the inflation outlook are not unaffected by past infla-

Chart IX-4
Interest rate differential with abroad
Weekly data January 7, 1998 - October 10, 2006



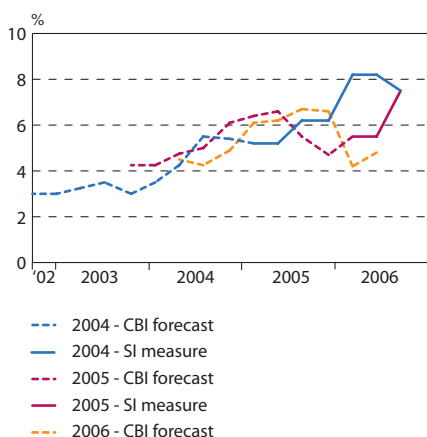
Source: Central Bank of Iceland.

Chart IX-5
Goods prices January 2001 - October 2006



Source: Statistics Iceland.

Chart IX-6
Forecast GDP vs measured GDP



Sources: Statistics Iceland, Central Bank of Iceland.

tion. Inherent inertia in the inflation path means that past or at least underlying inflation provides a strong indication about the future, given its impact on expectations and thereby on changes in wages, the exchange rate and other cost components. In turn, high inflation expectations can speed up the transmission of these cost effects to the general level of prices. Although monetary policy is supposed to be forward-looking, central banks face the universal fact that everything known about the future has its roots in the past – and in some cases the fairly distant past. For example, revised data on output growth in 2004 and 2005, which were published this year, have changed the Central Bank's assessment of inflation prospects quite considerably.

Long-term indicators of inflation deserve more attention

The Central Bank's macroeconomic forecasts and the inflation forecasts derived from them play a vital role in monetary policy-making. Sizeable revisions of national accounts data from preliminary estimates to final figures, which are common both in Iceland and other countries, entail a risk of forecasting errors, over and above those generated by imperfect models or misinterpretations. Estimates of the output gap are also fraught with uncertainties – increasingly so towards the most recent statistical measurements and beyond them into the forecasting period itself. However, the greatest uncertainty is often exchange rate movements, which can completely alter the inflation outlook almost overnight, as happened in Iceland earlier this year.

Forecasting uncertainties severely constrain forward-looking monetary policy. Given the high degree of uncertainty in the forecasts, it may be advisable not to rely on them blindly but also pay more attention to contemporary economic indicators, for example the labour market situation.¹ Uncertainties can also warrant a closer focus on long-term indicators of inflationary pressures, such as growth of credit and money supply, asset market developments and, not least, the current account balance. Similarly, persistent high inflation expectations and increasing unit labour costs which are well above a level compatible with the inflation target indicate an underlying long-term inflation problem.

When Statistics Iceland published its revised national accounts earlier this year, it was clear that the Central Bank had substantially underestimated the scope of economic activity in 2004 and 2005. By then, it had already long been obvious that the current account deficit was much wider than indicated by the Central Bank's models. Once again the current account is heading for a far greater deficit in 2006 than was shown in the Central Bank's earlier forecasts. This may indicate that, yet again, demand growth has been underestimated. A current account deficit heading for roughly one-fifth of this year's GDP is an unquestionable indication of eventual exchange rate pressures, although the timing is impossible to predict.

1. Of course, many of these indicators are explanatory variables in the Central Bank's macroeconomic and inflation models. They do not necessarily affect first-round measurements, however. For example, the labour market situation may imply macroeconomic pressures that have not yet been reflected in the national accounts and thus not in output gap estimates either.

Challenges in timing of responses

The Central Bank's challenge is to decide the most appropriate time to respond to these pressures, because despite the high probability that the current account deficit will prompt a depreciation of the króna, it is impossible to foresee the timing of this adjustment or how tight a monetary stance is required to prevent its inflationary effects from exceeding a level compatible with the inflation target. An untimely response could spark a short-lived inflow of speculator funds which could then reverse overnight at the worst possible time. On the other hand, a tardy response could amplify the contraction, if the króna depreciates at the same time as economic activity slows down significantly. Because the effect of a sharp currency depreciation for corporate and household balance sheets would contribute to a contraction, it is likely that the opportunity cost of a tight monetary stance is low – if any at all, as the Central Bank has maintained before.

The conclusion to be drawn from all the above is that although the formal horizon is roughly two years, monetary policy needs to consider factors both earlier and further ahead. High inflation expectations, a historically low unemployment rate, sharp rises in unit labour costs and a wide current account deficit all indicate the possible presence of inflationary pressures over and above those assumed in the Central Bank's forecasts, not only over the two-year forecast horizon but conceivably beyond it. Responding immediately to such future pressures need not be the most appropriate course of action. However, this must affect the Central Bank's assessment of when and under what conditions the policy interest rate can be lowered without a risk to the inflation target. Likewise, it is important for the Central Bank to dispel all doubt about the firmness of its response if the króna weakens by substantially more than is compatible with the inflation target.

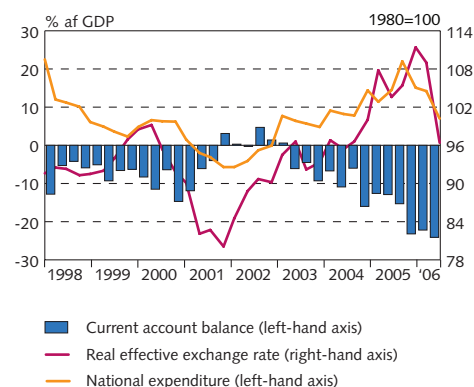
Changes in indirect taxes do not affect monetary policy

The government has announced changes in VAT on foods and other items as well as cuts in commodity taxes which, other things being equal, will lead to a sizeable reduction in the CPI. Tax changes like these should not affect monetary policy decisions. They only have an impact on measured inflation, not on underlying inflation.² Given the importance of appraising underlying inflation, some countries base their targets on core inflation indices excluding the impact of tax changes. This is not the case in Iceland. The formal reference for monetary policy is the CPI, not the core indices which are also calculated, although these are taken into account and the Central Bank also makes its own independent assessments of underlying inflation, as discussed in Section VIII.

The cut in VAT will impact measured inflation from Q2/2007 to Q2/2008 (see Chart IX-8). At the end of that period, the effect will

Chart IX-7

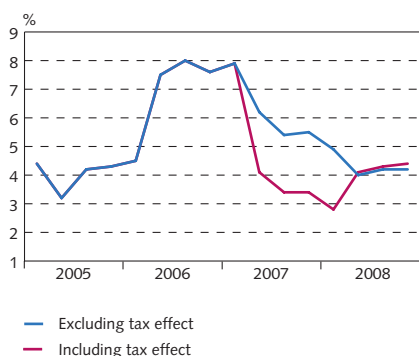
Growth of final domestic demand, current account balance and real effective exchange rate 1998-2006



Sources: Statistics Iceland, Central Bank of Iceland.

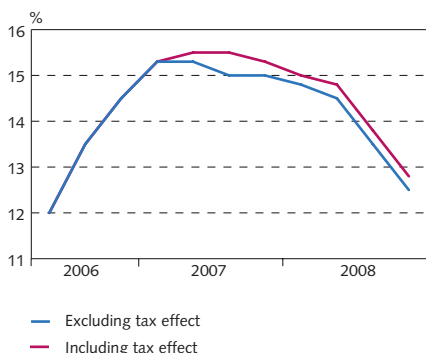
2. This is also true of government intervention in the aggregate level of prices, such as the decision to freeze wholesale prices of dairy products for the next twelve months. The Bank of Canada, for example, bases its monetary policy on core inflation excluding the first-round effect of indirect taxes. See e.g. Pétursson, Thórarinn G. (2002), Evaluation of core inflation and its application in the formulation of monetary policy, *Monetary Bulletin*, 2002/4, 54-63.

Chart IX-8
Tax effect on the baseline inflation forecast



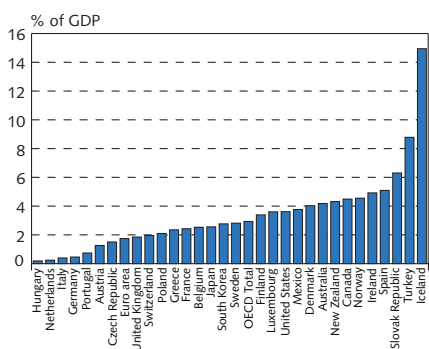
Source: Central Bank of Iceland.

Chart IX-9
Tax effect on policy interest rate based on monetary policy response



Source: Central Bank of Iceland.

Chart IX-10
Growth in domestic demand in OECD countries 2005



Sources: OECD, Reuters Ecowin.

be negligible. Under certain circumstances such actions could have a second-round effect through wage developments, but since settlements involving considerable additional rises have already been made, this seems unlikely in the present case. Nor is it impossible to rule out some impact on the inflation expectations of households. Offsetting this, the tax cuts will boost real wages and ease the fiscal stance, unless the government takes countermeasures. This demand effect could drive up underlying inflation.

As Chart IX-9 shows, the overall outcome of these measures is that the Central Bank needs to keep its policy rate temporarily higher than would have been the case, by 0.25-0.5 percentage points. However, the policy rate could move very high in real terms relative to the CPI. In these circumstances, it would be natural to gauge the stance against underlying inflation from which the direct impact of the tax cuts has been eliminated.

In addition to lower taxes on consumption, the relaxation of a previously announced freeze on public sector investment, and the easing of the Housing Financing Fund's lending rules, if agreed, will spur demand in the medium term. Such accommodation is untimely.

Is the policy rate abnormally high?

The Central Bank has been criticised in certain quarters for raising its policy rate excessively. However, the monetary stance must be assessed in light of economic conditions. Iceland is unparalleled among the industrial countries for the scale of its GDP and domestic demand growth, current account deficit and low unemployment. The rate of inflation is also much higher. Seen in this context, Iceland's policy rate is not exceptionally high. Although admittedly it is among the highest by international comparison, the real policy rate is broadly in line with those in countries with a comparable rate of inflation and an earlier history of persistent inflation problems.³

The policy rate peak may be in sight, but a reduction is further away

The alternative scenario based on applying a monetary policy rule to attain the inflation target within the forecast horizon indicates that the policy rate needs to be raised to just over 15% and maintained there for some time. Another scenario assuming an unchanged policy rate over the forecast period shows somewhat higher inflation, although the divergence is relatively small. In the monetary policy rule scenario, however, the policy rate can be lowered sooner and more quickly. A considerably lower policy rate now appears to be required to attain the target than was expected in July. Although the alternative scenario with monetary policy responses indicates that further hikes will be required, it can be said that the end of the tightening cycle is within sight. However, the large differences between the current assessment

3. Examples are Brazil, where the policy rate is more than 10% in real terms, and Turkey with 7½%. Based on the Central Bank's 14% policy rate and inflation of just over 7%, the real policy rate in Iceland is just below 7%. International comparisons of policy rates also require conversion to a flat rate (prepaid interest), which currently measures 13.1% in Iceland.

of the required policy rate path and the one presented in July highlight the enormous uncertainties involved.

Eventually, economic conditions will be ripe for the policy rate to be lowered. However, this is still some way off. The policy rate path assumed in the baseline forecast does not enable the target to be attained over the next two years, even if exchange rate movements remain modest. It should also be borne in mind that although demand growth is now slowing down, the sheer scale of the macroeconomic imbalances makes it very likely that a rapid decrease in the interest rate differential with abroad would prompt a sharp depreciation of the króna, with a corresponding inflation pass-through. The precondition for making a significant reduction in the policy rate without sacrificing the inflation target is that the Central Bank must have anchored inflation and inflation expectations. This will hardly be realised until domestic demand has contracted sufficiently to be compatible with production capacity and the external balance becomes sustainable.

When inflation prospects have improved sufficiently to allow the policy rate to be lowered, the Central Bank will begin with cautious steps, other things being equal. Some commentators have insisted that the Central Bank must lower its policy rate rapidly next year or even earlier – in part to be equipped to tighten the stance again later if new investments in the power and aluminium sectors are launched in 2008. Such claims are based on a misunderstanding. If the policy rate has been unduly high in the preamble to such an investment programme, this simply means that there will be less or no need to raise the rate when it actually begins – such a policy would have created more scope for the investments in the first place. The tightness of the monetary stance derives from how high the policy rate is at any given time, not from interest rate changes per se.

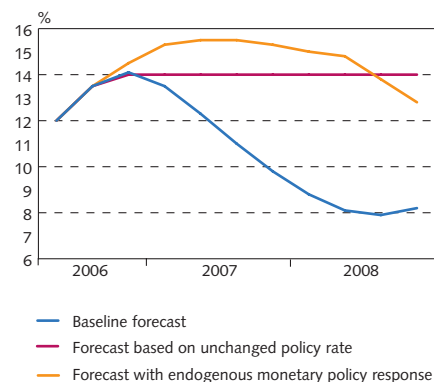
Table IX-1 Publication dates for Monetary Bulletin and interest rate announcement dates in 2006 -2007

<i>Date of interest rate decision</i>	<i>Commentary published in</i>	<i>Weeks since previous interest decision announcement</i>
December 21, 2006	Press release	7
February 8, 2007	Press release	7
March 29, 2007	Monetary Bulletin 2007/1	7
May 17, 2007	Press release	7
July 5, 2007	Monetary Bulletin 2007/2	7
September 6, 2007	Press release	9
November 1, 2007	Monetary Bulletin 2007/3	8

The inflation target remains the prime consideration

Although inflation prospects have improved since the middle of this year, a reduction in the policy rate is not yet in sight. As discussed above, there are still indications that some rise in the policy rate is needed if the inflation target is to be attained within the next two years. The Central Bank's perspective is therefore quite different from that of certain forecasters who expect a swift reduction in the policy rate early next year, even if this leads to high inflation later. In the Central Bank's view, such a development would be absolutely unacceptable. The objective of monetary policy is sustained price stability,

Chart IX-11
Different policy rate paths



Source: Central Bank of Iceland.

not merely short-lived disinflation. In keeping with the Central Bank's mandatory duties, the inflation target will remain the prime consideration in its monetary policy measures. Moreover, the Central Bank is convinced that this is the most favourable course to serve Iceland's long-term interests. If necessary, the Central Bank will raise the policy rate still further in order to ensure that the inflation target is attained, and will not lower the policy rate until it is convinced that this is compatible with the inflation target over a long-term scenario.

Appendix 1

The transmission mechanism of monetary policy in the Central Bank's quarterly macroeconomic model

The Central Bank of Iceland's macroeconomic model is an important instrument for evaluating economic developments and the impact of the Bank's policy measures. In this respect it is crucial that the transmission mechanism of monetary policy is well defined in the model. The following is an overview of the of the transmission mechanism in the Central Bank's new Quarterly Macroeconomic Model (QMM).¹

The transmission mechanism describes how changes in the Central Bank's policy interest rate affect market interest rates, asset prices, the exchange rate, consumption and investment decisions of households and businesses and thereby aggregate demand, inflation expectations and, ultimately, the rate of inflation.² QMM incorporates all the main channels of the monetary policy transmission mechanism.³ Simulations with QMM indicate that its transmission mechanism is consistent with the findings of earlier research in Iceland and experience in other countries.

Monetary policy rules

The policy rate follows a simple monetary policy rule in QMM.⁴ In most cases this involves a Taylor rule (see Taylor, 1993, 1999) in which the policy rate deviates from the equilibrium interest rate as inflation deviates from the inflation target and demand deviates from potential output.⁵ The policy rate in QMM can also follow an Orphanides rule (see Orphanides et al., 2000), which is a version of the Taylor rule based on the deviation of output growth from potential output growth instead of the output gap itself. On first impression this may not seem an important distinction, but research indicates less uncertainty in estimates of the growth of potential output than its level (see Orphanides,

1. A brief comparison of the QMM with the Central Bank's earlier models is presented in Appendix 1, *Monetary Bulletin* 2006/1, 59-61. A more detailed account of the new model is given in a forthcoming Central Bank of Iceland Working Paper by Danielsson et al. (2006).
2. A detailed discussion of the transmission mechanism of monetary policy is given in Pétursson (2001).
3. The expectation channel, which describes the impact of monetary policy on market agents' expectations about the future policy rate, exchange rate and inflation, is nonetheless subject to certain limitations in the current version of the model. Nor does it incorporate financial accelerator effects, given the complications in accounting for adverse selection and moral hazard problems in a model of this type.
4. Two alternative scenarios based on different policy rate paths are also used in preparation of the forecasts published in *Monetary Bulletin*. One assumes an unchanged policy rate across the forecast horizon, and the other a path reflecting market agents' and analysts' expectations for the development of the policy rate over the forecast period. The latter scenario has replaced the former as the Central Bank's baseline forecast since *Monetary Bulletin* 2006/2 in July.
5. Taylor rules are discussed further in Box 5, *Monetary Bulletin* 2002/2, 23-25.

2003). Erceg and Levin (2003) estimate a monetary policy rule of this type and argue that it provides a more accurate description of the behaviour of the US Federal Reserve than a conventional Taylor rule.

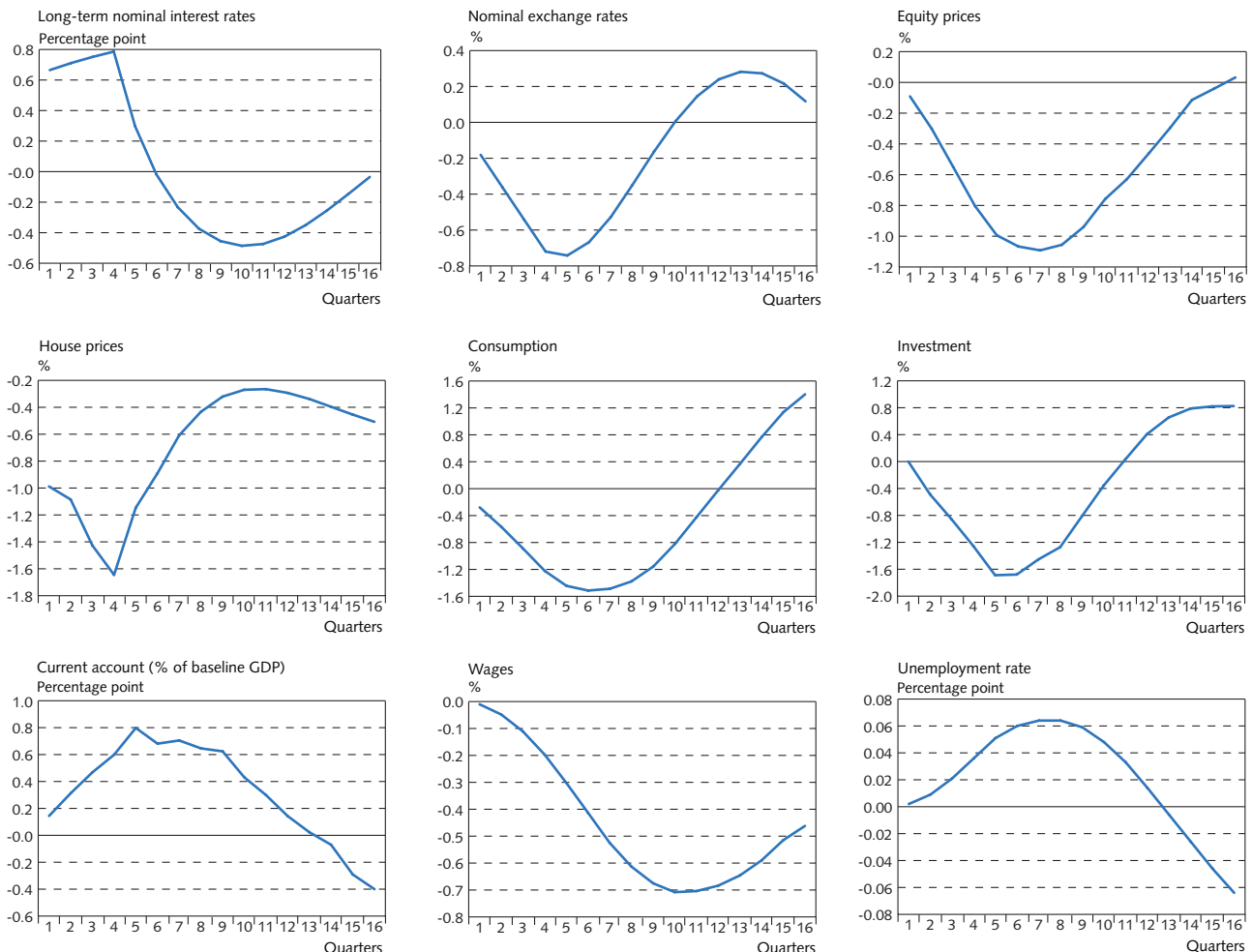
Interest rate channel

The transmission mechanism in QMM may be portrayed by simulation results on the effects of an unanticipated 1 percentage-point rise in the policy rate lasting for one year. Thus the policy rate follows the monetary policy rule but is 1 percentage point higher for one year than the rule states.⁶

The impact of the policy rate on market interest rates is often said to be the main transmission channel of monetary policy. QMM

6. It should be borne in mind that the charts are only intended to present a simple illustration of the real impact of monetary policy, which may vary on a case-by-case basis. Therefore they cannot be used for mechanical forecasting of how the economy will react to changes in monetary policy.

Chart 1
Responses of key variables to a 1 percentage-point rise in the policy rate lasting for one year (deviations from baseline)



makes no distinction between the policy rate and short-term interest rates on money market securities.⁷ In the model, a policy rate rise immediately drives up long-term nominal interest rates by 0.7 percentage points then continues to filter through until the impact peaks after just over one year at 0.8 percentage points.

A policy rate hike temporarily raises long-term real rates in the model, if this effect is not outweighed by changed inflation expectations. Real interest rates are most important for household and business expenditure and investment decisions. An increase in them gradually reduces both private consumption and investment in the model. Aggregate demand contracts as a result, with a corresponding easing of pressure on the utilisation of factors of production, which is measured by the output gap. Contracting aggregate demand also results in lower demand for imported goods and services, higher unemployment and lower demand for housing. Eventually, the smaller output gap eases inflationary pressures on prices of consumer goods, housing and labour (i.e. wages).

The model also takes into account the second-round effects on businesses and households which did not feel the direct impact of the interest rate hike. An example of these second-round effects is that the contraction in aggregate demand reduces households' wage income and thereby their disposable income.

Asset price channel

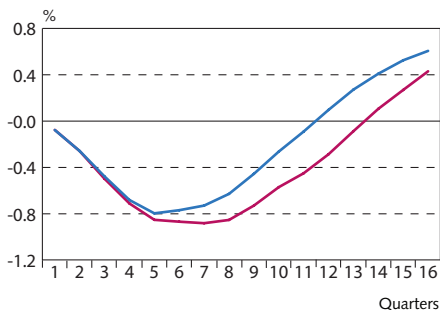
As Chart 2 shows, raising the policy rate by 1 percentage point causes both equity prices and housing prices to fall in QMM. Simulations indicate that the impact of a policy rate hike peaks after roughly one year for housing prices, but after two years for equity prices. The decrease in equity prices and market value of long-term bonds reduces household wealth. Lower housing prices lead to less residential investment and both factors cause household housing wealth to contract. Thus total household wealth is reduced by the higher policy rate, causing a contraction in private consumption and thereby aggregate demand.

Exchange rate channel

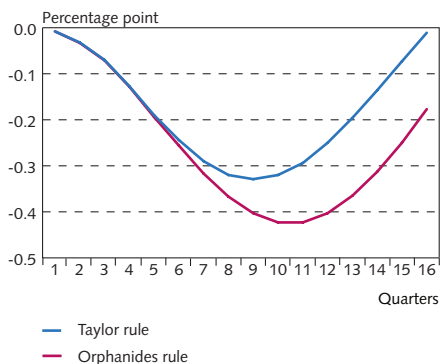
The impact of policy rate changes on the exchange rate is crucial to the transmission of monetary policy in a small open economy such as Iceland. In QMM, raising the policy rate by 1 percentage point contributes to an appreciation of the króna which will lead to a temporary real exchange rate appreciation, as domestic prices adjust slowly. The króna appreciates immediately by 0.2% and continues to do so until it peaks at 0.8% stronger than before the policy rate hike. This development is not consistent with uncovered interest rate parity, in which the króna appreciates immediately by 1% then gradually weakens to ensure that the expected yield on foreign and domestic assets is equal. However, it is consistent with international evidence and earlier studies of the transmission mechanism in Iceland (see e.g. Eichenbaum and Evans, 1995, and Pétursson, 2001).

7. Studies of the relationship between the policy rate and short-term market interest rates indicate that a policy rate change causes an almost immediate change in interbank and Treasury bill rates, although not always proportionally.

Chart 2
Responses to a 1 percentage-point rise
in the policy rate lasting for one year
GDP (deviations from baseline)



Inflation (deviations from baseline)



The króna appreciation reduces export volume and export prices denominated in domestic currency decline. Demand for domestic traded goods also falls relative to imports, which are priced lower. This channels demand out of the economy and eases inflationary pressures. The model also attempts to include second-round effects reflected in less ability of businesses to raise credit and to finance investment and wage rises. Finally, the appreciation has a direct impact on prices of imported goods and services, and thereby on inflation in the model.

Impact on economic activity and inflation

The 1 percentage-point rise in the policy rate starts to affect output after roughly one quarter, with peak effects after five quarters when output is 0.8% lower than otherwise. The impact on private consumption and investment is even stronger than is reflected in the aggregate output level, because of the positive impact on the current account balance. A policy rate hike is passed through to inflation with further delays, which is consistent with international findings. Prices are sticky and inflation remains broadly unchanged for the first three quarters after the policy shock. After that, disinflation begins and peaks after nine quarters at 0.3-0.4 percentage points lower than in the baseline scenario, depending upon which monetary policy rule is applied. These findings are also well consistent with those of previous research on the transmission mechanism in Iceland and findings from other economies.

References

Danielsson, Ásgeir, Lúdvík Eliasson, Magnús F. Gudmundsson, Björn Hauksson, Ragnhildur Jónsdóttir, Thorvardur T. Ólafsson and Thórarinn G. Pétursson (2006). QMM: A Quarterly Macroeconomic Model of the Icelandic Economy, Central Bank of Iceland, *Working Paper*, forthcoming.

Erceg, Christopher and Andrew T. Levin, (2003). Imperfect credibility and inflation persistence, *Journal of Monetary Economics*, 50, 915-944.

Orphanides, Athanasios, (2003). The quest for prosperity without inflation, *Journal of Monetary Economics*, 50, 633-663.

Orphanides, Athanasios, Richard D. Porter, David Reifschneider, Robert Tetlow and Frederico Finan, (2000). Errors in the Measurement of the Output Gap and the Design of Monetary Policy, *Journal of Economics and Business*, 52, 117-141.

Pétursson, Thórarinn G., (2001). The transmission mechanism of monetary policy, *Monetary Bulletin* 2001/4, 59-74.

Taylor, John B., (1993). Discretion versus policy rules in practice, *Carnegie-Rochester Conferences on Public Policy*, 39, 195-214.

Taylor, John B. (ed.), (1999). *Monetary Policy Rules*, University of Chicago Press, Chicago.

Appendix 2

Forecast errors in Central Bank of Iceland inflation forecasts

The Central Bank of Iceland has published inflation forecasts two years ahead in *Monetary Bulletin* ever since moving onto a formal inflation target in March 2001. Two-year inflation forecasts based on assumptions for the policy rate path are now presented three times a year.

Economic developments are always fraught with uncertainties. In its assessments of the inflation outlook, the Central Bank therefore emphasises the risk profile of its forecasts just as much as point values. Monetary policy decisions are made on the basis of a comprehensive assessment of the economic outlook in which forecasts are an important indicator, but not the only one. The main forecast is only one of many possible outcomes. Inflation is likely to be close to the main forecast, but marked divergences may be expected, in particular if key assumptions behind it change.

One part of the risk profile involves an assessment of the probability distribution of the inflation forecast, i.e. the estimated probability of different inflation outcomes in the future. This is done by examining the underlying determinants of inflation developments that could cause divergences from the main forecast. Examples of such uncertainties include global economic developments, domestic demand and developments in financial and FX markets. Calculation of the probability distribution of inflation forecasts is described in more detail in Appendix 3 in *Monetary Bulletin* 2005/1. Because of the high levels of inflation and uncertainties in recent years, the use of historical forecast errors may cause future uncertainties to be overestimated, if not at once then later on. Analysis of previous forecasts is useful for highlighting how large a part they should play in the decisions presented in *Monetary Bulletin*. However, it should not be forgotten that those decisions often aim to prevent the scenarios described in *Monetary Bulletin* from actually materialising.

The Central Bank publishes an annual survey of its inflation forecasting errors based on a variety of criteria, most recently in *Monetary Bulletin* 2005/2. This includes a comparison of the estimated confidence intervals with the distribution of the actual forecast after the Central Bank moved onto an inflation target. So far the root mean square error (RMSE) of forecasts has been estimated from relatively few measurements, but should become more reliable over time. Until the last *Monetary Bulletin* in July, the baseline forecast assumed an unchanged policy rate across the forecast horizon, which complicates comparison with earlier forecasts.

For many years, the Central Bank has published inflation forecasts with a horizon of up to one year. Table 1 shows the bias and RMSE in its forecasts up to four quarters ahead since 1994. The bias shows the forecasts' mean deviation from actual inflation and thus

whether inflation is being systematically over- or underforecast. By this criterion inflation has been underforecast two, three and four quarters ahead, to an increasing degree along the horizon. The RMSE measures how far on average the forecast value differs from the true value. The divergence increases further along the forecast horizon, reflecting greater uncertainties then.

Table 1 Central Bank of Iceland inflation forecast errors since Q1/1994

	Q1	Q2	Q3	Q4
Bias	0.0	-0.2	-0.3	-0.5
RMSE	0.4	0.9	1.4	1.6

Table 2 presents the bias and RMSE one and two years ahead since the adoption of inflation targeting in Q2/2001. In all, 18 forecasts four quarters ahead and 14 forecasts eight quarters ahead have now been published which can be compared with actual inflation. Under-forecasting is more pronounced two years ahead than one year ahead, although the difference is not substantial.

Table 2 Central Bank of Iceland inflation forecast errors since Q2/2001

	No. of measurements	Bias (%)	RMSE (%)
Four quarters ahead	18	-0.6	1.6
Eight quarters ahead	14	-0.9	1.7

Compared with the last survey of forecast errors in *Monetary Bulletin* 2005/2, the bias has increased both one and two years ahead. The RMSE, however, has decreased by 0.3 percentage points one year ahead but increased by 0.5 percentage points two years ahead. It is now greater two years ahead than one year ahead, contrary to the finding in the previous survey. Even though more measurements are included than in last year's survey, the sample is still too small to be conclusive.

Table 3 compares the distribution of measured inflation in forecasts over horizons of four and eight quarters respectively. With a sufficiently large sample, half of the forecasts might be expected to fall within the 50% confidence interval, three-quarters within 75% and nine out of ten within 90%. A comparison of the distribution of forecast errors with the assumed probability distribution reveals that the real proportions are lower for forecasts four quarters ahead but higher eight quarters ahead.

Table 3 Distribution of measured inflation based on confidence intervals

	No. of measurements	50%	75%	90%
Four quarters ahead	16 ¹	5 (31%)	9 (56%)	12 (75%)
Eight quarters ahead	12	6 (50%)	11 (90%)	12 (100%)

1. Only a point forecast was published in *Monetary Bulletin* 2004/1 and 2004/3. Therefore, 16 measurements are given in Table 3 but 18 in Table 2.

Of sixteen forecasts four quarters ahead, only five fell within the 50% confidence interval (31% of cases). Nine were within the 75% interval (56% of cases) and twelve within the 90% interval (75% of cases). Of

the twelve forecasts with a horizon of eight quarters, six were within the 50% confidence interval (50% of cases), eleven within the 75% interval (90% of cases) and all twelve (100%) within the 90% confidence interval. Inflation was therefore closer to the central probability distribution than the expected distribution indicated. However, the relatively few measurements involved should be borne in mind, and also that the probability distributions of previous forecasts are interdependent where they overlap.

Comparison of Central Bank and financial market analysts' forecasts

A comparison of forecasts by the Central Bank, Ministry of Finance and financial market analysts reveals that they are generally in broad alignment, as shown in Table 4. In 2004, analysts forecast on average an inflation rate of 3% one year ahead, while the Ministry of Finance forecast 3.3% inflation for 2005. The Central Bank also forecast inflation of 3.3% one year ahead in 2004, assuming an unchanged policy rate and exchange rate (based on the average of published forecasts over the year). Average year-on-year inflation in 2005 turned out to be 4%. In 2004, analysts forecast on average that inflation in 2006 would be 3.6%, the Ministry of Finance 3.3% and the Central Bank (assuming an unchanged policy rate and exchange rate) 3.2%.

In 2005, analysts forecast on average 4.3% inflation one year ahead but the Ministry of Finance 3.7%. In the Central Bank's baseline forecast, assuming an unchanged policy rate and exchange rate, 3.2% inflation was expected in 2006. The current outlook is that inflation in 2006 will be almost 7%.

Table 4 Comparison of inflation forecasts

	Forecast in 2004	
	1 year ahead	2 years ahead
Financial market analysts	3.0	3.6
Ministry of Finance	3.3	3.3
Central Bank	3.3	3.2
Statistics Iceland – measured inflation	4.0	-

	Forecast in 2005	
	1 year ahead	2 years ahead
Financial market analysts	4.3	5.3
Ministry of Finance	3.7	3.7
Central Bank	3.2	3.7

