MONETARY BULLETIN

2006•3

Contents

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Icelandic letters:

ð/Ð (pronounced like th in English this)
þ/Þ (pronounced like th in English think)
In *Monetary Bulletin*, ð is transliterated as d and þ as th in personal names, for consistency with international references, but otherwise the Icelandic letters are retained.

Symbols:

*	Preliminary or estimated data.
0	Less than half of the unit used.
-	Nil.
...	Not available.
.	Not applicable.

Introduction

Improved inflation outlook but a tight stance is still needed

The inflation outlook has improved substantially since the Central Bank published its last forecast in *Monetary Bulletin* in July. In Q3/2006, inflation was lower than had been forecast then and the long-term prospects are also more favourable. Nonetheless, they are still unacceptable and call for a cautious, tight policy. Expectations of a swift reduction in the policy interest rate in the near future are therefore unrealistic.

Disinflation over the past two months is partly the result of the sustained tight monetary stance that has led to a substantial rise in short-term real interest rates, a wider interest rate differential with abroad and an appreciation of the króna. However, a slowdown in inflation for two months is by no means solid evidence that the battle is over. Temporary factors, e.g. base effects, the appreciation of the króna and falling energy prices, are a volatile measure and can reverse. The risk of wage drift is not over yet. A tight monetary stance therefore remains unavoidable for the time being in order to ensure that inflation will continue to decrease and the inflation target will be attained.

While the positive signs are welcome, difficult challenges remain. Iceland has an enormous current account deficit, equivalent to more than one-fifth of GDP in 2006. Although credit growth has slowed down it is still substantial, the labour market is overstretched, sentiment is strong and restraint on public sector expenditures has weakened.

There is no sure-fire method for predicting exchange rate movements from their relationship with the current account deficit. Iceland is clearly dependent on the willingness of global investors and creditors to finance its deficit. Accordingly, the economy is more exposed to shifts in global financial markets and their responses to news, correct or otherwise, about its performance. Events in the first months of this year should still be fresh in people's minds.

The external balance has deteriorated further since the Central Bank's forecast in July. Certainly the current account deficit will narrow in the years to come, but in order to bring it to a sustainable balance over the next two years a tighter monetary stance is needed in the period ahead than the market currently appears to expect.

The factors pointed out above could lead to setbacks in the battle with inflation over the next few years. There are indications that demand, especially investment, in 2006 may turn out above forecast, so that the output gap and inflationary pressures may be underestimated. Excess demand for labour may be further evidence that this is the case.

Although business investment will shrink when investments in the power and aluminium sectors come to an end, it will take some while to achieve the necessary easing of pressures that appear in the form of labour shortages, the current account deficit and a wage-price spiral. A robust monetary stance must be maintained until internal and external imbalances have been reduced sufficiently to allow the policy rate to be lowered again without jeopardising the inflation target.

A tighter fiscal stance could expedite such developments. Certainly Treasury finances are impressive at the moment and much stronger than was previously estimated, in particular due to cyclical revenues generated by the economic upswing. However, this does not relieve the government of its duty to do everything in its power to ease macroeconomic imbalances. While the Central Bank does not pass judgement on legislative decisions concerning tax cuts as such, their timing is crucial for the effectiveness of monetary policy. Recently the government announced measures aimed at boosting household real disposable income, which at the same time will ease the stance and delay the necessary macroeconomic adjustment. These actions will not bring down underlying inflation even if measured inflation is temporarily reduced. Easier terms for lending by the Housing Financing Fund, which have also been discussed, would also serve to strengthen demand.

For all these reasons, a reduction in the policy interest rate is still not in sight, in spite of the substantial improvement in inflation prospects. On the contrary, it is impossible to rule out a further policy rate hike in order to attain the inflation target within an acceptable timeframe and the analysis presented here implies that there are still grounds for tightening the monetary stance further by raising the policy rate. However, the Board of Governors of the Central Bank of Iceland has decided to postpone such a measure for the time being, given the already very high policy rate, quite tight monetary stance and considerably more favourable inflation outlook than was forecast in the middle of this year. Because of prevailing uncertainty and the long interval before the first issue of *Monetary Bulletin* in 2007 is published, the Board of Governors has decided to add an interest rate decision date this year. The next interest rate decision will be announced on December 21, 2006. The decision made then will be based on the analysis in the current *Monetary Bulletin* and additional data that become available by that time.

Economic and monetary developments and prospects[1]

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

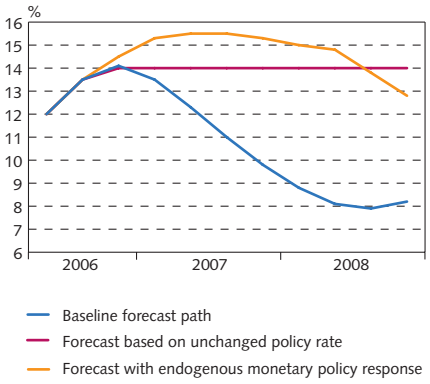
1. This article uses data available on October 31, 2006 but the forecast is based on data until October 17.

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.

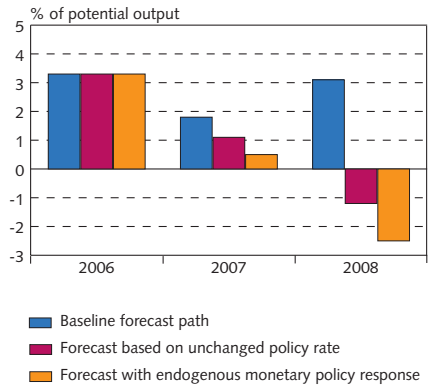
Some output growth is forecast for 2007 in spite of lower domestic demand, driven by rapid export growth and a substantial contraction in imports. In the baseline forecast, output growth will pick up again in 2008. According to the policy rate path in the baseline forecast, the monetary stance will be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

Chart I-1
Different policy rate paths



Source: Central Bank of Iceland.

Chart I-2
Output gap 2006-2008



Source: Central Bank of Iceland.

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.

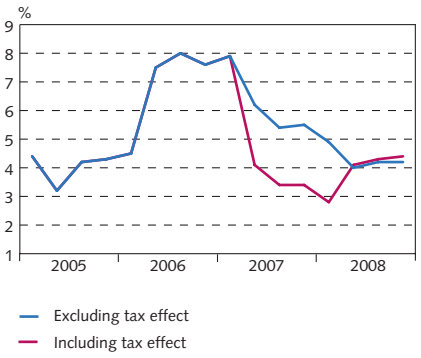
Cost-push inflation appears to have been overestimated

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.

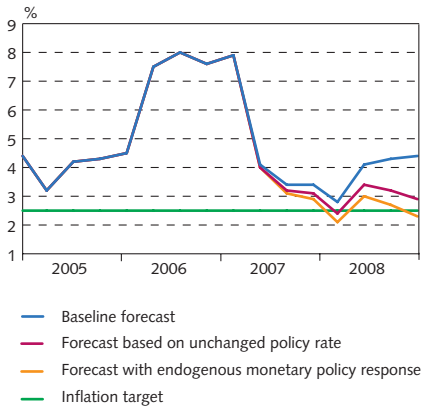
2. Such measures can have a second-round effect through wage developments, but this is unlikely in the present case with sizeable further wage rises already agreed.

Chart I-3
Tax effect on the baseline inflation forecast



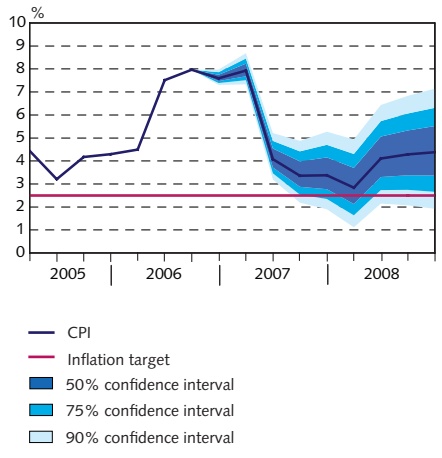
Source: Central Bank of Iceland.

Chart I-4
Different inflation paths



Source: Central Bank of Iceland.

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

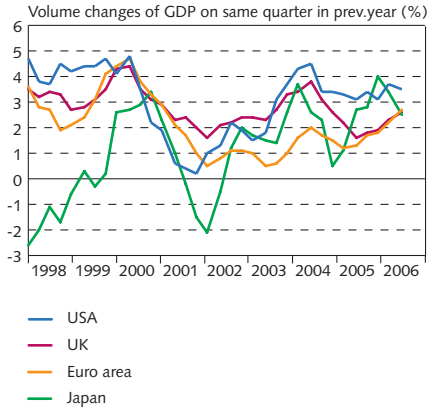
Other uncertainties remain broadly unchanged. Once again inflation one year ahead is more likely to be underforecast than overforecast, and this risk is now deemed greater than in July. The risk profile two years ahead is now tilted to the upside, while in the July forecast it was symmetric.

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.

Chart II-1
International economic developments
Q1/1998 - Q2/2006[1]
Economic growth in main trading areas



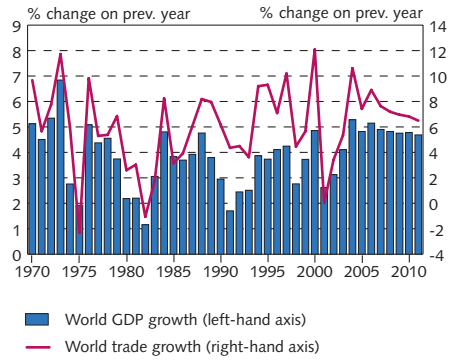
1. Data for 2006 are preliminary.
Source: Reuters EcoWin.

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.

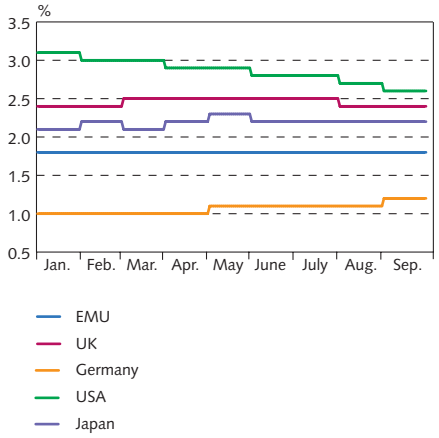
Global output growth outperformed forecasts in the first half of 2006. The rapid expansion of global trade and favourable international financial conditions have been major drivers of output growth in recent years. The IMF forecasts only marginally less growth of above 5% in 2006. If this holds, the 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-2
International economic developments
1970 - 2011[1]
World GDP and trade growth, change on previous year



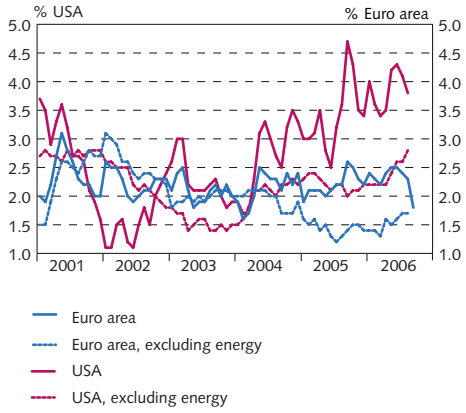
1. Data for 2005-2011 are IMF forecasts.
Source: IMF.

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 2006[1]
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).

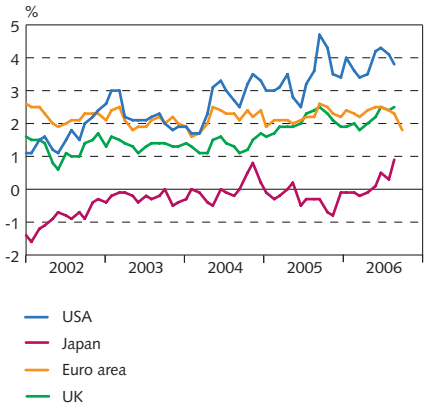
End in sight for deflation in Japan

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

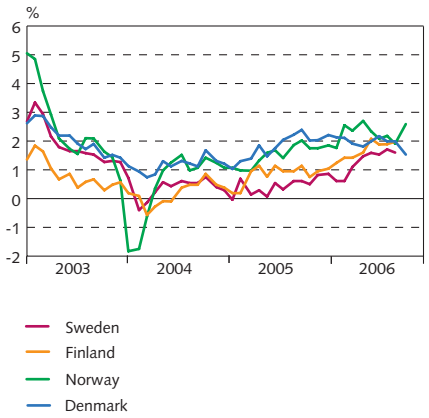
Although the bulk of Iceland's international trade is conducted with its traditional market areas of western Europe and the US, the share of certain emerging market economies is increasing. Their growing profile in the global economy also has indirect effects. Brisk growth in a number of emerging market 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 2006[1]



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

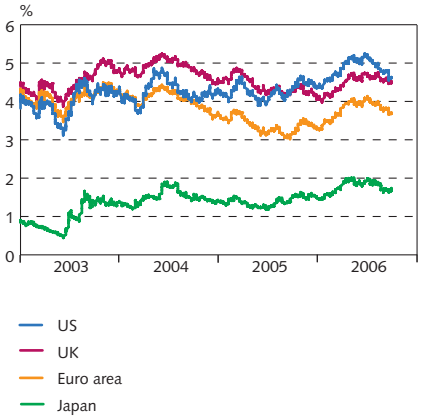
Chart II-6
Inflation in the Nordic countries
January 2003 - September 2006[1]



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

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

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

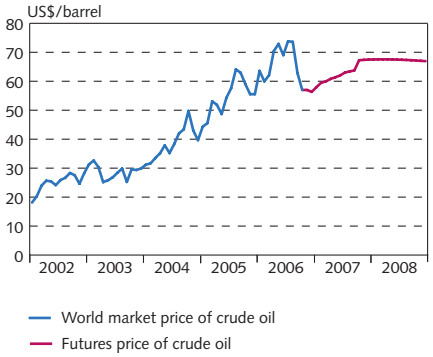


Source: Reuters EcoWin.

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.

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

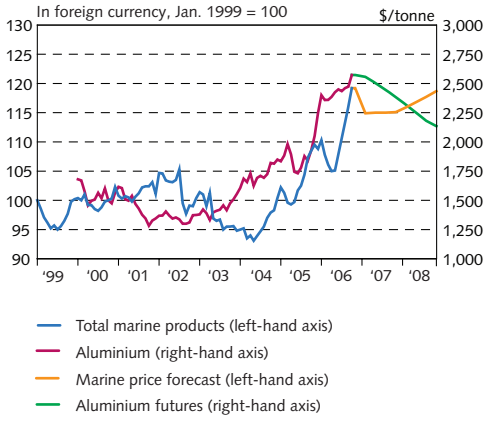


Sources: Bloomberg, NYMEX, Reuters EcoWin.

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.

Chart II-9
Prices of marine exports and aluminium



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

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

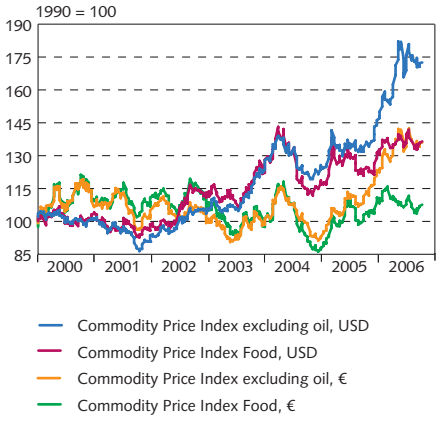
the next few years and the unlikelihood that main demersal catches will increase that year. For the purposes of this forecast, catches and export value are therefore assumed to remain unchanged.

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.

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

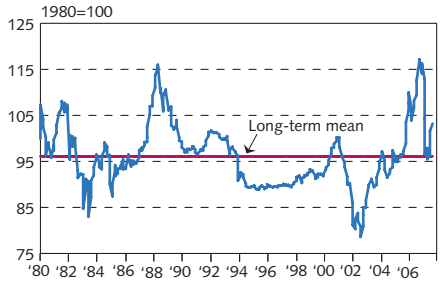


Source: Reuters EcoWin.

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.

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.

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

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

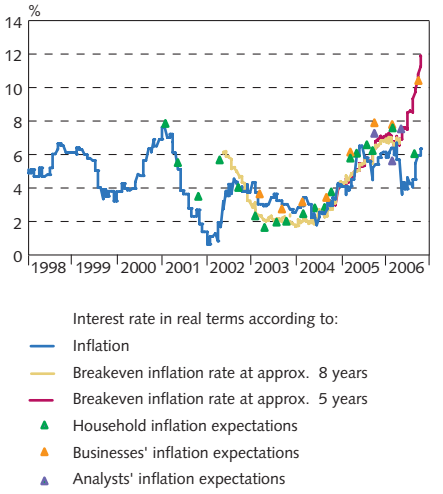
Since the last *Monetary Bulletin* was published in July, the Central Bank has raised its policy interest rate by 1.75 percentage points. Measured in real terms against the breakeven interest rate on five-year Treasury notes, the policy rate has risen by just over 4 percentage points. The monetary stance 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.

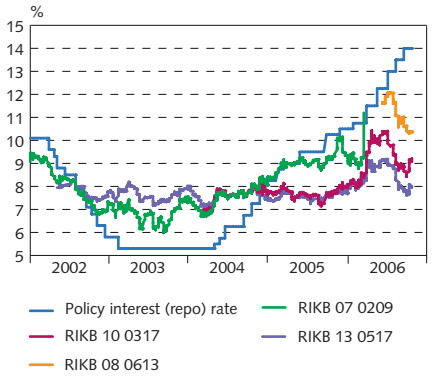
However, analysts are not unanimous about the probable two-year policy rate path. The three largest commercial banks' forecasts are broadly in line until mid-2008, when one expects the policy rate to be raised again, reflecting the assumption – which is not made by the others – that a new wave of investments 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



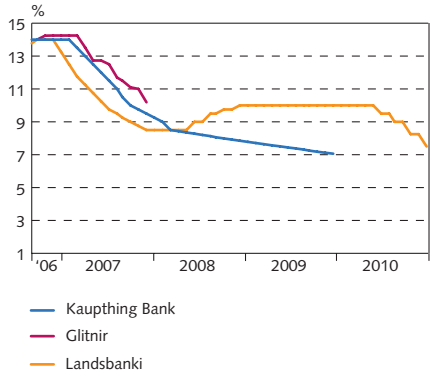
Source: Central Bank of Iceland.

Chart III-2
Nominal Treasury note yields and the Central Bank repo rate
Daily data January 3, 2002 - October 31, 2006



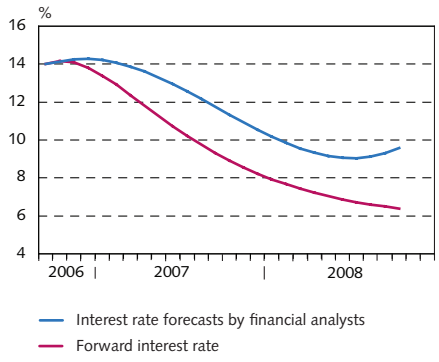
Source: Central Bank of Iceland.

Chart III-3
Latest policy rate forecasts by main commercial banks
Monthly averages



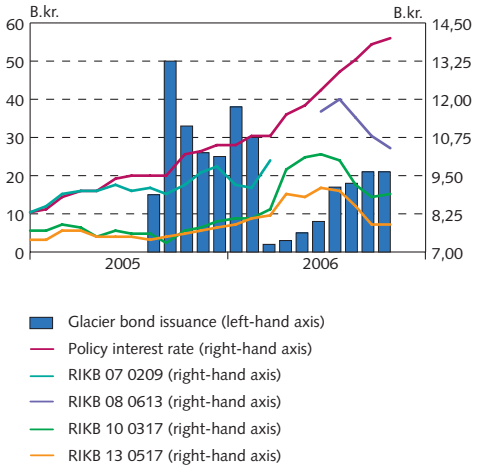
Sources: Glitnir, Kaupthing Bank, Landsbanki.

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 issuance[1]
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

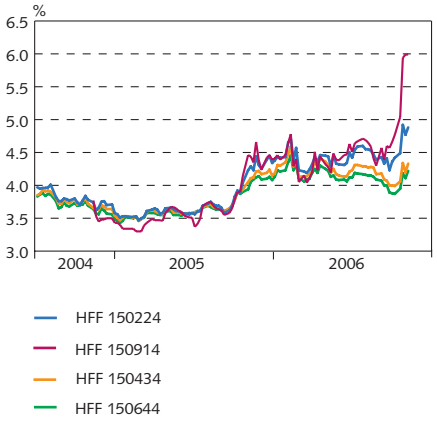
After *Monetary Bulletin* was published in July, yields on indexed Housing Financing Fund (HFF) bonds went down for most of the time, especially on the two longer series maturing in 2034 and 2044. A considerable rise has taken place since then, however, most noticeably in the shortest series maturing 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.

Chart III-6
HFF bond yields
Weekly data July 8, 2004 - October 31, 2006



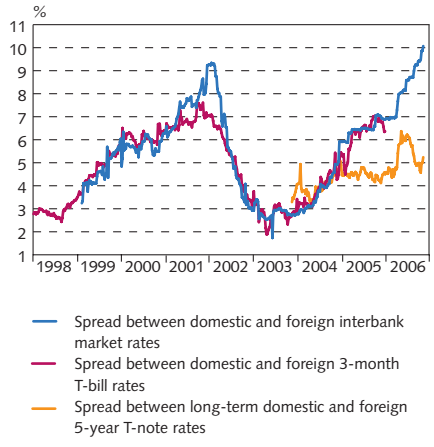
Source: Central Bank of Iceland.

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.

Chart III-7
Short-term interest rate differential with abroad
Weekly data January 7, 1998 - October 31, 2006



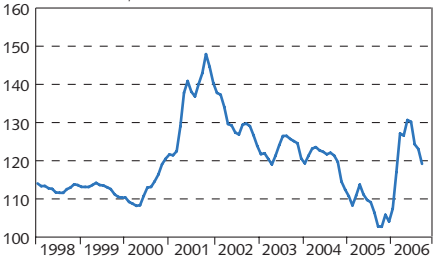
Source: Central Bank of Iceland.

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

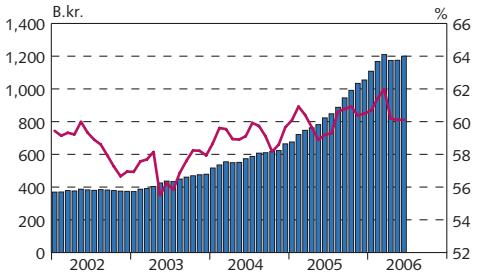
Chart III-8
Exchange rate index
Monthly average January 1998 - October 2006
December 31, 1991=100



Source: Central Bank of Iceland.

Chart III-9

Corporate foreign currency-denominated borrowing, and as a share of total lending 2002 - 2006[1]



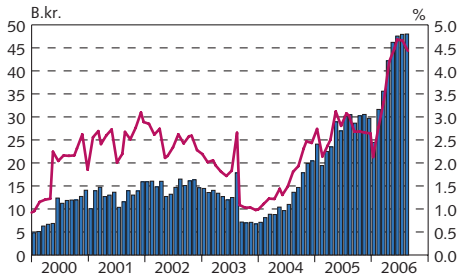
Total corporate foreign-denominated borrowing (left-hand axis)

Proportion of businesses' foreign-denominated borrowing (right-hand axis)

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 2005[1]



Total household foreign-denominated borrowing (left-hand axis)

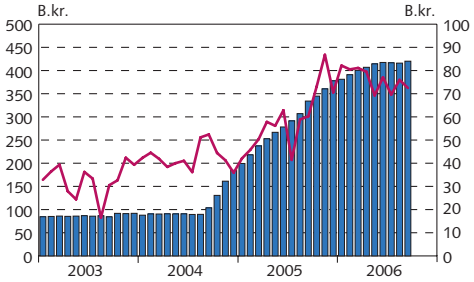
Proportion of households' foreign-denominated borrowing (right-hand axis)

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 households[1]

January 2003 - September 2006



Indexed loans (left-hand axis)

Overdrafts (right-hand axis)

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.

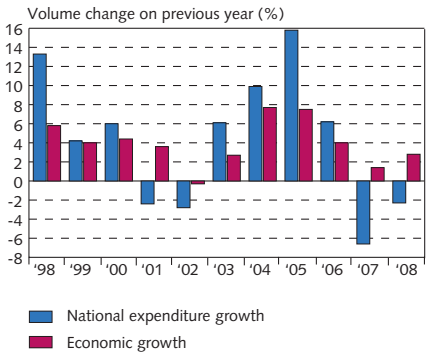
In Q2/2006, corporate lending growth by the credit system dropped from the previous quarter for the first time since Q2/2004. However, growth is still surging ahead, at 53%. Business overdrafts have been increasing in recent months and in September the twelve-month growth rate was 32.7% (an increase 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.

Mynd IV-1

National expenditure growth and economic growth 1998-2008[1]



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

Divergent domestic demand adjustment in baseline forecast and alternative scenario

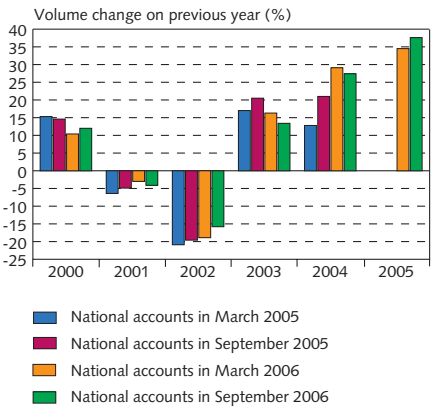
As in the last *Monetary Bulletin* in July, the baseline forecast assumes that the policy interest rate will develop in line with market agents' and analysts' expectations and forecasts. Two alternative scenarios are calculated. One keeps the policy rate unchanged, while the other presents a calculated 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%.

Chart IV-2

Revision of gross fixed capital formation growth



Source: Statistics Iceland.

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

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

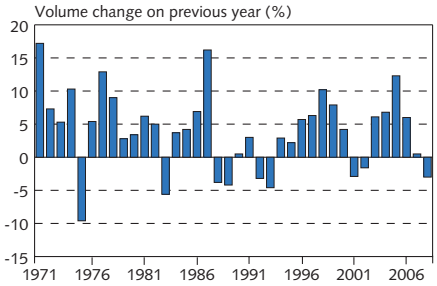
The baseline forecasts in *Monetary Bulletin* this year have presented a fairly consistent picture of private consumption developments. Annualised growth is projected to drop fairly swiftly until mid-2007, when it will begin to contract for the rest of the forecast period. The baseline forecast broadly 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

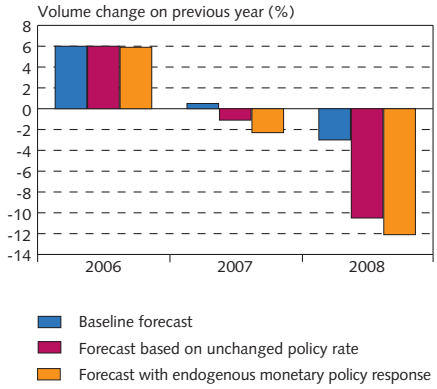
Most pointers indicate that private consumption growth has been slowing down this year, as forecast (see Table IV-1). However, the

Chart IV-3
Private consumption growth 1971-2008[1]



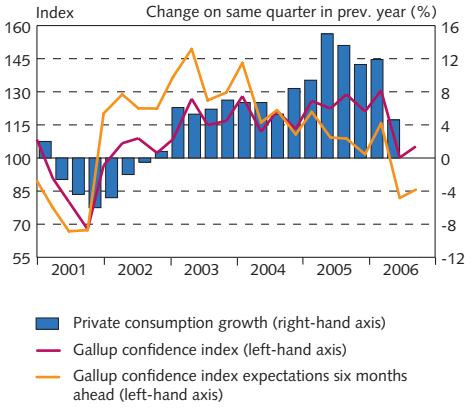
1. Central Bank baseline forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-4
Private consumption growth 2006-2008



Source: Central Bank of Iceland.

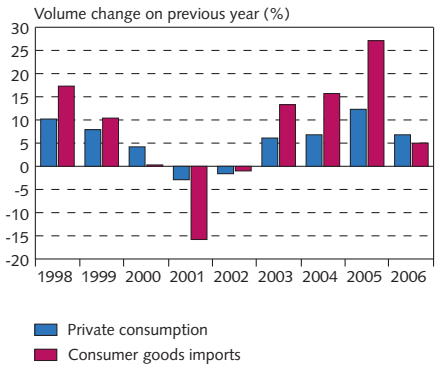
Chart IV-5
Private consumption and consumer confidence[1]
Q1/2001 - Q3/2006



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

Chart IV-6

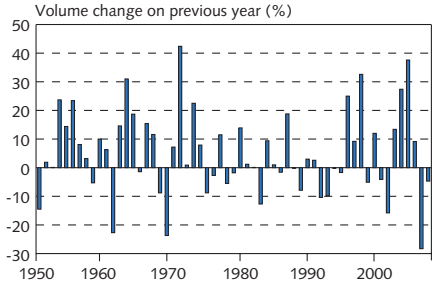
Private consumption and consumer goods imports 1998-2005 and 2006/Q1-3[1]



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

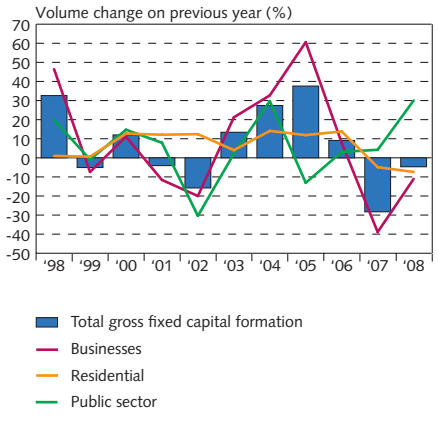
Gross fixed capital formation growth 1950-2008[1]



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 1998-2008[1]



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%.

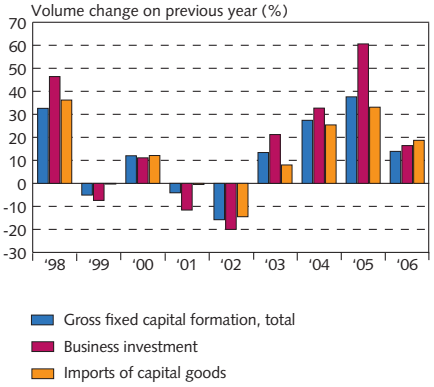
More business investment growth this year and a sharper contraction in 2007, compared with the July forecast

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.

Chart IV-9

Gross fixed capital formation and imports of capital goods 1998-2005 and Q1-3/2006[1]



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.

Investment in the power and aluminium sectors peaks this year

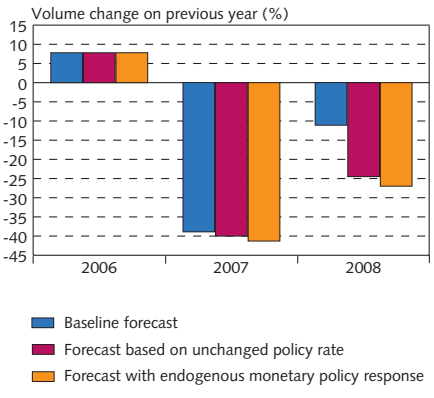
Investment in the power and aluminium sectors accounts for almost half of total business investment in 2005 and 2006. It peaked this year and is expected to amount to 110 b.kr., which is just under 4 b.kr. less than forecast in July. By the end of 2006, around 80% of the current aluminium and power sector 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 Reykjavík is estimated to cost roughly 10 b.kr. per year over the next four years.

Chart IV-10

Business investment growth 2006-2008



Source: Central Bank of Iceland.

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

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

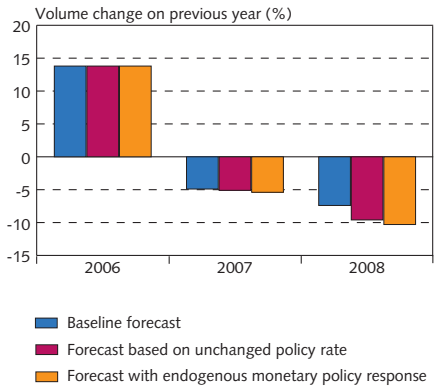
In light of sharp wage rises in 2005, it is interesting to note that the large majority of executives – and considerably more than in May – expect average wages to rise over the next six months.

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%.

Chart IV-11
Residential investment growth 2006-2008



Source: Central Bank of Iceland.

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.

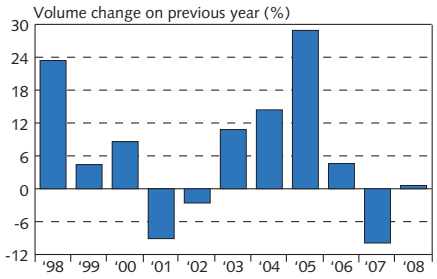
Imports

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

Chart IV-12
Import growth 1998-2008[1]



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

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.

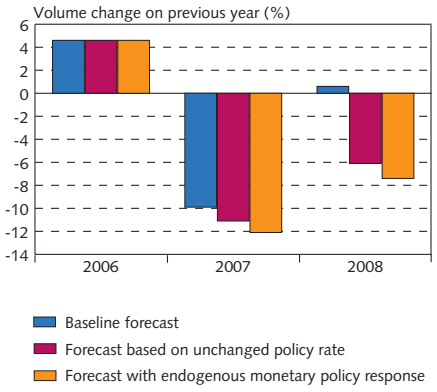
GDP growth and the output gap

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 ...

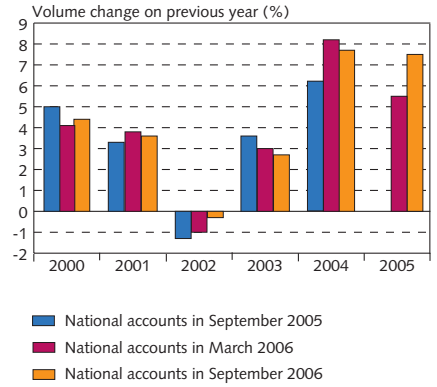
In July, the Central Bank forecast GDP growth of 4.8% this year and just under 2% in 2007, followed by a ½% contraction in 2008. The forecast for 2006 and 2007 has now been revised downwards. For 2008, an increase of almost 3% is now expected instead of a decline. The alternative scenarios are closer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

Chart IV-13
Import growth 2006-2008



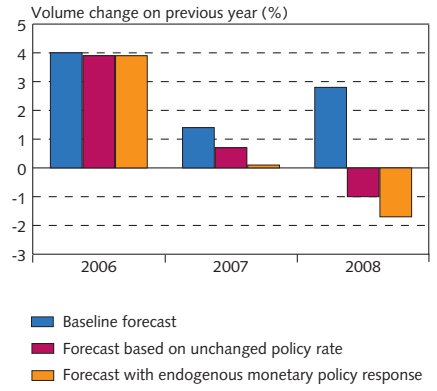
Source: Central Bank of Iceland.

Chart IV-14
Revision of economic growth



Source: Statistics Iceland.

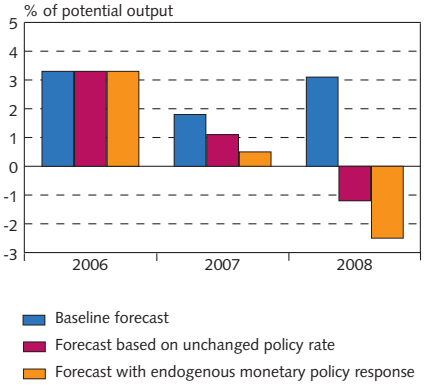
Chart IV-15
Economic growth 2006-2008



Source: Central Bank of Iceland.

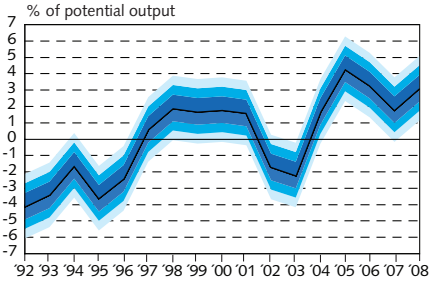
2. Estimates and provisional figures for GDP in 2002 and 2003 have also changed. The preliminary estimate for 2002 showed a contraction of ½%, which was revised to 2.1% at the beginning of 2005. Statistics Iceland's revision of GDP figures for 1990-2003, published in autumn 2005, showed a decrease of 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-16
Output gap 2006-2008



Source: Central Bank of Iceland.

Chart IV-17
The output gap in the baseline scenario 1992-2008[1]



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

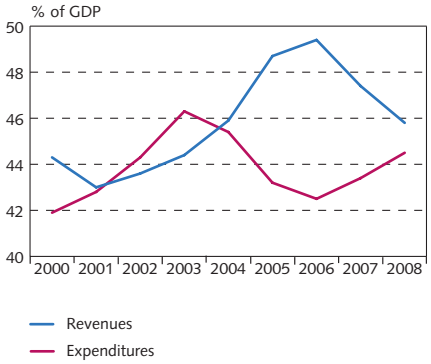
Table V-1 Public sector 2005-2008[1]

% 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.

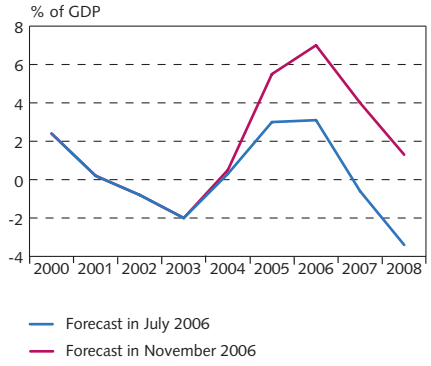
Sources: Ministry of Finance, State Accounts, Statistics Iceland, Central Bank baseline forecast 2006-8.

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



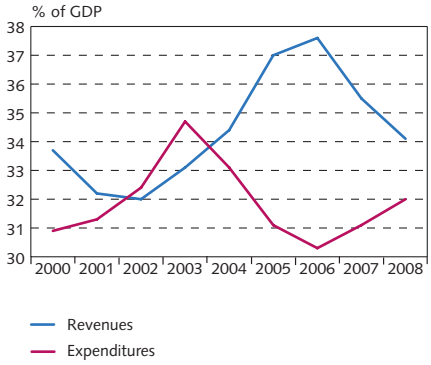
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

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



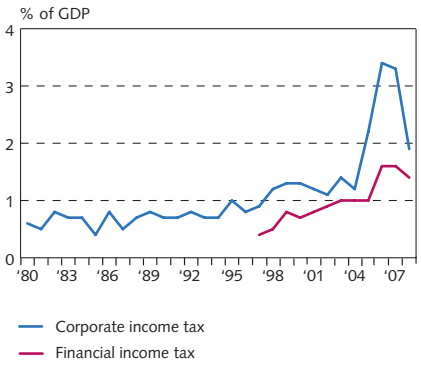
Source: Central Bank of Iceland.

Chart V-3
Treasury revenues and expenditures 2000-2008



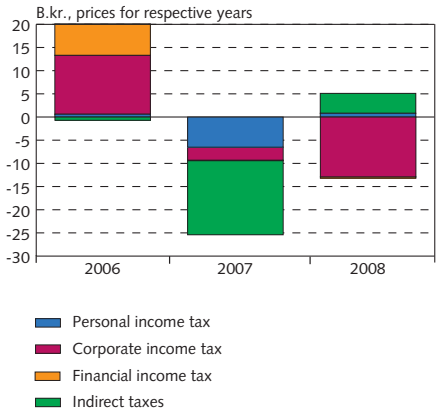
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

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



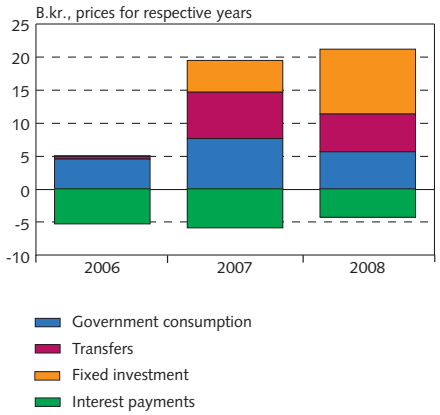
Sources: State accounts, Central Bank of Iceland baseline forecast.

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 2005-2008[1]

% 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-

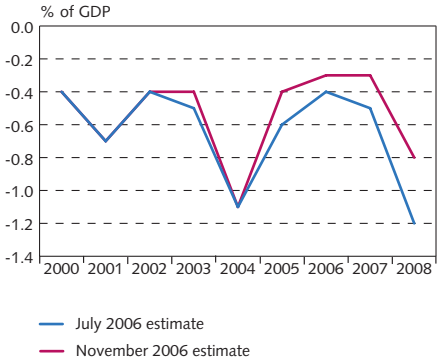
Table V-3 Local government 2005-2008[1]

% 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.

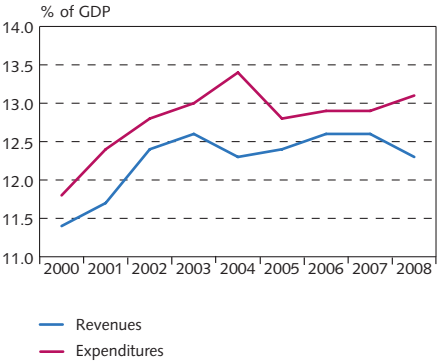
Sources: Ministry of Finance, State Accounts, Statistics Iceland, Central Bank baseline forecast 2006-8.

Chart V-7
Fiscal balance of municipalities 2000-2008



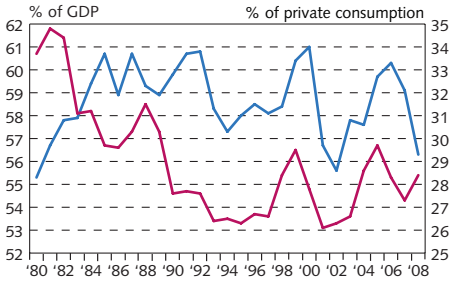
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

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



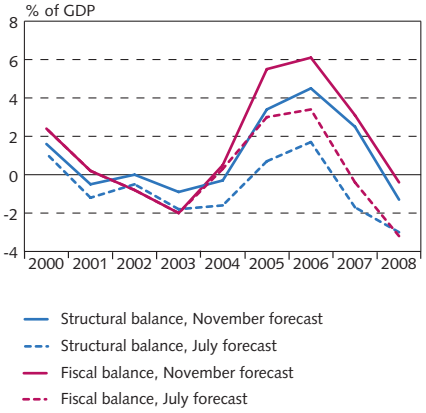
Sources: Statistics Iceland, Central Bank of Iceland baseline forecast.

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. Cyclicality 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 cyclicality 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.

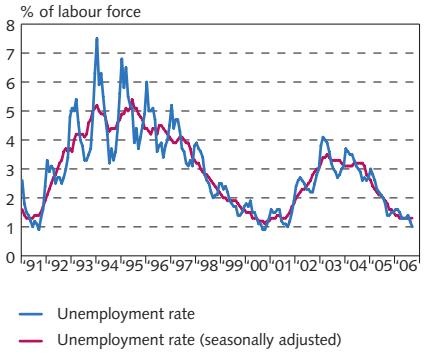
Domestic labour use is still on the increase ...

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 Reykjavík Area (7.9%) than in regional Iceland (3.2%).

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

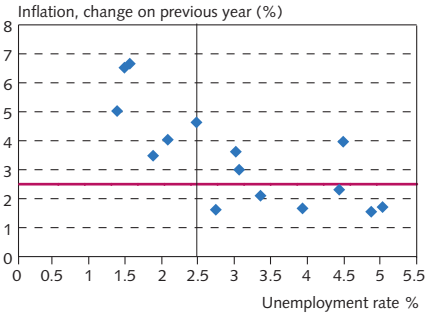
Recent statistics reveal how excess demand for labour in recent years has been met by labour imports. In 2005, more than 9,000 foreign

Chart VI-1
Unemployment rate
January 1991 - September 2006



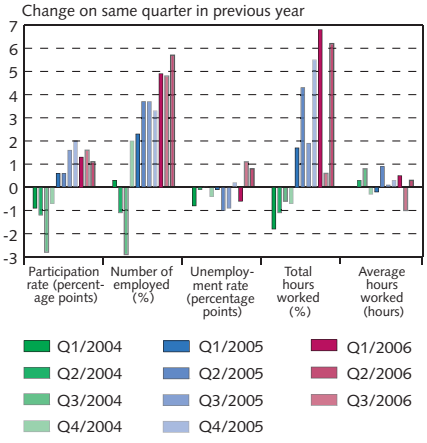
Sources: Directorate of Labour, Central Bank of Iceland.

Chart VI-2
Unemployment and inflation 1991-2005



Sources: Directorate of Labour, Statistics Iceland.

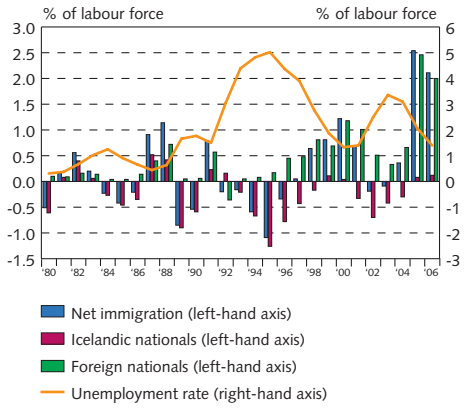
Chart VI-3
Changes in labour market
2003-2006



Source: Statistics Iceland.

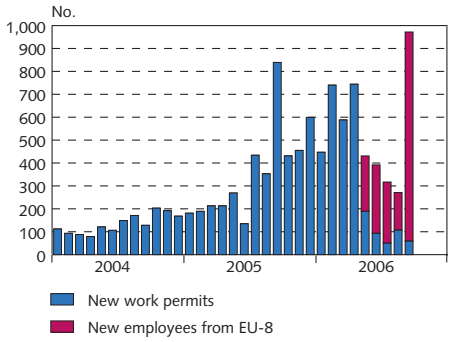
1. See e. g. Box 1, Equilibrium unemployment and labour market pressures, *Monetary Bulletin* 2001/4, 6-7.

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



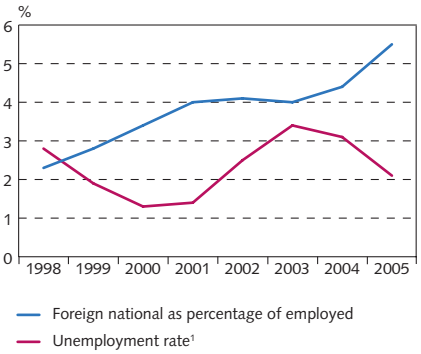
Sources: Directorate of Labour, Statistics Iceland.

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 May1, 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.

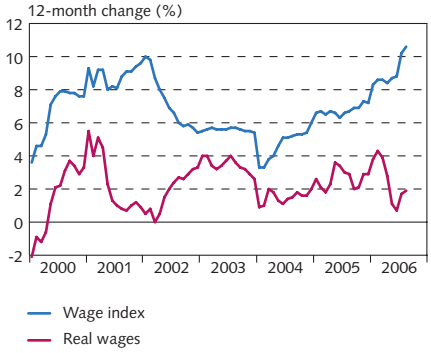
The sharpest turnaround in sentiment has been in the construction and power utility sectors. In September only one out of four companies wanted to take on more employees, compared with just over 56% in May. Some 16% of construction businesses now want to cut back their staff numbers, as against only 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%.

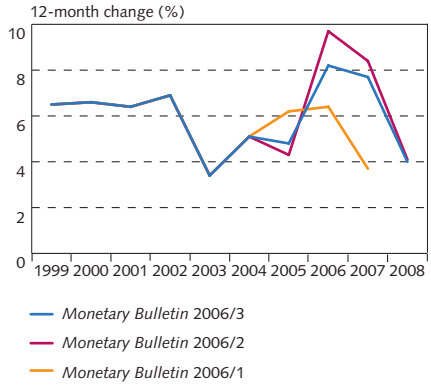
One consequence of the ASÍ-SA wage agreement has been considerably higher wage increases than were forecast at the beginning of 2006 without a corresponding increase in productivity. According to the current Central Bank forecast, unit labour costs will increase by 8.2% year-on-year. This increase is 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

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



Source: Statistics Iceland.

Chart VI-8
Unit labour cost 1999-2008[1]



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

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.

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.

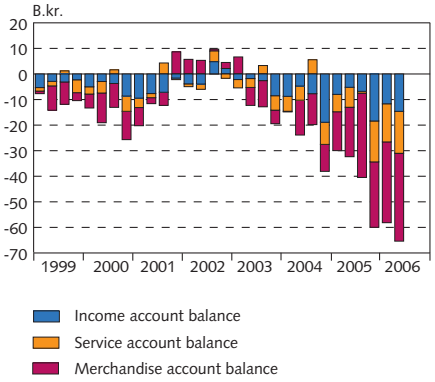
A total deficit of almost 95 b.kr. was shown on the merchandise account over the first eight months of 2006 compared with just over 63 b.kr. over the corresponding period in 2005, measured at constant exchange rates. As reported in *Monetary Bulletin* in July, the merchandise deficit is driven by surging 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

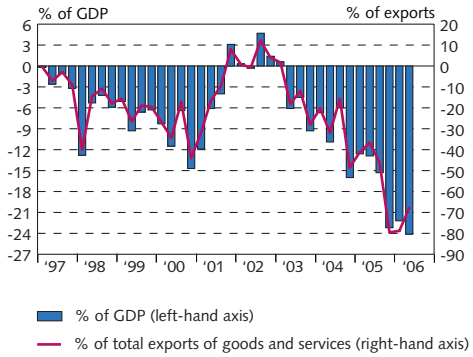
The wider current account deficit and depreciation of the króna since Q1/2006 caused the external position to deteriorate in Q2. The net external position was negative by the equivalent of 119% of estimat-

Chart VII-1
Current account balance components[1]
Q1/1999 - Q2/2006



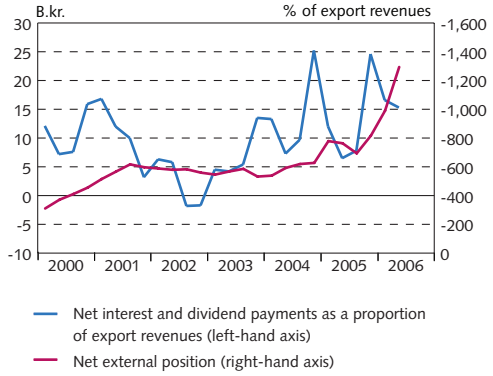
1. Net current transfer is included in balance on income.
Sources: Statistics Iceland, Central Bank of Iceland.

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



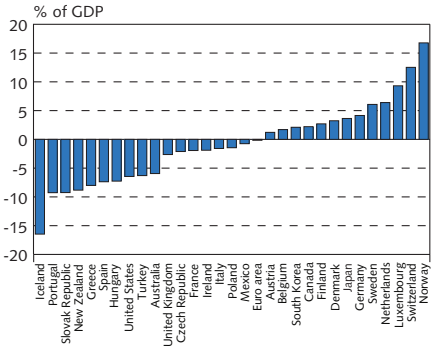
Sources: Statistics Iceland, Central Bank of Iceland.

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



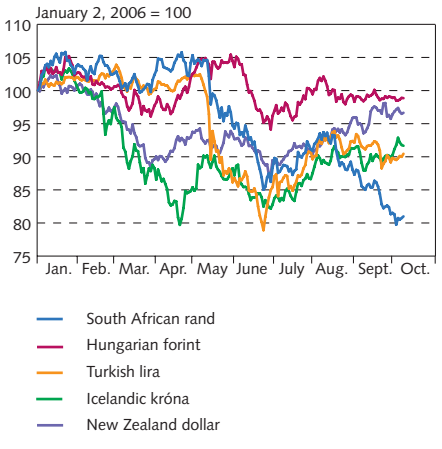
Sources: Statistics Iceland, Central Bank of Iceland.

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).

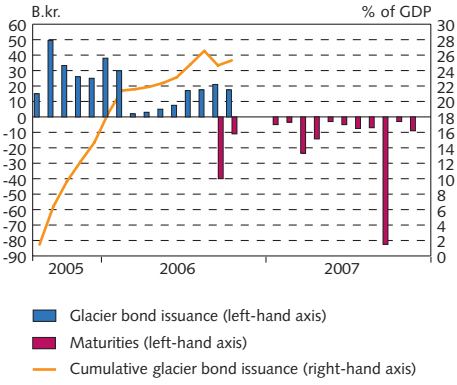
It is difficult to determine the implications that carry trades have for the long-term strength of the króna. A major test of the stability of the currency came in mid-September when the first round of glacier bond maturities arrived. The króna weakened slightly on the day when 30 b.kr. matured, but 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.

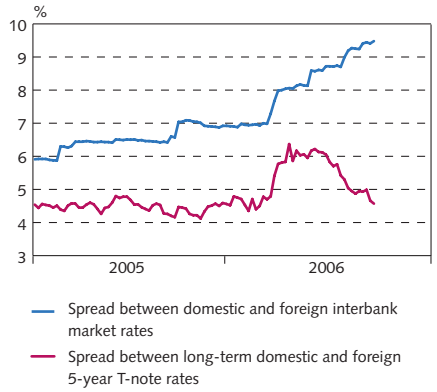
Iceland's enormous current account deficit ought to prompt investors to consider the risks of króna-denominated investments. Until now, most foreign investors have opted to ignore it. The strong Treasury position is one factor cited by Icelandic and international analysts as offsetting the major prevailing 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.

Chart VII-6
Glacier bond issues[1]



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.

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.

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.

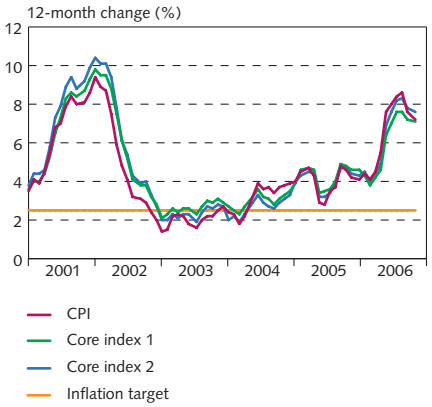
Lower inflation in September and October is mainly explained by the base effect of price rises a year before and a reduction in prices of certain volatile index components, especially petrol. The base effect of the 1.5% rise in the CPI in September 2005 has now passed out of the index. Disinflation over 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.

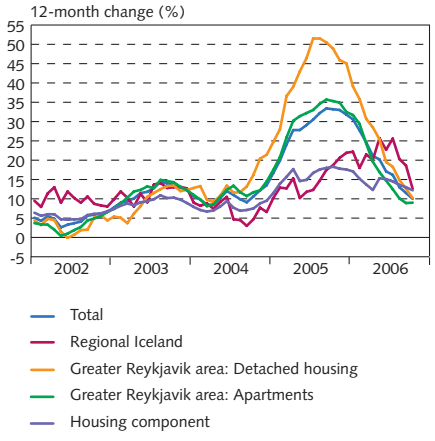
Despite the lower contribution of the housing component to inflation, an increase in the cost of owner-occupied housing was one of the main drivers of the rise in the CPI since *Monetary Bulletin* was published at the beginning of July. Increased prices of private sector services and domestic food and 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 2006[1]



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.

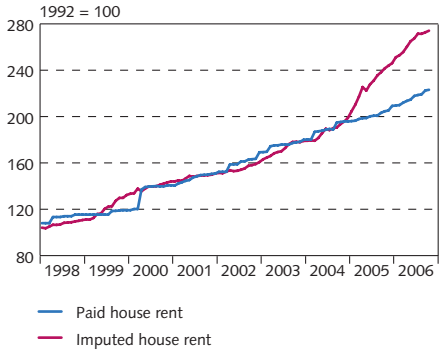
Chart VIII-2
The CPI housing component and market prices of housing January 2002 - Oct. 2006



Source: Statistics Iceland.

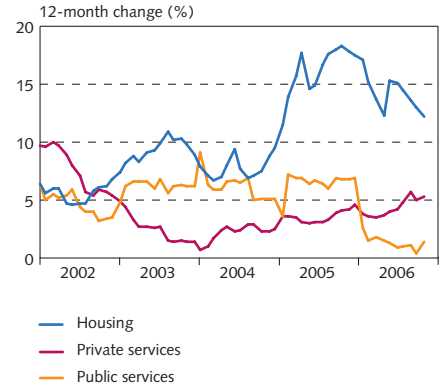
1. This is 0.1 percentage point lower than in the forecast published in *Monetary Bulletin* in July, which was prepared when the second quarter was almost over.
2. Core index 1 is the CPI excluding prices of vegetables, fruit, agricultural products and petrol, and Core index 2 also excludes prices of public services.

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



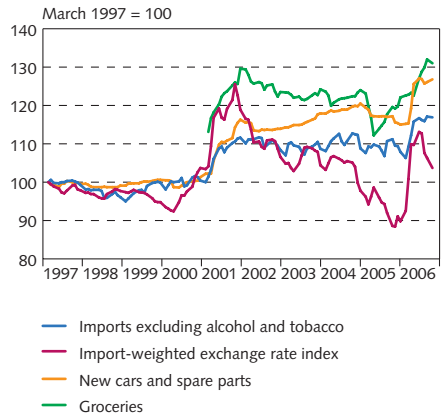
Source: Statistics Iceland.

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.

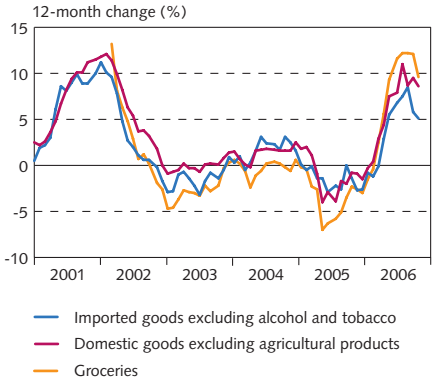
Appreciation of the króna hampers the full pass-through to prices from the depreciation that preceded it

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]

Chart VIII-6
Goods prices January 2001 - October 2006



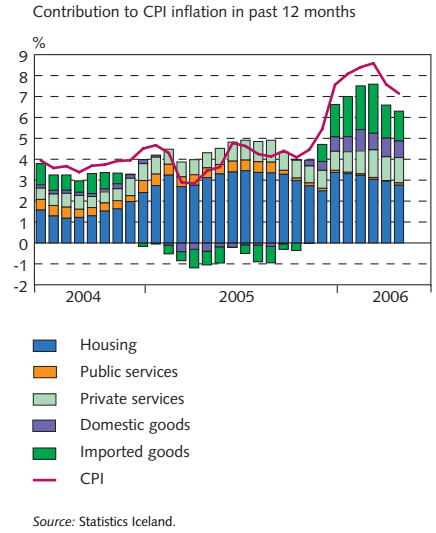
Source: Statistics Iceland.

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.

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

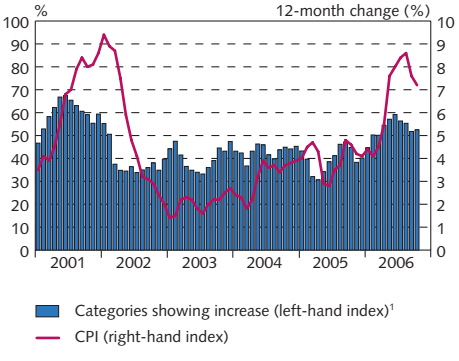


Source: Statistics Iceland.

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-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.

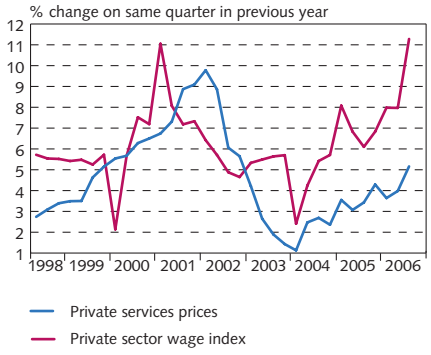
Overview of forecasts by financial market analysts[1]

	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).

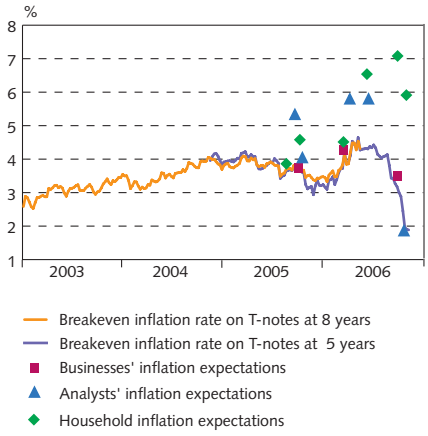
Source: Central Bank of Iceland.

Chart VIII-9
Private sector wage index and private services prices
Q2/1998 - Q3/2006



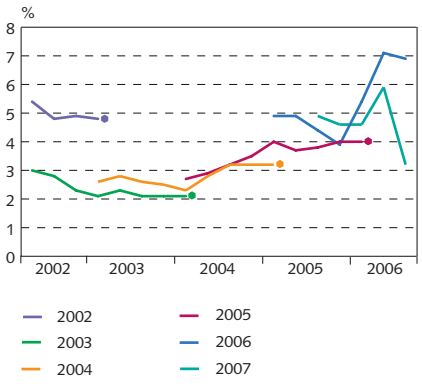
Source: Statistics Iceland.

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 inflation[1]



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.

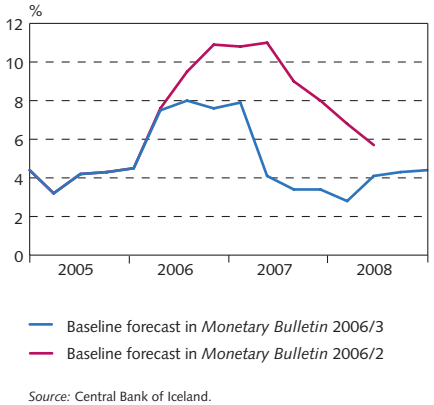
The baseline forecast projects a rate of inflation above the target for the entire forecast period. Nonetheless, the forecast for 2007 has been revised sharply downwards since July. It reaches a low of 2.8% in Q1/2008. Since the monetary stance is too lax, however, inflation picks up across the remainder 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]

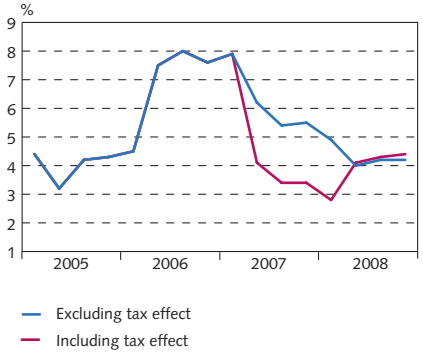
The normal measure of inflation under such circumstances would therefore be a core index excluding the impact of the tax cuts. Chart VIII-13 presents the effect of the tax reductions on the baseline forecast. It shows that measured inflation falls much faster than underlying inflation to remain two percentage 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.

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.

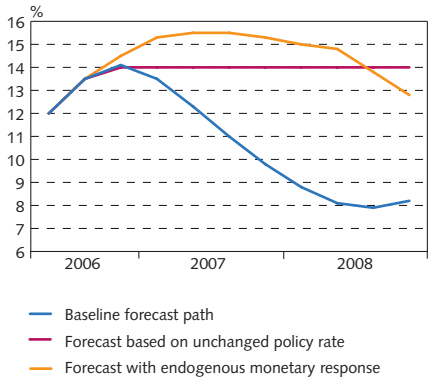
A tighter monetary stance results in a better inflation outlook two years ahead

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.

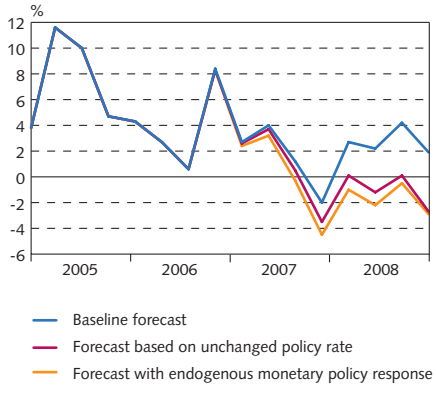
Chart VIII-15 shows a considerably weaker output growth path in the alternative scenarios than in the baseline forecast, which is based on an easier monetary stance. The outlook is for a contraction in output from Q3/2007 and over the whole of 2008 in the scenario based on endogenous policy responses.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

Chart VIII-14
Alternative policy rate paths



Source: Central Bank of Iceland.

Chart VIII-15
Different GDP growth paths

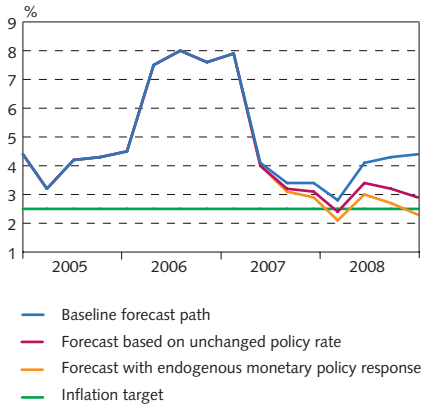


Sources: Statistics Iceland, Central Bank of Iceland.

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.

Chart VIII-16
Different inflation paths



Source: Central Bank of Iceland.

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

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

Central Bank risk profile	*One year ahead*	*Two years ahead*
Monetary Bulletin 2006/1	Upward	Upward
Monetary Bulletin 2006/2	Upward	Symmetric
Monetary Bulletin 2006/3	Upward	Upward

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

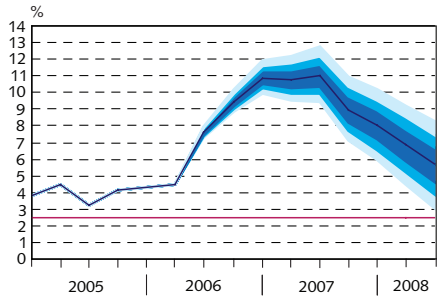
As before, falling asset prices, particularly real estate prices, could lead to a reduction in private consumption from the baseline forecast projection. Coupled with the risk of a faster-than-expected rise in international interest rates, this could drive down domestic demand in the second half of the 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.

Chart VIII-17

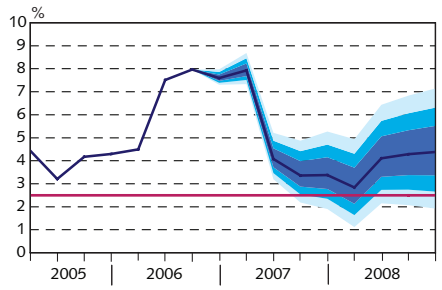
Previous Central Bank inflation forecast
– baseline forecast (in *Monetary Bulletin* 2006/2)

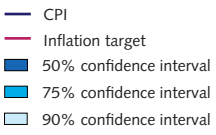
Forecasting period: Q2/2006 - Q2/2008



Current Central Bank inflation forecast
– baseline forecast

Forecasting period: Q4/2006 - Q4/2008





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.

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

	Inflation				
	Under	*In the range*	*Under*	*In the range*	*Over*
Quarter	*1%*	*1% - 2½%*	*2½%*	*2½% - 4%*	*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.

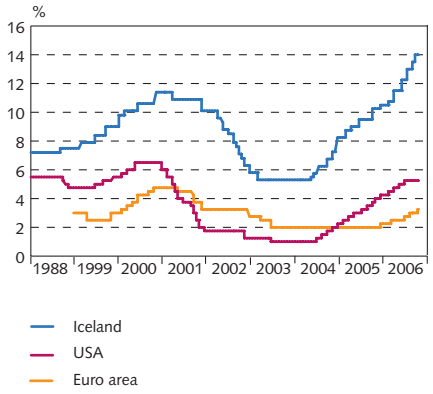
Relative to measured inflation, the policy rate has unquestionably risen in real terms. It has also gone up by most other criteria, because sizeable hikes have coincided with lower inflation expectations in the markets and among businesses. Household expectations in August, on the other hand, were at 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

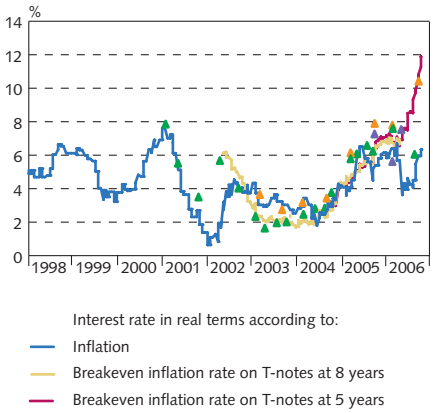
Inflation prospects two years ahead depend crucially upon fairly favourable exchange rate developments. The strengthening of the

Chart IX-1
Central bank policy interest rates
Daily data January 1, 1998 - October 18, 2006



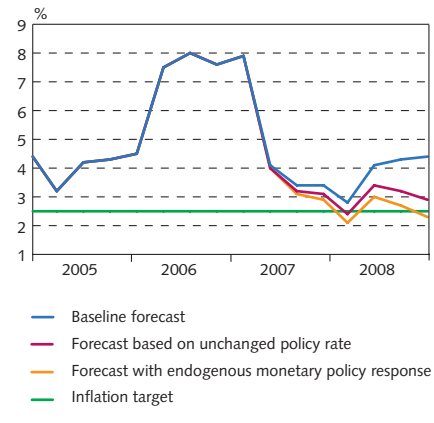
Sources: Reuters EcoWin, Central Bank of Iceland.

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.

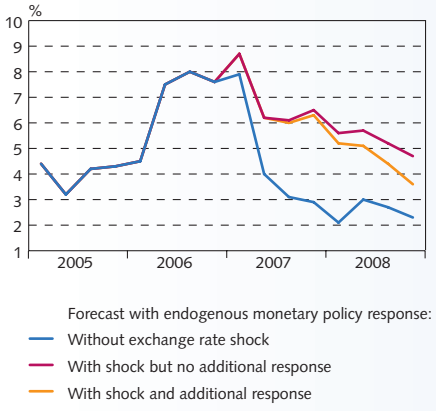
Forecasting of exchange rate movements is notoriously difficult, if not impossible. Iceland's current economic climate is not conducive to making this task any easier. It is also obvious that exchange rate movements can have a substantial impact on a small, open economy like Iceland. Uncertainty about 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.

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



Source: Central Bank of Iceland.

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

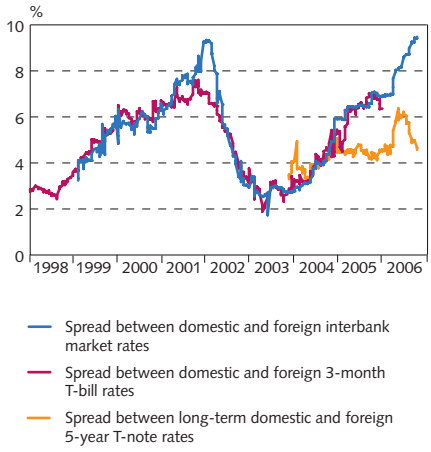
The hypothetical depreciation would have a positive effect on export growth while the tighter monetary stance would amplify the contraction in domestic demand, especially in 2008 and 2009. The export effect would predominate in 2007 with a correspondingly higher rate of output growth that year. However, 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.

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.

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



Source: Central Bank of Iceland.

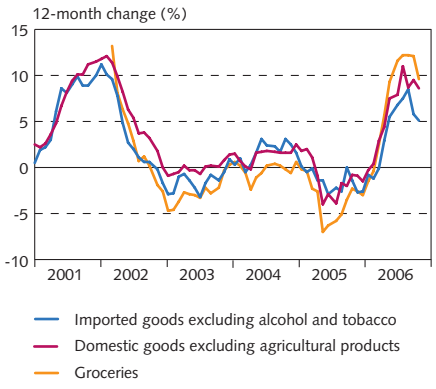
Monetary policy must look beyond short-lived fluctuations in inflation and other indicators

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 macroeconomic 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.

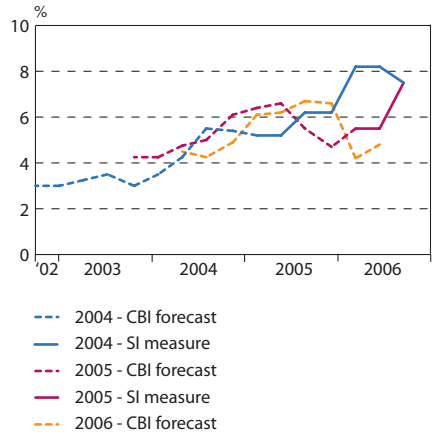
This is not to say that recent inflation is completely irrelevant. Assessments of the inflation outlook are not unaffected by past infla-

Chart IX-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.

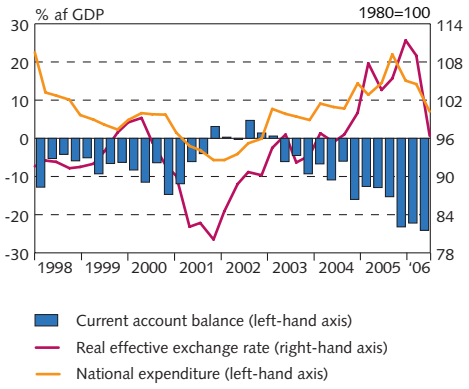
Challenges in timing of responses

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.

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.

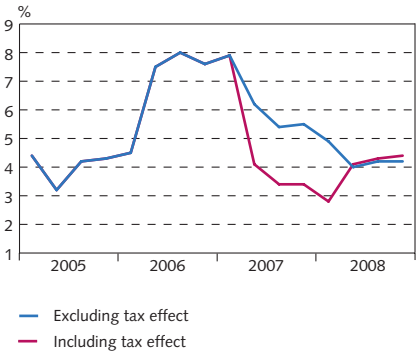
Changes in indirect taxes do not affect monetary policy

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

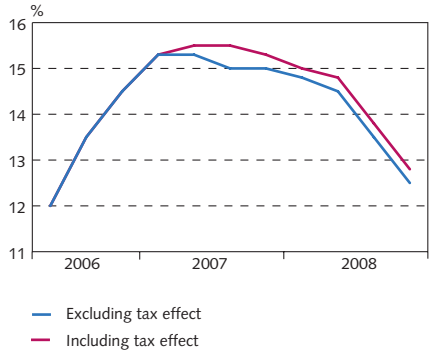
2. This is also true of government intervention in the aggregate level of prices, such as the decision to freeze wholesale prices of dairy products for the next twelve months. The Bank of Canada, for example, bases its monetary policy on core inflation excluding the first-round effect of indirect taxes. 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



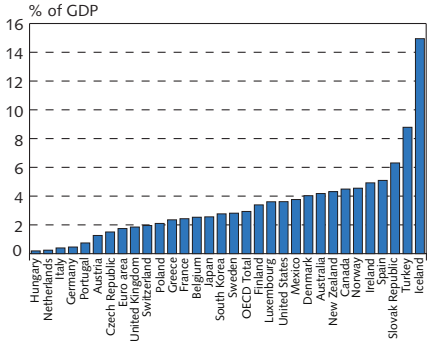
Source: Central Bank of Iceland.

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

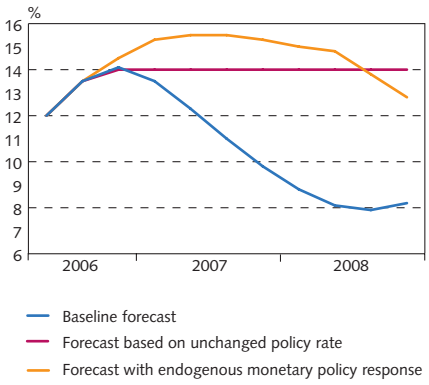
3. Examples are Brazil, where the policy rate is more than 10% in real terms, and Turkey with 7½%. Based on the Central Bank's 14% policy rate and inflation of just over 7%, the real policy rate in Iceland is just below 7%. International comparisons of policy rates also require conversion to a flat rate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

Chart IX-11
Different policy rate paths



Source: Central Bank of Iceland.

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

Date of interest rate decision	*Commentary published in*	*Weeks since previous interest decision announcement*
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,

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 Daníelsson 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.

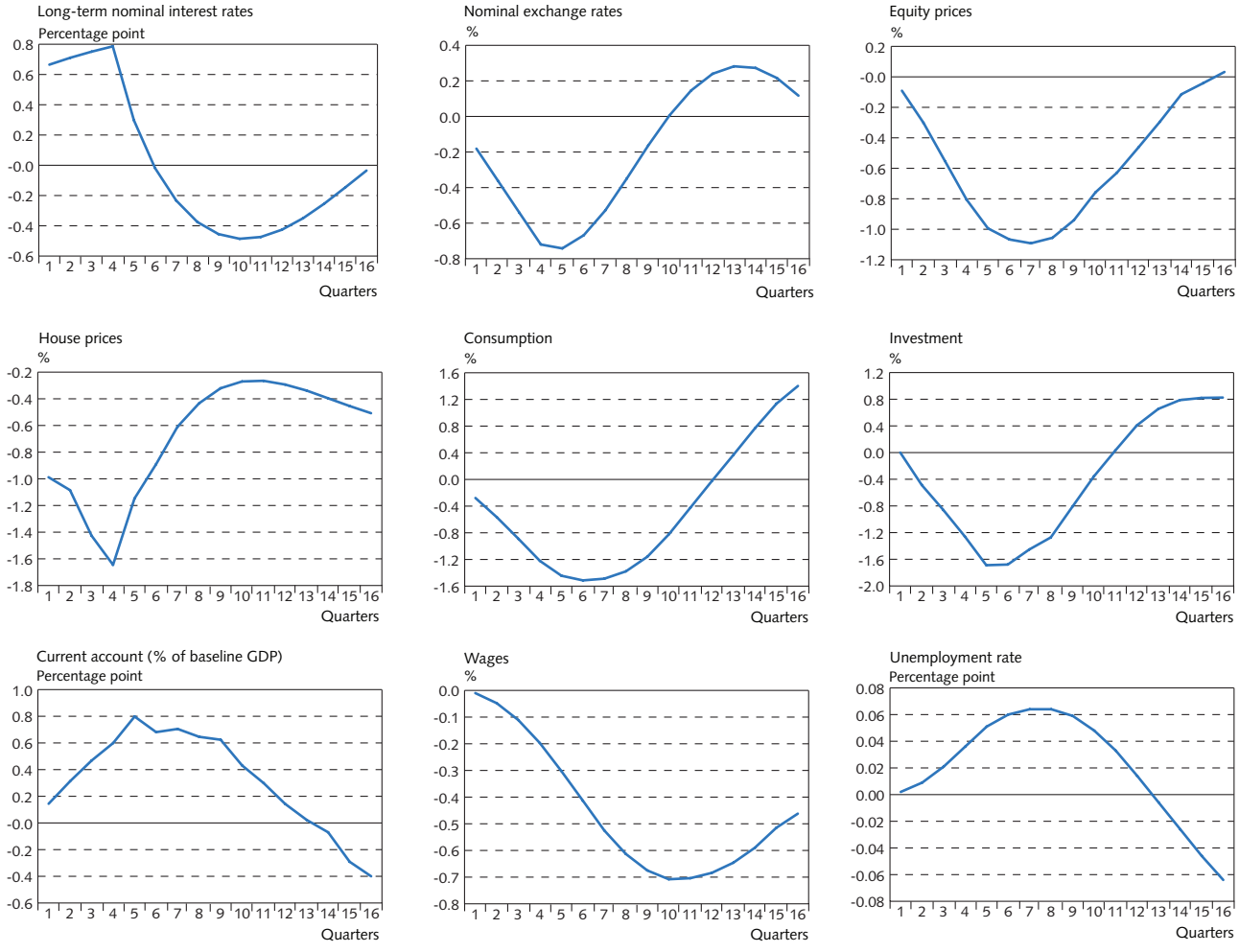
Interest rate channel

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.

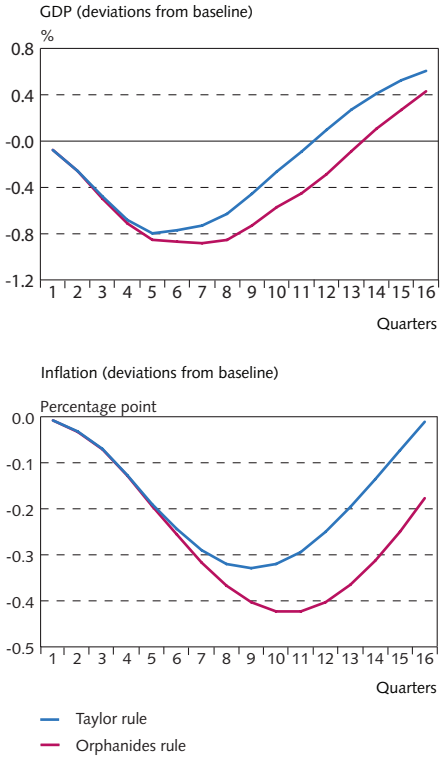
Exchange rate channel

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



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.

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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. Underforecasting 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 Q2/20011

	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

Financial markets and Central Bank measures[1]

Growing optimism in domestic markets

Domestic markets have been upbeat since the second half of June. The króna has appreciated by nearly 10% and domestic equity market indices have risen by 20% over the same period. The first króna-denominated Eurobonds (glacier bonds) matured in mid-September but did not seem to have a palpable effect on the FX market. The three largest commercial banks all announced that they had secured their refinancing through 2007, when more than €11 billion in foreign loans will mature. Carry trades increased and foreign parties have issued some new glacier bonds. Exista investment company was listed on Iceland Stock Exchange (ICEX) after a successful IPO and Icelandair was sold by FL Group to a domestic investor consortium and will also be listed. The Central Bank raised its policy interest rate three times, by a total of 1.75 percentage points, and inflation expectations have dropped since mid-year.

Global financial environment

The global economic environment has been buoyant in recent months, though the optimism that reigned in the first half of the year has diminished somewhat.

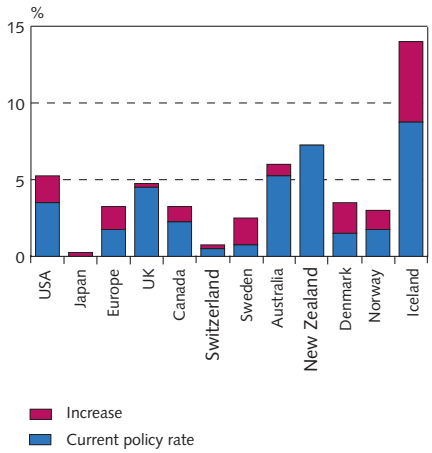
Given the conflict between a weaker economic outlook and increased inflationary pressures, uncertainty surrounds the US Federal Reserve's next interest rate decisions. The US housing market has cooled and is even seen as a potential brake on economic growth over the medium term.

The European Central Bank has raised its minimum bid rate by 1.25 percentage points this year in an attempt to contain inflationary pressures. Economic growth has been on the rise in the euro area, but developments in Germany will prove most crucial. Tax increases intended for next year could hamper economic growth in Germany and there are still no signs of change in the labour market rigidities that are viewed as an obstacle to progress.

In the summer, the Bank of Japan increased its uncollateralised overnight call rate from zero to 0.25%. The Japanese economy has been picking up after 15 years of almost continuous stagnation.

Modest inflation coupled with continuing economic growth in industrialised countries implies that interest rates will remain broadly low, which will sustain the sizeable interest rate differential between Iceland and its chief trading partner countries. Following unease in the first half of 2006, when the króna and other high-interest currencies came under strong pressure, position-taking for carry trades appears to have picked up in global markets. After the Icelandic króna has become part of international portfolios, certain changes can be discerned in the behaviour of its exchange rate. Because domestic markets are increasingly sensitive to global economic developments, unease and uncertainty in foreign markets could have a strong impact in Iceland. International markets have been highly liquid in recent years, but experience shows that this could change at short notice. In such an event, it could prove more difficult to fund the current account deficit in the future. Of particular concern is Iceland's large deficit on the in-

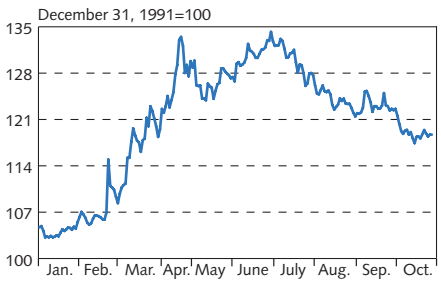
Chart 1
Increases in selected central banks' policy interest rates since the beginning of 2006



Source: Central Bank of Iceland.

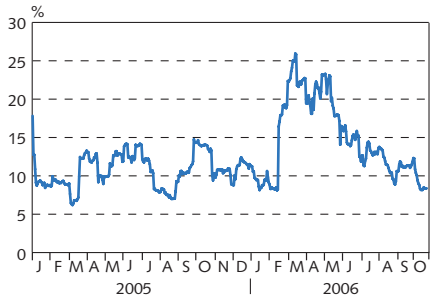
1. This article uses data available on October 26, 2006.

Chart 2
Exchange rate index of the króna
Daily data January 3, 2006 - October 27, 2006



Source: Central Bank of Iceland.

Chart 3
ISK volatility against USD
Daily data January 3, 2005 - October 27, 2006



Source: Reuters.

come account, which is estimated at 4% of annual GDP over the next 2-3 years and is especially sensitive to interest rate hikes and tighter credit terms in international financial markets.

Growth in carry trades

Since autumn 2005, foreign investors have traded on the Icelandic markets on a growing scale. There has been considerable interest in the FX, króna and bond markets, though interest in domestic equities is still limited.

High interest rates in the markets for domestic currency have been the main magnet for foreign investors. The Central Bank raised its policy interest rate three times since the end of June, first by 0.75 percentage points followed by increases of 0.5 percentage points each in August and September. The spread between domestic three-month interest rates and LIBOR now stands at just below 10 percentage points based on the present currency basket, up from 8.6 percentage points at the end of June. Outstanding foreign glacier bond issues total 270 b.kr. and the majority are held by foreign investors. Issuers have presumably covered their short positions vis-à-vis the króna by contracts with Icelandic financial institutions. The balance of forward contracts in the banking system indicates a 430 b.kr. long position in the króna in the money and FX markets. Not included in this figure are non-residents' holdings of Treasury notes and government-guaranteed housing bonds, which could amount to roughly 20% of their outstanding stock, or approximately 120 b.kr. Besides this position-taking in the króna, the current account deficit represents a further exposure estimated at 200 b.kr. this year.

Iceland is the smallest economy in the world with its own floating currency. Relative to FX market turnover and GDP, such an exposure is of unprecedented magnitude. Investor flight from these positions could put sudden and substantial pressure on the króna. However, the Icelandic FX market is better equipped than before to handle heavy flows, as turnover has multiplied in recent years and trading in the króna is now spread over a more diverse group of investors. The generally positive economic situation also reduces the probability of sudden major pressures on the currency.

The FX market – króna appreciation and increased turnover

The króna has appreciated almost without interruption since the end of June. The month-end exchange rate index for June was 134.23 but had gone down by 11.8% by the end of October.

Volatility in the domestic currency market has eased again after turbulence from February to June. Fluctuations over the past few months have been only slightly more pronounced than in the second half of 2005 and into February 2006. Turnover has soared in the FX market this year as well. If the trend continues, FX market turnover could reach 4,500 b.kr., or more than double the 2005 volume of 2,077 b.kr. By comparison, turnover in 2004 totalled 948 b.kr. The explanation for this surge is doubtless increased interest in the Icelandic currency among foreign investors.

Issuance and maturities of glacier bonds

The first glacier bonds from foreign issuers matured in the middle of September. In all, the equivalent of 51 b.kr. in glacier bonds have matured since the last *Monetary Bulletin* was published in July, but this is offset by new issues totalling 59 b.kr. Only a small part of the new issues have been made by issuers of bonds that have already matured, and their dates do not conflict with existing maturities. These movements have had little impact on the FX market, though there are indications of increasing position-taking with the króna through the money and FX markets. As pointed out above, the FX balance of the three commercial banks' forward contracts was 430 b.kr. at the end of Q3/2006.

Decrease in foreign reserves in króna terms

Since the beginning of July, the Central Bank's foreign reserves have decreased in domestic currency terms in pace with the appreciation of the króna. Reserves now stand at 71 b.kr. The Treasury has continued to retire its foreign debt and the Central Bank has purchased 5 million US dollars weekly in the domestic FX market on behalf of the Treasury for this purpose. The Treasury's foreign currency deposit with the Central Bank is now sufficient to cover its foreign commitments until the end of the year. As previously announced, the Central Bank will continue to purchase currency on the same scale for the rest of the year in order to boost its foreign reserves. Future purchases will depend on market conditions, Treasury requirements and estimates of the preferable size of the reserves, and the Central Bank will make a separate announcement of its plans in this respect. Next year, Treasury foreign loan maturities and debt service will amount to 208 m.

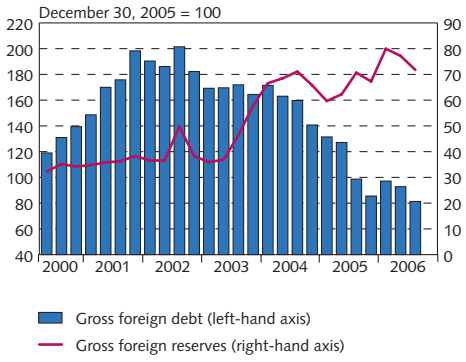
In 2007, the Central Bank will continue its regular purchase of currency in the domestic interbank market. It plans to purchase 3 million US dollars twice a week, instead of 2.5 million this year. Accordingly, the amount of individual transactions will be the same as the minimum applying to regular transactions by interbank market makers. Roughly two-thirds of the currency purchased next year will be sold to the Treasury to meet its foreign maturities and debt service. The remainder will be used to boost the Central Bank's foreign reserves.

Foreign assets of the Central Bank are now less than 10 b.kr. lower than the Treasury's foreign debt. The Central Bank is considering linking its foreign assets to the Treasury's foreign debt, which would hedge the entire exchange rate risk and most of the interest rate risk of both parties. Similar methods are used by central banks in Denmark, Canada and New Zealand. Such a change would have no impact on the domestic currency market or the FX market.

Commercial banks' refinancing

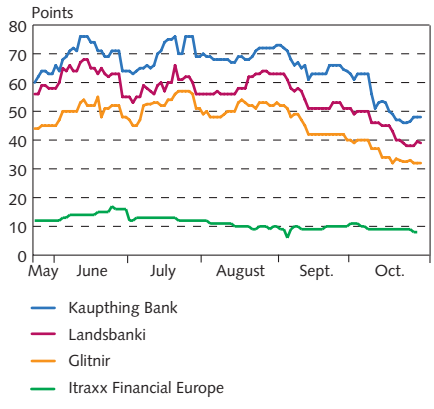
At the end of September, Kaupthing Bank announced that it had completed its refinancing of the foreign loans that are due from now until year-end 2007. Similar announcements had previously been made by Glitnir and Landsbanki. A large portion of the three largest commercial banks' foreign debt – €11 billion – will mature next year. Additional financing is required to fund credit growth through the year 2007,

Chart 4
Gross reserves and gross central government foreign debt
Quarterly data, Q2/2000 - Q3/2006



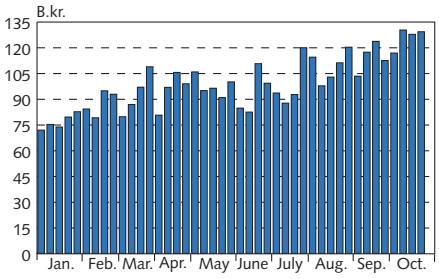
Source: Central Bank of Iceland.

Chart 5
CDSs of Icelandic banks and Itraxx Financial Index
Daily data May 23, 2006 - October 27, 2006



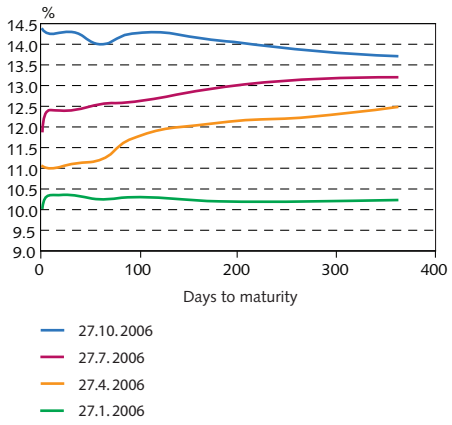
Sources: Bloomberg, Reuters.

Chart 6
Outstanding stock of Central Bank repos
Weekly data January 3, 2006 - October 24, 2006



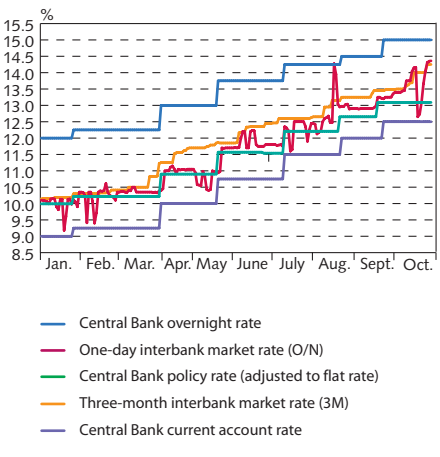
Source: Central Bank of Iceland.

Chart 7
Yield curve on money market



Source: Central Bank of Iceland

Chart 8
Interest rates in the interbank market and Central Bank policy rate
Daily data January 3, 2006 - October 27, 2006



Source: Central Bank of Iceland

the scale of which is still not known. The market had expressed doubt about the banks' ability to secure all their refinancing requirements. They have not tapped European markets this year, but by borrowing in the US they have been able to secure adequate liquidity over the medium term. Lending terms proved less favourable than those obtained in recent years, but the banks must have decided that they needed to dispel uncertainty about their access to capital. This approach seems to have paid off, at least judging from equity prices and pricing of credit default swaps (CDSs) over the past few weeks. A large proportion of the new funds has maturities of three, five and ten years, which sharply reduces the risks posed by high leverage through short-term borrowing.

Once it became clear that the Icelandic banks had clinched financing from abroad until the end of 2007, the CDS pricing on their debt finally began to drop. The three commercial banks are still some way short of commanding the terms that they enjoyed for most of 2005, and there is quite a difference in the prices of their respective five-year CDSs. For the first part of the period covered by Central Bank data, however, the market made little distinction between them.

In September, Moody's Investor Services downgraded the Bank Financial Strength Rating (BFSR) of Kaupthing Bank to C from C+. Reactions in the equity market and CDS market would indicate that the change in ratings was not unexpected. Moody's had had the BFSR rating under review for possible downgrade since April this year.

Money market

On average, year-to-date turnover in the REIBOR market has been down from 2005, with sluggish trading in the first four months of the year accounting for much of the drop. Since May, however, turnover has picked up sharply and August was the briskest month ever, with a volume of 193 b.kr.

The money market was liquid until autumn but seems to have tightened since then, as evidenced in the growing spread between interbank rates and repo rates. The likely explanation is the Treasury's large and growing deposits in the Central Bank, coupled with increased foreign investor appetite for the króna. A record for repo transaction volume of 130 b.kr. was set on October 10, following an upward trend beginning in early July. Another explanation of rising interest rates could be that financial institutions have begun to experience a shortage of bonds that are eligible as collateral for repo transactions with the Central Bank.

Turnover in the market for T-bills has been scant all year, and increased Treasury issuance has had little impact on trading. Last year's turnover was much greater, when market makers for T-bills were paid volume-linked commissions. Greater depth in T-bill issuance by the Treasury and other agents such as financial institutions could revive the Icelandic market, however.

Bond market

Inflation figures for September and October were lower than the Central Bank had forecast earlier in the year, and the bond market re-

flected this clearly. In addition, the government announced sizeable cuts in indirect taxes aimed at reducing household food costs by as much as 16%. The tax changes, which will take effect in March 2007, should reduce the CPI by up to 2.7%. Both these announcements have caused significant activity in the bond market. Yields on longer Treasury notes dropped by 1.06-1.26 percentage points between mid-summer and the end of October. The yield curve in Chart 7 illustrates clearly the recent changes in market inflation expectations.

The government's announcement triggered strong selling pressure on indexed bonds. In October, yields on HFF bonds shot up after the longer series had fallen by 20-40 basis points since mid-year. Yields on the shortest series have risen considerably since mid-August, as can be seen in Chart 9, while the jump in longer bonds has since partially unwound. Recent developments reflect considerable optimism regarding the inflation outlook, with a sharp drop in market expectations. The market expects a rapid decline in inflation despite continued labour market pressures, a wide current account deficit and proposed tax changes that must be deemed expansionary in the long run.

In June the National Debt Management Agency (NMDA) issued a new two-year series of T-notes, as part of a strategy to strengthen the yield curve for the next two years and thus improve transmission of monetary policy across it. The series has now reached the intended volume of 15 b.kr. A new two-year T-note series will be auctioned in December.

The equity market

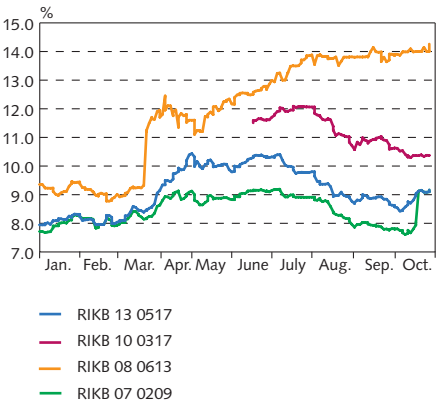
The equity market rallied in the third quarter, with the ICEX-15 index rising by 24% from a low of 5,240 in July. On October 25, the index stood at 6,500, after peaking at almost 7,000 in February and then plummeting in the wake of the market turbulence that began in February and lasted until the summer.

Kaupthing Bank sold its holding in Exista investment company in August and the offer was oversubscribed by double. Previously, Kaupthing had announced plans to sell its stake in Exista to Kaupthing shareholders, partially as a response to criticism of cross-ownership between the two companies. Exista was listed on Iceland Stock Exchange on September 15.

At the beginning of October, FL Group holding company announced plans to have Icelandair Group listed on ICEX by year-end 2006. Icelandair Group has an estimated market worth of 43 b.kr. and Glitnir underwrote and sold 51% of the shares to primary investors. A public offering for private and institutional investors is planned.

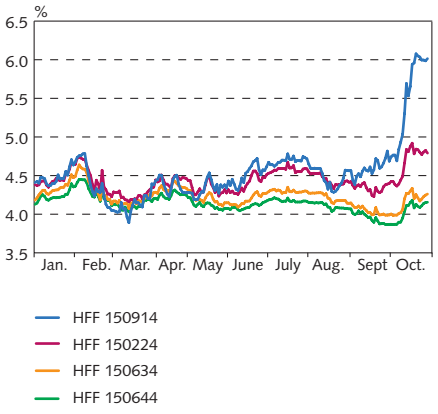
In September it was announced that OMX of Sweden and the holding company Eignarhaldsfélag verðbréfaþings hf. (EV), owner of ICEX, had signed a letter of intent concerning OMX's acquisition of EV. OMX already offers access to some 80% of the Nordic and Baltic securities market – all except Norway.

Chart 9
Treasury note yields
Daily data January 3, 2006 - October 27, 2006



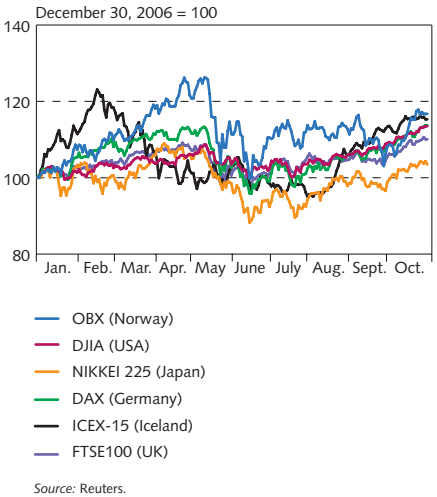
Source: Central Bank of Iceland.

Chart 10
HFF bond real yields
Daily data January 3, 2006 - October 27. 2006



Source: Central Bank of Iceland.

Chart 11
Development of selected share indices
Daily data December 30, 2005 - October 27, 2006



Source: Reuters.

Thorvardur Tjörvi Ólafsson[1]

Developments in monetary economics and central bank practice

The monetary policy advice that economic theory, empirical research, practical experience and models provide for central banks has become much more consistent. This article discusses the advances made over the past two decades, especially within monetary economics, and how it has established a firmer footing for central banks' monetary policy in many countries. New Keynesian economics plays a key role in this development and a fairly broad consensus on this approach has been achieved in recent years. However, many questions remain unanswered and new Keynesian economics will clearly continue to evolve in the near future. One challenge has been how to adapt it to the open economy. These developments in economics have had an impact on central bank practice, including activities of the Central Bank of Iceland. Greater transparency in monetary policy-making and communication, a shift away from individual interest rate decisions towards the medium-term policy rate curve and enhanced forecasting methods all reflect advances in new Keynesian economics. There is a growing emphasis that monetary policy should be systematic, credible and transparent in order to maximise its effect on inflation expectations.

Introduction

Central banks take four main factors into account in formulating their monetary policy. First, the latest economic theories at any time. Second, empirical research results on e.g. the transmission mechanism of monetary policy and determinants of inflation. Third, practical experience from monetary policy-making, and finally, forecasts of models that aim to reflect all three. All these fields have been flourishing recently. Rapid advances have been made in macroeconomic theory, especially in the field of monetary economics. Extensive research has been made into the transmission mechanism of monetary policy, properties of inflation and optimal monetary policy design. Central bank measures appear to have succeeded in recent years in maintaining a low rate of inflation in spite of robust growth and high oil prices. However, views still differ on the reasons for low inflation and whether monetary authorities actually deserve most of the credit for it (see e.g. Rogoff, 2006). Also, a new generation of models has appeared incorporating theoretical advances, empirical research and practical experience.

Much more convergence has now been established between the lessons on central bank monetary policy objectives, design and communication that are offered by the different foundations of monetary policy, i.e. theory, empirical research, practical experience and modelling. Nonetheless, they are not completely consistent. Many questions remain to be resolved, especially concerning the monetary framework in a small open economy such as Iceland. While it is important to be

1. The author is an economist at the Central Bank of Iceland Economics Department. He would like to thank Arnór Sighvatsson, Ásgeir Daníelsson, Thórarinn G. Pétursson, Ragnhildur Jónsdóttir, Karen Vignisdóttir, Tómas Örn Kristinsson and participants at a Central Bank of Iceland seminar on May 23, 2006 for useful comments. The author alone is responsible for any errors or omissions. The opinions expressed in this article are those of the author and do not necessarily represent the views of the Central Bank of Iceland. Part of this article builds on a recent working paper by the author, The New Keynesian Phillips Curve: In Search of Improvements and Adaptation to the Open Economy, *Central Bank of Iceland Working Papers* No. 31.

aware of the footing that this greater consistency has provided for monetary authorities, it is also vital to discuss how far this compatibility extends, review the remaining bones of contention and steer research towards them.

Foundations of monetary policy in a closed economy

Due to the wide gulf around twenty years ago that separated economic theory, research and models from actual practice, central banks operated in a partial theoretical vacuum at that time. Modern monetary policy, on the other hand, is based on a fairly firm theoretical and empirical foundation which presents quite consistent advice for policy making. Although this convergence spans a period of at least two decades, developments have been very rapid in recent years. Four parts may be identified in this convergence.

First, advances in macroeconomics and monetary economics have aligned theory more closely with central banks' ideas of the importance and effectiveness of monetary policy. Second, changes in the framework, communication and design of monetary policy-making have also impacted theory – the introduction of inflation targeting is probably the clearest example. Third, the focus of research has increasingly shifted towards central bank tasks. Finally, model design has been reshaped in light of new knowledge. Academic economists and central bank experts now work closely together on developing new Keynesian general equilibrium models. These four points are discussed in more depth below.

Theory

Over the past two decades, macroeconomics has evolved from a divided field, which in many ways lacked a solid foundation, into a more comprehensive discipline built on a fairly firm microeconomic foundation. The quest for this microfoundation was most intense about twenty years ago. Keynesian models, which dominated macroeconomics in its heyday in the 1950s and 1960s, were derailed by the great inflation of the 1970s and fierce criticism from economists such as Edmund S. Phelps (1967), Milton Friedman (1968) and Robert E. Lucas (1976). Real business cycle theory, which dismissed the role of monetary policy, enjoyed an ascendancy within macroeconomics at this time. Its models assume perfect competition and flexible prices and wages, and that the economy is always in equilibrium. The economy moves from one steady state to another through the agency of shocks originating in technological advances, preferences or fiscal policy. This view was sharply at odds with central bank experience and empirical research which demonstrated that wages and prices were sticky. Nonetheless, academics increasingly championed the view that central banks should not act because their activities had little impact and did more harm than good. At most it was recognised that an unexpected change in monetary policy could have some impact.

In recent years a fairly broad consensus has been reached on the new Keynesian approach. New Keynesian economics reconciles the general equilibrium approach of the real business cycle school with the

clear role of rigidities advocated by Keynes and Phelps. The general equilibrium approach derives the equilibrium conditions from the optimisation problem of forward-looking households, firms and fiscal and monetary authorities in conditions of uncertainty. It consolidates the economic foundation of new Keynesian models compared with their predecessors and provides them with some defence against the Lucas critique.[2] The existence of various kinds of rigidities, e.g. imperfect competition, price stickiness, labour market heterogeneity and market information problems, implies an important role for monetary policy.

The on-going debate on the appropriate specification of new Keynesian models, which is reflected in part in this paper, implies that certain questions remain to be resolved. Different modelling approaches still confront one another and give rise to different policy advice. Krugman (2000) and Mankiw (2006) both refer to this convergence as a truce rather than a synthesis. The history of macroeconomics is a series of revolutions and counterrevolutions, so any prediction of how long the new Keynesian approach will last is untimely.

Macroeconomics is not the only branch of economics where advances are being made. Two decades ago, monetary economics was in decline and in conflict with both the latest movements in macroeconomics and central bank perceptions of the importance and effectiveness of monetary policy. Walsh (2006) points out that models in monetary economics at this time were static, lacked a clearly defined economic foundation and assumed that the money stock was still the instrument used by central banks, even though most of them managed interest rates rather than money supply by then.

The main growth area in monetary economics at this time was analysis of the monetary authorities' ability to fulfil their commitment to ensure price stability vis-à-vis the motives of central bank governors in their work (see Kydland and Prescott, 1977, and Barro and Gordon, 1983). This growth accompanied an increasing emphasis on forward-looking expectations and the ascendancy of institutional economics. The main idea in the literature was that even though central banks should preferably maintain a low rate of inflation, they cannot commit themselves to ensure price stability by credible means. If households expect low inflation in line with declarations by the monetary authorities, central banks would be tempted to try to reduce unemployment and boost output growth by allowing inflation to rise slightly above target. Realising this, households would then expect the monetary authorities to succumb to such a temptation and would raise their

2. Lucas (1976) emphasised the importance of expectations in economic models and the potential effect on them of changes in monetary and fiscal policy. He argued against relying too heavily on trying to exploit statistical relations between economic aggregates for economic policy purposes. Expectations reflect a change in policy which could cause statistical relations between economic aggregates to change. Models designed to analyse the impact of economic policy measures, he maintained, must take into account that those measures alter people's behaviour. The Lucas critique was directed in particular at the Phillip curve of this time, which appeared to give monetary authorities a choice between minimising unemployment or inflation. However, the critique has more general implications. DSGE models based on the optimisation problem of households and firms in conditions of uncertainty are not as sensitive to this criticism, because market agents' actions reflect measures implemented by the monetary and fiscal authorities. Coefficient values in the equilibrium relations in DSGE models are therefore well defined functions of underlying structural production and utility functions and of the price adjustment structure.

inflation expectations accordingly. Central bank measures to reduce unemployment would therefore only lead to higher inflation without any benefits in the form of lower unemployment or higher output growth. This is known as the time inconsistency problem of monetary authorities.[3] Methods discussed in the literature for solving this credibility challenge include appointing a conservative governor, incentive contracting or target rules (see Persson and Tabellini, 1990).

The new Keynesian approach has created a common foundation for macroeconomics and monetary economics. Two decades ago there was a confrontation between the general equilibrium approach, which dominated macroeconomics, and smaller models (such as AS-AD) with no clearly defined economic foundation, which were most common in monetary economics.[4] Now, both disciplines are based on the new Keynesian approach. This has contributed to more clearly defined models for the transmission mechanism of monetary policy under conditions of imperfect competition and sticky prices.

However, advances in monetary economics are not limited to the common foundation of new Keynesian economics. In recent years a number of important advances have been made in monetary economics which have had a bearing on central bank monetary policy-making. These include the assessment and development of monetary policy rules (Taylor, 1993) and the derivation of the so-called Taylor's principle, which states that the policy interest rate should be raised by more than the change in inflation in order to ensure price stability. It highlights the importance of real policy rates and raising them to reduce inflation (and vice versa).

The new Keynesian emphasis on expectations and forward-looking behaviour in markets has similarly had major consequences for monetary policy implementation, as Walsh (2006) points out. If private agents' expectations about future inflation are the main determinants of inflation, it is crucial for monetary policy-making to be systematic, credible and transparent to maximise its impact on them. This expectational channel of monetary policy introduces a new instrument for monetary authorities, i.e. the possibility to influence inflation by influencing forward-looking expectations. This has led to an ongoing discussion on the advantages of commitment versus discretion, which differs from the debate of the 1980s and 1990s spawned by the time-inconsistency literature. The current debate centres on the benefits from committing to price stability even in the absence of a time inconstancy problem, e.g. by introducing an official inflation target, and being transparent in formulation, communication and implementation of monetary policy in order to anchor future inflation expectations and improve the trade-off between stabilising inflation and output gap volatility.

3. A policy is time-consistent if the measures planned at period *t* to take effect at period *t+i* are still optimal when period *t+i* arrives. It is inconsistent if the measures are not optimal at period *t+i* (only because time has elapsed and not as a result of new information, etc.).

4. AS-AD models in monetary economics are generally based on a Lucas supply function with a conventional IS-LM model on the demand block. Lucas (1972) proposed a supply function in which the output gap (deviation of GDP from potential output) is a function of unexpected inflation. Thus output only deviates from potential output when inflation is higher than expected.

Walsh (2006) draws attention to the strong contrasts between this new transparency literature and the policy advice of models from the 1970s through the 1990s which implied that policy was only effective if policy makers succeeded in surprising private agents in the economy. Now the emphasis is on transparency, credibility and systematic measures to hinder inflation expectations from deviating substantially from the inflation target.

Practical experience

Recent positive experience of monetary authorities' measures is another factor contributing to broader consensus on monetary policy framework and implementation. The experience of central bank measures in the 1970s and early 1980s was extremely negative. In many countries, inflation ran rampant and unemployment increased as well. There was disagreement about how to solve the problem and even about the instruments that monetary authorities should use to fight inflation. However, a broader consensus emerged that price stability should be the main objective of monetary policy. Since then the outlook for monetary authorities has brightened. Inflation has generally been low in spite of high growth for most of the period. Important reforms have been made to most central banks' monetary policy framework, objectives and policy making, alongside advances in communicating about measures. These reforms have contributed to much-needed changes within monetary economics.

The best known example is when the Reserve Bank of New Zealand became the first central bank to move onto a formal inflation target at the beginning of 1990. Since then the number of countries operating under an official inflation target has soared and in many cases academic discussion of monetary policy takes targeting by the monetary authorities for granted. Empirical experience from inflation targeting has underlined the importance of inflation forecasting as an intermediate target for central banks. A growing number of central banks publish regular forecasts in dedicated inflation reports. These publications have underscored the importance of rhetoric in communication of monetary policy measures. Transparency in the interpretation of information and presentation of the rationale behind interest rate decisions have also been given more precedence. A current issue is how far transparency should be taken. Norway's Norges Bank has been one of the main exponents of greater transparency and publishes the interest rate path that it considers will ensure that the inflation target is attained at any given time (see e.g. Woodford, 2005a, Svensson, 2006 and Qvigstad, 2006).

Japan's struggle with the deflationary challenge is another example of the way that practical policy experience has been incorporated into monetary economics. By creating awareness of the risks of the deflation trap, it led many central banks to adjust their targets in order to avoid excessively low inflation or deflation, and academics began constructing models which emphasised the expectational channel of the transmission mechanism to tackle this problem (see e.g. Eggertsson, 2003, 2006).

Low interest rates and abundant liquidity in the past few years have caused the role of price stability as the single final objective of

monetary policy to be questioned. White (2006) and Borio (2006) advocate a wider perspective, pointing out that price stability offers no guarantee for macroeconomic stability. A longer-term view is needed to assess the possible financial instability that can build up as a result of monetary policy measures. The debate on whether central banks should respond to asset market bubbles has similar roots.

Finally, Greenspan (2003, 2004, 2005) has repeatedly argued the importance of risk management in monetary policy decision-making. Blinder and Reis (2005) distinguish between the risk management and the optimisation approaches to monetary policy. Greenspan frequently cited the Federal Reserve rate cut in autumn 1998 as an example of effective risk management, when the US monetary authorities opted to hedge against the conceivable effects of a collapse in the rouble and bankruptcy of the Long Term Capital Management hedge fund, despite the negligible impact these events were likely to have on the US economy.

Empirical research

Research topics and findings have been the third main factor in consolidating the foundation for monetary policy decision-making. Roughly two decades ago, research showed that the Phillips curve, one of the most important economic relationships for monetary authorities at that time, had "disappeared" when inflation and unemployment both grew in the 1970s. Research also focused on other tasks beside those of the monetary authorities, partly as a result of the ascendancy of the real business cycle school. A further shift of focus occurred in the 1990s with an upswing in research into business cycles and time series analysis of the properties of inflation and the transmission mechanism of monetary policy. Business cycle studies proliferated with the rise of the real business cycle school, but contrary to its predictions, they demonstrated that monetary policy does have an impact due to sticky prices and wages. This prompted further studies of the transmission mechanism of monetary policy, which benefited from the increased use of time series analysis and advances in that field. Following this research and the introduction of monetary policy rules, studies were made aiming to identify the optimum monetary policy rule based on the empirical picture of the transmission mechanism and properties of inflation.

Models

Finally, economic modelling has been radically overhauled in recent years. Two decades ago there was a vast difference between the large macroeconomic models used by central banks for forecasting and the smaller general equilibrium models that dominated the real business cycle school. Models used in monetary economics fell outside both categories but were fiercely criticised by both central banks and the real business cycle school academics.

The gap between academic macroeconomic models and applied policy models has decreased in recent years. There has been a clear tendency away from the large-scale disaggregated models of the 1970s towards tractable small- and medium-sized models, well suit-

able for medium-term policy analysis, which are the basis for efficient monetary policy-making in an uncertain environment. The older large-scale models were criticised on a number of fronts, e.g. for lacking microeconomic foundation, their treatment of expectations formation, their forecasting abilities in comparison to simple vector autoregression (VAR) models, their underlying econometric methodology and their modelling of the cost of disinflation in terms of output losses. In the words of Pesaran and Smith (1995): "The models did not represent the data [, ...] did not represent the theory [... and] were ineffective for practical purposes of forecasting and policy" (Pesaran and Smith, 1995: 65-66).

New Keynesian models – the latest generation – have quickly gained wide acceptance by both academia and central banks. The transmission mechanism of monetary policy is given a high profile in these models and their specification is consistent with the view that the main role of monetary authorities is to provide a credible anchor for inflation expectations. These models are examined in more detail in the following section.

New Keynesian Models

New Keynesian models provide a tractable framework for analysis of optimal monetary policy design. The combination of dynamic optimising agents, nominal rigidities and other market imperfections provides a better understanding of transmission of various types of shocks and allows for the derivation of optimal policy based on welfare analysis.

New Keynesian models represent a convergence between (i) simple (static) policy-oriented models such as the IS-LM model, (ii) a Keynesian emphasis on the role of monopolistic competition, markups and costly price adjustments, and (iii) dynamic general equilibrium models with their roots in the real business cycle literature.

A small-scale new Keynesian model for a closed economy basically consists of three components. The demand block is represented by an expectational IS curve, which is a linear approximation to the representative household's intertemporal Euler equation.[5] This relates the level of real activity to expected (and sometimes past) real activity and the real interest rate. The supply block is represented by a price-setting equation – the new Keynesian Phillips curve – which can be derived from various price-setting behaviour (see Roberts, 1995). It relates inflation to expected (and sometimes past) inflation and a measure of excess demand. The model is closed by a monetary policy rule, which can either be directly specified or derived from the minimisation of a central bank's loss function. The policy interest rate setting

5. The Euler equation is a solution to the optimisation problem of households and describes the necessary development of household consumption in order to optimise its allocation across time based on their intertemporal budget constraints. For example, if households reduce their current consumption slightly and use the saving to increase consumption at a later time, the Euler equation states that the marginal cost and benefit of this decision must be equal. In simple small three-equation new Keynesian models, a linear approach of this Euler equation is applied (generally assuming 0% steady-state inflation) and it is written in an output gap form excluding investment and central government expenditure so that household consumption is equal to output.

is thus commonly a reaction function where the monetary authorities respond to the output gap and (expected) inflation.[6]

A small-scale new Keynesian model hence provides a very stylised representation of the key aggregates in the economy whilst trying to capture the essence of the transmission mechanisms of monetary policy. An extensive literature has dealt with optimal monetary policy design in such a framework in recent years, e.g. Taylor (1999), Svensson (1999), Clarida, Galí and Gertler (1999), Woodford (2003a) and Walsh (2003).

New Keynesian models range from these small-scale three-equation models to full-blown dynamic stochastic general equilibrium (DSGE) models where equilibrium conditions are derived from optimisation problems faced by forward-looking consumers, firms and monetary authorities in an environment characterised by uncertainty and various forms of rigidities. DSGE macroeconomic models used for quarterly economic forecasting in practice at central banks, e.g. BEQM at the Bank of England, TOTEM at the Bank of Canada and JEM at the Bank of Japan, are more complex in structure as they seek to have a well defined steady state and a careful accounting of stock-flow relations.

DSGE models represent an ambitious attempt to combine progress in macroeconomic theory, structural forecasting and practical monetary policy-making. Disagreement remains on the precise structure of these models and how well they manage to combine theoretical consistency and empirical coherency.

Many issues remain unsolved. First, the precise modelling of the microeconomic foundation of DSGE models with regard to imperfections in various markets, price setting and expectations is still controversial. Second, various classical and Bayesian estimation approaches to DSGE models have been tried, while others favour calibrating methods. Third, forecast performance of these models has to be tested more. Finally, another burning research issue is extending DSGE models to an open-economy framework.

The adaptation of DSGE models to practical use in policy making is a red-hot research area in some of the main central banks and policy institutions in the world. One focus has been on the new Keynesian Phillips curve. Few considerations are more crucial for central banks aiming to follow a forward-looking monetary policy than to be able to predict short- and medium-term inflation. The new Keynesian Phillips curve plays a key role in small DSGE models for forecasting and analysis of the inflation outlook.

The new Keynesian Phillips curve and inflation forecasting

Short-run inflation dynamics is a pivotal issue in macroeconomics, model design and monetary policy-making. Various improvements

6. Many larger central bank models can also be broken down into three components in this way even though they are based on a more precise disaggregation of demand and more complex price and wage formation. The demand block of such models is comprised of equations describing household consumption, investment and net exports with, for example, the real interest rate and real exchange rate paths. The supply block is comprised of equations for price and wage formation and the relationship between exchange rate changes and prices.

have been made in model design with regard to inflation dynamics. In the old IS-LM framework, prices or wages were fixed and there was no room for a price adjustment structure. Like many of the models used in monetary policy analysis in the 1970s and 1980s, the equilibrium conditions in the IS-LM model are not the results of optimisation of private agents in the economy (see McCallum and Nelson, 1999 for a discussion on the weakness of the IS-LM paradigm). The Phillips curve also entered the economic field without a microeconomic foundation as a simple empirical relationship between wage inflation and unemployment.

The last two decades of the 20th century were turbulent yet fruitful times where the Phillips curve re-entered macroeconomic models as a more solid economic relation with a stronger microfoundation than before. The new Keynesian Phillips curve is now the dominant approach to wage and price modelling in macroeconomics and a key relationship in modern macroeconomic models. It is nevertheless still very controversial.

A particular bone of contention is how closely the new Keynesian Phillips curve converges with research findings on inflation dynamics and the effects of monetary policy. For example, it has trouble in reproducing the inflation persistence that is common in practice although this characteristic has diminished as average inflation has fallen in recent years. Also, the forward-looking nature of the curve causes monetary policy measures to impact inflation immediately in new Keynesian models, enabling monetary authorities to contribute to disinflation without a corresponding opportunity cost in the form of lower output growth and higher unemployment. This conflicts with central banks' empirical experience of their measures.

A large part of the author's companion working paper (Ólafsson, 2006) is devoted to discussing the approaches that have been tried to amend these problems of the new Keynesian Phillips curve. A popular path to improve the new Keynesian Phillips curve is to assume that only some firms are forward-looking in their price setting while others reflect past inflation. This hybrid form, which produces more persistent inflation dynamics, has been heavily debated in recent years. Lately, real rigidities in various forms have been introduced to solve the empirical problems which still emerge with the hybrid Phillips curve. Novel attempts to introduce search and matching frictions in the labour markets and allow for firm-specific capital give rise to renewed optimism that the empirical problems of the new Keynesian Phillips curve will decline in the near future (see e.g. Walsh, 2005, Christoffel and Linzert, 2005, Woodford, 2005b and Christoffel et al., 2006).

Krugman's (2000) question on whether this approach is building a proper microfoundation for aggregate supply or coming up with "micro-excuses" for the form of the new Keynesian Phillips curve is still unanswered.

Monetary policy-making in open economies and new Keynesian economics

The above discussion implies that questions still remain about the foundations of monetary policy in closed economies, although more

convergence has now been achieved. More uncertainty surrounds monetary policy measures in open economies. The introduction of open-economy elements into DSGE models marks the frontier of current research. Open-economy macroeconomics has progressed by leaps and bounds in recent years but many questions remain unanswered, and it has been an arduous task to adapt new Keynesian economics to open economies. Exchange rate economics has been particularly difficult to reconcile. This is not surprising. Exchange rate economics is one of the most challenging areas within macroeconomics and a heavily debated issue in monetary policy design. It is a field considered filled with anomalies and puzzles.[7] Ceaseless efforts to develop models for exchange rate forecasting have turned out to be a Sisyphean task. Nor has extensive research succeeded in satisfactorily charting the relationship between inflation and the exchange rate. It is therefore not surprising that model building and forward-looking monetary policy-making is more difficult in these circumstances. In a small open economy like Iceland, where exchange rate volatility can have widespread repercussions on the economy, this becomes even more crucial.

New open-economy macroeconomics

The so-called new open-economy macroeconomic (NOEM) literature represents an attempt to introduce new Keynesian economics into an open-economy framework. NOEM has brought new insights into international transmission of shocks, different price setting behaviour and policy coordination. The NOEM DSGE models are still to a certain degree fragile as the precise modelling approach is not fully established and different approaches yield different policy advice. This is of course also true for their closed economy counterparts, but not to the same degree.

NOEM literature has grown exponentially in volume since the publishing of the pioneering redux paper by Obstfeld and Rogoff in 1995. The models in the early papers of the NOEM literature are deterministic: e.g. Obstfeld and Rogoff (1995) and Betts and Devereaux (1996, 2000). Obstfeld and Rogoff (1998, 2000) introduced uncertainty into the models and this has become standard (see Lane, 2001, for a survey of the first wave of the NOEM literature and Bowman and Doyle, 2003, for its monetary policy implications).

A major strength of DSGE models is that they enable welfare analysis and are thus able to address normative policy questions. A limitation of the early open-economy DSGE models in the NOEM literature was that they modelled monetary policy as a choice of a monetary aggregate instead of short-term interest rate setting. Monetary policy is modelled in the closed-economy new Keynesian models either as a simple rule in the tradition of Taylor (1993) or derived from a loss function of monetary authorities where an inflation target is often explicitly assumed. This has happened with a lag in the open-economy

7. The main puzzles are the exchange rate disconnect puzzle, purchasing power parity puzzle and forward bias puzzle. Sarno (2005) provides a good overview of the main puzzles in exchange rate economics and advances made towards solving them.

DSGE models. The first examples of the use of monetary policy rules in an open economy new Keynesian model are Ball (1999), Svensson (2000) and Batini, Harrison and Millard (2001).

A common result in a number of the early NOEM papers was that optimal monetary policy design was in no important way different in an open-economy environment compared to the closed-economy framework (see e.g. Ball, 1999 and Clarida et al. 2001, 2002). This isomorphic result is based on a number of strong assumptions. The law of one price is assumed to hold and there is full pass-through from exchange rate changes into prices. The law of one price states that when trade is open and costless, identical goods should trade at the same relative price wherever they are sold. These assumptions are in strong opposition to wide-ranging empirical research (see e.g. Engel 1993, 1999, 2002, Campa and Goldberg, 2002 and Marazzi et al., 2005).

Recent research supports this finding and shows that the introduction of open-economy factors has important influences for model design, inflation dynamics and monetary policy-making. Svensson (2000) notes that the main implications are (i) additional channels for the transmission of monetary policy, (ii) further emphasis on forward-looking behaviour and the role of expectations, and (iii) transmission of foreign shocks to the domestic economy.[8]

Firms' price setting has received much more attention in NOEM literature than before. Price setting assumptions are crucial in any DSGE model, whether in a closed or open-economy framework. The specification of price setting is more complex in open-economy models than in models for closed economies. First, the specification must take into account the firm's choice of currency. Second, it must account for the effects of competition from abroad. Lastly, the models must describe the level of exchange rate pass-through into prices.

On first impression, divergent assumptions for price setting may seem to make little difference. However, research indicates that completely different results are yielded for the optimal exchange rate regime according to the type of price setting that is assumed. Likewise, price setting assumptions are crucial in deriving the new Keynesian Phillips curve for open economies, which plays the main role in small DSGE models for understanding and forecasting inflation developments. Donald L. Kohn, Vice Chairman of the Board of Governors of the Federal Reserve System discussed the importance of price setting in a recent speech: "I have a lengthy list of macroeconomic inflation puzzles whose answers would make me a better policymaker, but, for the most part, the solutions to the puzzles rest on a better understanding of how workers and firms set wages and prices." (Kohn, 2005)

Inflation forecasting in a small open economy and the new Keynesian Phillips curve

Price setting specifications in open-economy DSGE models are crucial for the derivation of the new Keynesian Phillips curve, as said earlier. Its adaptation to the open economy has proved very difficult as it faces

8. He does not discuss the issue of incomplete exchange rate pass-through.

bigger problems in an open economy framework. The microfoundation is weaker as the modelling of price setting is more complex and the introduction of various forms of real rigidities in the spirit of what Christoffel and Linzert (2005) and Walsh (2005b) have done in closed economy models is harder to model in an open-economy framework, especially in an era characterised by increased globalisation. NOEM literature has nevertheless made important contributions to the adaptation of the new Keynesian Phillips curve to the open economy, especially with regard to modelling price setting and exchange rate pass-through. The works of Batini, Jackson and Nickell (2000, 2005) and Balakrishnan and López-Salido (2002) are good examples of empirical use of some of the theoretical contributions made by NOEM literature. They demonstrate that the new Keynesian Phillips curve for open economies can describe inflation dynamics in the UK. Prices of imported intermediate goods are an independent variable in the curve, reflecting theoretical advances and development of models for price setting in open economies (the adaptation of the new Keynesian Phillips curve is discussed in more detail in Ólafsson, 2006).

Inflation forecasting plays a pivotal role in the conduct of forward-looking monetary policy-making. It is well known that the exchange rate can influence inflation through the prices of traded final goods and imported intermediate goods, as well as through its effects on inflation expectations. Exchange rate changes have a demand effect by altering the relative prices of domestic and foreign goods, which encourages households to shift their demand to the relatively cheaper one at any time. Exchange rate changes also have a supply effect, e.g. when an appreciation lowers the price of imported goods, which have a heavy weight in the consumer price index and therefore exert direct downward pressure on inflation (see Pétursson, 2001).

Small open economies usually import a larger share of their consumer goods than large economies and this makes the exchange rate one of the most important relative prices in these economies. Hence, exchange rate fluctuations matter more for domestic inflation in small open economies. These fluctuations are famously difficult to forecast and this can make forward-looking monetary policy-making, which relies on inflation forecasting, more difficult in practice in small open economies than in larger ones. Thus the monetary authorities lack a desirable degree of foothold for policy making in this respect. There are strong indications of a shift in the relation between prices and the exchange rate in recent years, towards a longer lag and weaker pass-through to consumer prices (Ólafsson, 2005). However, the impact is much stronger in small open economies such as Iceland than in larger closed economies. But models that analyse optimal monetary policy within a DSGE framework with limited exchange rate pass-through have just very recently emerged.[9]

9. See e.g. Smets and Wouters (2002), Justiano and Preston (2004), Lindé, Nessén and Söderström (2004), Monacelli (2005), Corsetti and Pesenti (2005), Corsetti, Dedola and Leduc (2005) and Liu (2006).

The Central Bank of Iceland and new Keynesian economics

The objectives, design and communication of the Central Bank of Iceland's monetary policy have changed radically in recent years, in pace with the advances described above. Iceland moved onto an inflation target in March 2001 which, as elsewhere, ushered in a much stronger emphasis on forecasting and systematic presentation of the rationale behind the Central Bank's measures. Ever-growing transparency in Central Bank policy making and communication is clearly evident from the rhetoric in *Monetary Bulletin* and enhancements to its forecasting methods. The Central Bank has striven to anchor inflation expectations more firmly and reduce uncertainty in the markets by providing more information on the probable medium-term policy rate path. This has included more focused and frank rhetoric, statements on the expectations that can be read from forward market interest rates, publication of the policy interest rate curve which simulations from the Central Bank's models show to attain the inflation target over the forecast horizon, and scheduling of prearranged interest rate decision dates. Another aspect of transparency has involved changes to the Central Bank's forecasts. The underlying assumption behind the baseline scenario has been altered from an unchanged policy rate across the forecast horizon to a policy interest rate curve reflecting expectations of market agents and analysts about the medium-term policy rate path. The Bank of England and Sweden's Sveriges Riksbank are among central banks that have opted for the same course.

Research at the Central Bank has also been substantially boosted since preparations began for moving onto an inflation target. Focuses have included charting the transmission mechanism of monetary policy, the business cycle and inflation dynamics. A major effort has also been made in developing a quarterly macroeconomic model (QMM) which replaced the earlier forecasting model in the beginning of 2006 (see Daníelsson et al., 2006). The QMM is not a new Keynesian model and its equilibrium conditions are not generated by optimisation of private agents in the economy but by a statistical estimation of the (long-term) relation of various aggregates.[10] The degree of empirical coherence is therefore given precedence over the degree of theoretical coherence in Pagan's terms (2003).[11]

10. Equations and short- and long-term conditions in QMM are selected with reference not only to statistical estimation but also to the dynamic properties of the model as a whole (see further Daníelsson et al., 2006).

11. Fukac and Pagan (2006) distinguish four generations of central bank macroeconomic models in which the DSGE model represents the fourth. The Central Bank of Iceland's QMM model would be classified as second-generation. These models are much smaller than the first generation and emphasise clear presentation of the supply block with a production function and use of an error correction form to describe the short-term properties of the main economic relationships. In terms of the importance it attaches to forward-looking expectations, the QMM is actually closer to a third-generation model. The chief characteristic of third-generation models is that they are based on a clear presentation of the optimisation problem of forward-looking households and firms to produce a well defined steady state, which often proved difficult to identify in second-generation models. The fourth generation of models introduces imperfect competition and more complex price and wage setting, substantially changing their dynamic properties compared with those in the third generation, where perfect competition and flexible prices and wages prevailed.

The Central Bank's inflation forecasting methodology has also evolved over the years (see e.g. Box VIII-1, *Monetary Bulletin* 2006/1, 46-47). A clear trend towards a greater new Keynesian focus may be discerned in the evolution of the Central Bank's forecasting. The output gap was given a greater weight in forecasts in 2002 and the inflation forecasting equation in QMM is a Phillips curve which, while not derived from firms' price setting, is highly new Keynesian in character. Inflation forecasting has occasionally been complicated by unexpected exchange rate volatility and the resulting inflationary spikes and higher inflation expectations have eroded the Central Bank's monetary stance, most recently this spring.[12] While unexpected exchange rate fluctuations are frustrating for most monetary authorities and forecasters, in some cases it is the timing of exchange rate movements that is unexpected, while their signs and scope are less of a surprise.

From the above, it is clear that the Central Bank of Iceland's monetary policy has in many ways been put on a much firmer footing in recent years. The Central Bank has brought its policy objectives and communication of the rationale behind its measures into line with best international practice and the new QMM ought to bolster its analysis of economic developments and outlook. Indeed, the OECD's most recent Economic Review of Iceland points out that "given its limited resources, the Central Bank of Iceland['s] … analysis, forecasting and communication display exceptional competence and professionalism"(see OECD, 2006, 49).

The Central Bank of Iceland aims to strengthen these pillars of its activities even further. For example, it is very interested in DSGE models and preparations have already been launched for building such a model. But model building is a time-consuming effort and a stone-by-stone approach can often be well advised, especially since the Central Bank currently has a new model. The first stage is to survey the landscape and collect the most up-to-date knowledge of these models. This paper and the companion working paper are envisaged as part of this task. The next step is to construct a small new Keynesian model for forecasting, analysis of economic questions and comparative analysis of the findings of the Central Bank's other models.[13] Further, work is in progress on assessing the equilibrium real exchange rate and potential output of the economy, which play a major role in new Keynesian models as they explain deviations in the aggregate economy from steady-state levels. All these factors should contribute to putting Central Bank monetary policy on a more consolidated footing in the future.

12. The Central Bank has long incorporated exchange rate developments into the risk profile of its inflation forecasts. In QMM the exchange rate is forecast with a hybrid equation mainly driven by the interest-rate differential with abroad and convergence to purchasing power parity. The baseline scenario is now based on this exchange rate path (from a policy rate curve based on expectations of market agents and analysts) instead of assuming an unchanged exchange rate from the forecast date and across the forecast horizon.

13. Hunt (2006) and Honjo and Hunt (2006) have estimated a small new Keynesian model for Iceland using a Bayesian approach, which will be taken into account in construction of the new DSGE model.

Concluding Remarks

There is plenty of momentum behind central bank activities. Monetary economics is advancing by leaps and bounds, central banks are increasingly coming out into the open and changing their policy making and communication to match new theoretical findings and rapid progress is being made in economic modelling around the world. The new Keynesian approach is being rapidly refined and spreading through most branches of macroeconomics. A wealth of new literature appears every month applying new Keynesian approaches to the classical themes of economics. Central banks need to monitor developments closely and play an active part in the continuing evolution of theory and empirical research in order to enhance their own inflation forecasting and policy making. At present, central banks enjoy a boost from the broader academic consensus on the importance of monetary policy and methods of designing analytical models for economic and monetary developments and outlook.

This paper attempts to provide an overview of developments over the past two decades and the greater agreement on the advice that the foundations of monetary policy provide to central banks about how to conduct it in practice. An attempt has also been made to chart the extent of this convergence and highlight a number of disputed issues.

The Central Bank of Iceland has already adopted many of the focuses that have come to the fore in recent years. It has taken steps towards making its monetary policy systematic, credible and transparent.

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Monetary policy and instruments

The target and implementation of monetary policy

The target of monetary policy is price stability. On March 27, 2001 a formal inflation target was adopted, as follows:

- The Central Bank aims for an annual rate of inflation, measured as the annual twelve-month increase in the CPI, which in general will be as close as possible to 2½%.
- If inflation deviates by more than ±1½% from the target, the Central Bank shall be obliged to submit a report to the government explaining the reason for the deviation, how it intends to respond and when it expects the inflation target to be reached once again. This report shall be made public.
- The Central Bank shall publish inflation forecasts, projecting inflation at least two years into the future. Forecasts shall be published in the Bank's *Monetary Bulletin*. This shall also contain the Bank's assessment of the main uncertainties pertaining to the inflation forecast. The Bank shall also publish its assessment of the current economic situation and outlook.

Since monetary policy aims at maintaining price stability, it will not be applied in order to achieve other economic targets, such as a balance on the current account or a high level of employment, except insofar as this is consistent with the Bank's inflation target.

The Central Bank announces interest rate decisions on scheduled, prearranged dates. Before an interest rate decision is made, the Board of Governors convenes monetary policy meetings, as detailed in the Bank's Internal rules on the preparation, rationale and presentation of monetary policy decisions, which are set pursuant to the provisions of the Central Bank Act. The Internal rules are published on the Central Bank website, www.sedlabanki.is.

Main monetary policy instruments

In particular, the Central Bank implements its monetary policy by managing money market interest rates, primarily through interest rate decisions for its repurchase agreements with credit institutions. Yields in the money market have a strong impact on currency flows

Overview of Central Bank interest rates October 20, 2006

	Current rate (%)	*Last change*		*Rate one year ago (%)*
		Date	*Percentage points*	
Current accounts	12.50	Sept. 21, 2006	0.50	8.00
Overnight loans	15.00	Sept. 21, 2006	0.50	11.00
Certificates of deposit, 90 days	-	July 11, 2006	-	9.75
Required reserves	12.75	Sept. 21, 2006	0.50	8.75
Repos (yield)	14.00	Sept. 19, 2006	0.50	9.50
Certificates of deposit, 7 days (yield)	13.85	Sept. 19, 2006	0.50	9.35

and thereby on the exchange rate, and in the long run on domestic demand. Broadly speaking, transactions with credit institutions can be classified into fixed trading instruments and market actions.

Fixed trading instruments:

- *Current accounts* are deposits of the credit institutions' undisposed assets. These are settlement accounts for netting between deposit institutions and for interbank market trading, including transactions with the Central Bank. Interest rates on these accounts set the floor for overnight interest rates in the interbank market.
- *Overnight loans* are provided on the request of credit institutions and secured with the same securities that qualify for repo transactions (see below). Overnight interest rates form the ceiling for overnight interest rates in the interbank market.
- *Certificates of deposit* are issued with a maturity of 90 days, on the request of credit institutions. Although they are unlisted, they qualify for repo transactions. Their role is to establish the floor for three-month yields in the money market.
- *Required reserves* are made with the Central Bank by credit institutions which are not dependent on Treasury budget allocations for their operations. The required reserve base comprises deposits, issued securities and money market instruments. The required reserve ratio is 2% for the part of the required reserve base which is tied for two years or less. The maintenance period is based on the 21st day of each month until the 20th of the following month, and the two-month average reserve is required to reach the stipulated ratio during the period.

Market operations:

- *Repurchase agreements* are the Central Bank's main instrument. Auctions of 7-day agreements are held every week. Credit institutions need to put up securities that qualify as collateral, as specified in the Central Bank's Rules No. 997 of December 10, 2004. Auctions can be fixed-price or auctions where total amount is announced. Fixed-price auctions have been used so far.
- *Certificates of deposit* with a maturity of 7 days are auctioned weekly. Their function is to counteract temporary surplus liquidity in the banking system. The auction format is fixed-price.
- *Securities* market trading is limited to Treasury-guaranteed paper.
- *Foreign exchange market intervention* is employed only if the Central Bank considers this necessary in order to promote its inflation target or sees exchange rate fluctuations as a potential threat to financial stability.

Economic and monetary chronicle

July 2006

On July 1, the Housing Financing Fund's loan-to-value ratio was temporarily lowered from 90% to 80% and the maximum mortgage amount from 18 m.kr. to 17 m.kr. as part of the government's restraint package.

On July 4, Glitnir Bank announced that all conditions for its acquisition of the Swedish brokerage firm Fischer Partners Fondkommission AB had been met and the transaction was complete. The acquisition price was 3.7 b.kr.

On July 6, the Governors of the Central Bank of Iceland announced that the Bank would raise its policy interest rate (i.e. its repo rate in transactions with credit institutions) by 0.75 percentage points to 13%. Interest rates on overnight loans and required reserves were raised by 0.5 percentage points and other Central Bank interest rates by 0.75 percentage points. All raises were made as of July 11. The Board of Governors also decided to assess the need for further monetary restraint in the middle of August and announce a decision on interest rates on August 16.

On July 17, Standard & Poor's Ratings Services lowered its long-term local currency issuer credit rating on the Icelandic Housing Financing Fund (HFF) to AA- from AA+. The rating was removed from CreditWatch. At the same time, the AA- long-term foreign currency and the A-1+ short-term foreign and local currency ratings on HFF were affirmed. The foreign currency outlook is negative but the local currency outlook is stable.

August 2006

On August 16, the Governors of the Central Bank of Iceland announced that the Bank would raise its policy interest rate (i.e. its repo rate in transactions with credit institutions) by 0.5 percentage points to 13.5%. Interest rates on overnight loans and required reserves were raised by 0.25 percentage points and other Central Bank interest rates by 0.5 percentage points. Interest rates on one-week certificates of deposit and the repo rate were raised as of August 22 and other rates as of August 21.

September 2006

On September 12, Moody's Investors Service downgraded the Bank Financial Strength Rating of Kaupthing Bank from C+ to C. At the same time it affirmed Kaupthing's A1/Prime-1 deposit ratings. The outlook on all ratings is stable.

On September 12, Glitnir Bank announced the issue of subordinated bonds in the amount of 250 million US dollars (18 b.kr.). The issue is classified as Tier 1 capital.

On September 14, the Governors of the Central Bank of Iceland announced that the Bank would raise its policy interest rate (i.e. its repo rate in transactions with credit institutions) by 0.5 percentage points to 14%. Other Central Bank interest rates were also raised by 0.5 percentage points. Interest rates on one-week certificates of deposit and the repo rate were raised as of September 19 and other rates as of September 21.

On September 25, Landsbanki announced that all conditions for its acquisition of Guernsey-based bank Cheshire Guernsey Limited had been met and the transaction was complete. The bank was included in the Landsbanki Group consolidated accounts as of the end of Q3/2006 and its name will subsequently be changed to Landsbanki Guernsey Limited.

Tables and charts

Tables and charts are generally based on statistical information available on October 27, 2006, apart from financial market data, which are from September 29, 2006. A list of symbols is on p. 2.

A Tables

B Charts

Table 1a Baseline macroeconomic and inflation forecasts

	Macroeconomic forecast							
	Current forecast				*Change from prev. forecast (perc. points)*			
GDP and its main components[1]	*2005*	*2006*	*2007*	*2008*	*2005*	*2006*	*2007*	*2008*
Private consumption	12.3	6.0	0.5	-3.0	0.4	-0.2	0.3	4.7
Public consumption	3.3	2.2	3.0	2.7	0.1	-0.7	-0.9	-0.1
Gross fixed capital formation	37.6	9.1	-28.3	-4.7	3.1	4.3	-8.7	6.3
Business sector investment	60.5	7.8	-38.9	-11.1	3.6	4.7	-7.0	10.8
Residential construction	11.9	13.8	-4.9	-7.4	1.6	-1.1	-8.7	-7.0
Public works and buildings	-13.1	3.1	4.2	30.0	0.4	13.0	-21.7	12.4
National expenditure	15.9	6.2	-6.6	-2.3	1.0	0.9	-2.4	3.9
Exports of goods and services	7.1	-2.9	13.5	14.2	3.6	-4.3	2.3	0.2
Imports of goods and services	28.9	4.6	-9.9	0.6	0.5	1.0	-3.9	2.7
Gross domestic product	7.5	4.0	1.4	2.8	2.0	-0.8	-0.4	3.3
Other key aggregates								
Gross domestic product at current prices (b.kr.)	1,012	1,134	1,218	1,283	16	-29	-81	-87
Current account balance (% of GDP)	-16.2	-20.8	-11.7	-8.0	0.3	-5.4	-3.7	-7.0
Unit labour cost (change between annual averages in %)	4.8	8.2	7.7	4.0	0.5	-1.5	-0.7	-0.1
Unemployment (% of labour force)	2.1	1.4	2.0	3.4	-	0.1	0.1	-0.1
Policy rate and exchange rate								
Central Bank policy interest rate (%)	9.4	12.6	11.6	8.2	-	0.3	-0.1	-0.9
Foreign exchange index (Dec. 31. 1991 = 100)[2]	108.7	122.6	126.7	127.9	-	-2.2	-3.1	-2.7

	Inflation forecast		
Quarter	*Change on same quarter of previous year*	*Change from previous forecast (percentage points)*	*Annualised quarterly change (%)*
2006:1	4.5	-	4.5
2006:2	7.5	-0.1	14.3
2006:3	8.0	-1.5	7.5
2006:4	7.6	-3.3	4.3
2007:1	7.9	-2.9	5.8
2007:2	4.1	-6.9	-1.1
2007:3	3.4	-5.6	4.6
2007:4	3.4	-4.6	4.4
2008:1	2.8	-4.0	3.6
2008:2	4.1	-1.6	3.9
2008:3	4.3	...	5.3
2008:4	4.4	...	4.7
Change year on year			
2005	4.0	-	
2006	6.9	-1.2	
2007	4.6	-5.1	
2008	3.9	...	

1. Volume change on previous year (%). 2. Change from previous forecast is the percentage-point change in the effective exchange rate index.

Table 1b Macroeconomic and inflation forecast with endogenous monetary policy response

	Macroeconomic forecast							
	Current forecast				*Change from prev. forecast (perc. points)*			
GDP and its main components[1]	*2005*	*2006*	*2007*	*2008*	*2005*	*2006*	*2007*	*2008*
Private consumption	12.3	5.9	-2.3	-12.1	0.4	0.5	3.6	-0.2
Public consumption	3.3	2.2	3.0	2.7	0.1	-0.7	-0.9	-0.1
Gross fixed capital formation	37.6	9.1	-30.1	-15.1	3.1	4.6	-4.5	1.2
Business sector investment	60.5	7.8	-41.3	-27.0	3.6	5.1	-1.6	4.0
Residential construction	11.9	13.8	-5.4	-10.3	1.6	-1.0	-7.2	-7.4
Public works and buildings	-13.1	3.1	4.2	30.0	0.4	13.0	-21.7	12.4
National expenditure	15.9	6.1	-8.7	-9.6	1.0	1.3	0.4	-
Exports of goods and services	7.1	-2.9	13.3	13.6	3.6	-4.4	2.0	0.3
Imports of goods and services	28.9	4.6	-12.1	-7.4	0.5	1.6	-0.9	-1.4
Gross domestic product	7.5	3.9	0.1	-1.7	2.0	-0.6	1.2	0.5
Other key aggregates								
Gross domestic product at current prices (b.kr.)	1,012	1,134	1,199	1,188	16	-26	-54	-97
Current account balance (% of GDP)	-16.2	-20.8	-10.7	-4.0	0.3	-5.6	-5.2	-7.2
Unit labour cost (change between annual averages in %)	4.8	8.2	7.3	1.9	0.5	-1.5	-0.4	-0.3
Unemployment (% of labour force)	2.1	1.4	2.0	3.8	-	0.1	-	-0.1
Policy rate and exchange rate								
Central Bank policy interest rate (%)	9.4	12.7	15.4	14.1	-	-1.5	-1.4	6.2
Foreign exchange index (Dec. 31. 1991 = 100)[2]	108.7	122.5	124.8	121.3	-	-1.9	-3.4	-8.0

	Inflation forecast		
Quarter	*Change on same quarter of previous year*	*Change from previous forecast (percentage points)*	*Annualised quarterly change (%)*
2006:1	4.5	-	4.5
2006:2	7.5	-0.1	14.3
2006:3	8.0	-1.5	7.5
2006:4	7.6	-3.3	4.2
2007:1	7.9	-2.8	5.7
2007:2	4.0	-6.7	-1.4
2007:3	3.1	-5.3	4.1
2007:4	2.9	-4.2	3.5
2008:1	2.1	-3.5	2.3
2008:2	3.0	-1.1	2.1
2008:3	2.7	...	2.9
2008:4	2.3	...	1.8
Change year on year			
2005	4.0	-	
2006	6.9	-1.2	
2007	4.4	-4.8	
2008	2,5	...	

1. Volume change on previous year (%). 2. Change from previous forecast is the percentage-point change in the effective exchange rate index.

Table 2 Main monthly indicators

	Consumer prices		Exchange rate		Interest rates (end of period, %)						Money and credit (end of period)[5]			
	% change in CPI[1] over the previous		% ch. in effective exchange rate [1,2]		Short-term rates			Long-term rates[4]			12-month % change			
	1 month	12 months	1 month	12 months	Central Bank repo yield	3-month REIBOR[3]	3-month Treasury bills	RIKB 13 0517	RIKS 15 1001	HFF 150644	Base money	M3	DMB lending	DMB foreign liabilities[6]
2000	.	5.0	.	-0.1	11.40	12.0	11.5	.	5.4	.	-10.4	11.2	26.2	83.4
2001	.	6.7	.	-16.7	10.10	12.5	10.0	.	5.1	.	-14.2	14.9	13.4	30.1
2002	.	4.8	.	3.0	5.80	6.2	5.8	7.6	4.9	.	17.2	15.3	0.9	-2.8
2003	.	2.2	.	6.4	5.30	5.1	4.8	7.9	4.3	.	-33.5	17.5	14.8	67.3
2004	.	3.1	.	2.1	8.25	8.6	7.4	7.4	3.6	3.5	77.7	15.0	39.5	59.2
2005	.	4.0	.	11.4	10.50	10.2	9.7	7.8	4.1	4.1	23.1	23.2	51.5	96.4
2005														
January	0.1	4.0	1.9	7.2	8.25	8.6	7.1	7.4	3.5	3.5	3.9	17.1	37.0	61.3
February	0.2	4.5	1.6	7.8	8.75	9.0	7.8	7.4	3.4	3.5	-13.1	15.5	40.0	71.0
March	0.8	4.7	2.2	12.1	9.00	9.2	8.7	7.7	3.6	3.6	14.7	14.9	41.4	64.5
April	0.2	4.3	-2.3	11.1	9.00	9.2	8.8	7.7	3.5	3.5	-23.4	17.5	47.6	70.4
May	-0.5	2.9	-2.6	8.6	9.00	9.2	8.6	7.5	3.6	3.6	52.0	18.9	53.5	84.5
June	0.7	2.8	2.3	10.4	9.50	9.3	9.2	7.5	3.6	3.6	36.0	20.7	53.3	94.6
July	0.1	3.5	1.3	11.5	9.50	9.3	9.4	7.3	3.7	3.7	-18.2	19.1	54.8	110.4
August	0.2	3.7	0.5	11.5	9.50	9.3	9.3	7.4	3.6	3.6	-10.9	21.1	50.5	100.7
September	1.5	4.8	2.6	14.7	10.25	10.0	8.4	7.7	3.6	3.7	-5.4	12.9	55.8	82.6
October	0.6	4.6	3.5	18.1	10.25	10.1	9.7	7.8	4.0	4.0	-6.4	19.4	49.0	91.6
November	-0.2	4.2	0.1	16.5	10.25	10.1	9.7	7.8	4.2	4.1	15.7	27.2	53.7	97.9
December	0.4	4.1	-3.0	8.2	10.50	10.2	9.7	7.8	4.1	4.1	23.1	23.2	51.5	96.4
2006														
January	0.3	4.4	1.7	8.0	10.75	10.3	10.2	8.3	4.5	4.4	-3.9	17.9	51.2	95.7
February	-0.1	4.1	-3.1	3.1	10.75	10.4	14.1	7.9	4.0	4.1	40.8	20.8	51.8	113.4
March	1.1	4.5	-8.2	-7.4	10.75	11.3	12.4	8.6	4.4	4.2	85.2	26.4	57.0	126.1
April	1.1	5.5	-8.0	-12.8	11.50	11.7	12.0	9.1	4.3	4.2	64.6	26.3	57.8	121.3
May	1.4	7.6	0.4	-10.1	12.25	11.9	12.6	8.9	4.0	4.1	44.9	22.3	52.2	94.0
June	1.2	8.0	-3.1	-14.9	12.25	12.5	12.6	9.1	4.4	4.2	8.5	20.1	53.7	96.4
July	0.5	8.4	0.4	-15.7	13.00	12.6	13.5	8.9	4.5	4.2	36.8	21.1	52.2	78.7
August	0.3	8.6	4.7	-12.2	13.50	13.3	13.7	8.0	4.3	4.1	50.4	17.9	47.2	80.0
September	0.6	7.6	1.0	-13.5	14.00	13.5	14.2	7.8	4.1	3.9	30.7	17.8	42.2	81.3
October	0.2	7.2	...	...	...	...	...	...	...	...	...	...	...	...

1. Percentage changes between period averages. 2. Based on the official effective exchange rate basket (trade-weighted). Positive sign indicates appreciation of the Icelandic króna. 3. Average yield on the interbank market in Icelandic króna. 4. For Treasury bonds and HFF bonds, the quoted yield is in excess of changes in the CPI. Trading with HFF bonds began in July 2004; prior figures are for housing bonds. 5. Annual figures are changes over year. Latest figures are preliminary. 6. DMBs = deposit money banks = commercial and savings banks and other institutions permitted to accept deposits from the public. Foreign lending excluded from January 2002.

Table 2 (continued) Main monthly indicators

	Foreign exchange market and reserves				Foreign trade and external conditions					Labour market		Treasury financial balance, % of revenues, from Jan. 1[12]	Asset prices 12-mo. % changes	
	Gross foreign currency reserves:			CB net purchases (b.kr.)	Trade balance (b.kr.)	Merchandise exports (b.kr.)	Merchandise imports (b.kr.)	Marine product prices 12-mo.% ch.[9]	Real exchange rate of króna[10]	Unemployment	Wages, 12-mo. % change[11]		Equity prices[13]	Housing prices[14]
	B.kr.	as ratio of: Merch. imports[7]	as ratio of: For. short-term liabil.[8]											
2000	34.2	2.1	0.60	-13.9	-38.0	149.3	187.3	-3.0	96.2	1.3	6.6	5.7	-19.3	13.3
2001	36.6	2.1	0.40	-29.5	-6.7	196.4	203.1	1.6	83.7	1.4	8.8	-0.7	-11.2	3.1
2002	37.2	2.5	0.20	4.5	13.1	204.3	191.2	3.4	88.5	2.5	7.2	-7.4	16.7	7.5
2003	58.1	3.5	0.25	43.2	-16.9	182.6	199.5	0.4	94.1	3.4	5.6	-8.1	56.4	9.1
2004	65.6	3.6	0.24	27.2	-37.8	202.4	240.2	0.6	97.2	3.1	4.7	0.0	58.9	23.3
2005	67.3	2.9	0.16	24.6	-94.5	194.4	288.9	8.9	107.1	2.1	6.8	8.5	64.7	31.0
2005														
January	65.0	3.5	0.26	0.8	-4.7	14.1	18.8	9.5	106.0	3.0	6.6	15.2	54.6	27.9
February	60.0	3.2	0.26	0.6	-5.0	16.5	21.4	7.9	107.7	2.8	6.7	21.0	43.3	32.2
March	59.5	3.1	0.26	0.6	-5.9	16.4	22.3	9.6	110.0	2.6	6.5	11.5	53.5	32.2
April	61.5	3.0	0.22	0.6	-4.7	17.2	21.9	8.6	106.7	2.3	6.7	5.7	51.8	34.1
May	61.7	3.0	0.21	7.3	-8.1	15.8	23.9	8.9	103.9	2.2	6.6	3.7	51.6	38.5
June	62.4	2.9	0.19	0.6	-6.9	22.7	29.6	8.7	106.6	2.1	6.3	5.3	39.9	38.8
July	58.8	2.8	0.17	0.7	-10.0	13.9	23.9	8.1	108.2	2.0	6.6	3.6	38.3	39.4
August	58.3	2.7	0.18	0.8	-13.0	14.4	27.4	10.1	109.4	1.8	6.7	4.9	38.0	40.4
September	70.7	3.2	0.20	2.5	-10.4	16.9	27.3	11.5	112.6	1.4	6.9	4.4	21.8	37.0
October	59.5	2.7	0.16	3.2	-5.5	16.0	21.6	10.3	116.6	1.4	6.9	6.7	39.0	36.4
November	64.2	2.8	0.16	3.4	-11.0	16.7	27.8	9.0	117.2	1.5	7.3	6.4	48.4	35.5
December	67.3	2.9	0.16	3.5	-9.4	13.7	23.1	5.1	114.1	1.5	7.2	8.5	64.7	31.0
2006														
January	68.5	2.8	0.17	1.4	-8.4	17.0	25.5	6.0	116.3	1.6	8.3	38.0	69.6	25.3
February	72.1	2.9	0.12	1.3	-7.7	14.7	22.4	4.5	112.8	1.6	8.6	30.8	74.9	21.7
March	79.9	2.8	0.10	1.6	-13.3	19.9	33.3	4.2	104.3	1.5	8.6	25.4	50.5	20.9
April	66.2	2.2	0.08	1.5	-8.0	19.1	27.1	4.9	96.5	1.3	8.4	19.4	35.7	17.7
May	70.4	2.3	0.1	1.8	-10.9	23.9	34.9	6.8	97.9	1.3	8.7	18.5	41.3	13.2
June	76.8	2.4	0.1	1.5	-15.6	23.4	39.0	8.3	95.5	1.3	8.8	16.1	32.4	13.1
July	74.3	2.4	0.1	1.7	-19.0	16.2	35.2	10.7	96.2	1.4	10.2	17.2	22.4	7.5
August	72.6	2.4	0.1	1.6	-11.6	16.6	28.2	10.7	101.6	1.2	10.6	14.6	28.6	10.8
September	71.3	2.4	...	1.4	-7.6	22.3	29.9	10.1	103.2	1.0	10.8	...	36.8	10.5
October	...	...	...	1.5	...	...	...	...	...	...	...	...	...	...

7. Gross foreign exchange reserves at end of period as a ratio of the average monthly value of merchandise imports. Calculated at fixed exchange rates. 8. The denominator is foreign short-term liabilities of credit institutions (deposit money banks and investment banks). 9. Prices in SDR. Annual figures are % changes between annual averages. 10. Real effective exchange rate of the Icelandic króna based on relative consumer prices (a trade-weighted average of 17 trading partner countries' consumer prices is used). 1980 = 100. 11. Annual figures show change in annual averages. 12. Cash basis. Without privatisation revenues. Adjusted for changed timing of expenditure charges in Jan.-Nov. 2004. 13. The ICEX-15 index. Annual figures are % changes over year. 14. Residential housing in the Greater Reykjavík Area. Annual figures are % changes over year.

Sources: Directorate of Labour, Iceland Stock Exchange (ICEX), Land Registry of Iceland, State Accounting Office, Statistics Iceland, Central Bank of Iceland.

Table 3 Prices

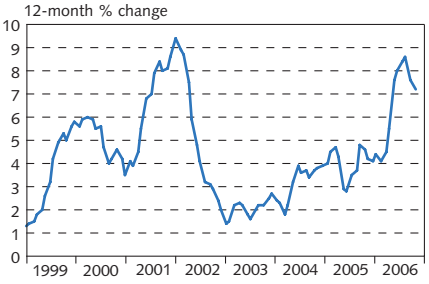
	2006								
	Feb.	*March*	*April*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*
Consumer price index, May 1988 = 100	249.5	252.3	255.2	258.9	261.9	263.1	264.0	265.6	266.2
1-month % change									
Consumer price index	-0.1	1.1	1.1	1.4	1.2	0.5	0.3	0.6	0.2
Domestic goods excl. agric. products and vegetables	0.6	1.0	-0.5	0.5	2.2	2.0	-0.3	1.1	0.5
Agricultural products and vegetables	0.7	-0.7	0.3	-1.2	4.3	0.8	0.9	1.9	-1.1
Imported goods excl. alcohol and tobacco	-1.5	2.8	2.8	3.2	0.8	-0.4	-0.3	1.0	-0.2
Petrol	1.1	-0.1	6.7	6.5	-2.4	3.5	1.3	-3.3	-4.1
Housing	0.7	0.9	1.4	1.6	1.7	0.6	0.6	0.5	0.4
Public services	-0.1	0.0	-0.2	-0.0	-0.0	0.3	0.2	-0.5	1.3
Other services	0.3	0.4	0.1	0.7	0.3	0.9	1.2	-0.2	0.4
Harmonised index of consumer prices (HICP)[1]	-0.2	1.1	0.8	1.2	1.3	0.4	0.5	0.8	...
12-month % changes									
Consumer price index	4.1	4.5	5.5	7.6	8.0	8.4	8.6	7.6	7.2
Domestic goods excl. agric. products and vegetables	0.4	2.9	4.4	7.5	7.9	11.0	8.7	9.5	8.6
Agricultural products and vegetables	2.7	4.0	6.2	10.8	12.5	10.1	11.9	11.7	9.1
Imported goods excl. alcohol and tobacco	-1.2	-0.1	2.9	5.5	6.8	7.5	8.5	5.8	5.1
Petrol	13.9	10.7	18.0	21.0	18.3	15.8	15.2	6.3	4.4
Housing	15.2	13.7	12.3	15.3	15.1	14.5	13.6	13.0	12.2
Public services	1.5	1.8	1.5	1.3	0.9	1.0	1.1	0.4	1.4
Other services	3.6	3.5	3.7	4.0	4.2	4.8	5.7	5.0	5.3
Harmonised index of consumer prices (HICP)[1]	1.2	2.0	3.3	4.8	5.7	6.3	7.1	6.1	...
Building cost index for residential buildings	3.8	3.9	4.2	5.3	6.9	7.1	11.8	11.5	11.4
Housing prices[2]	21.7	20.9	17.7	13.2	13.1	7.5	10.8	...	...
Foreign CPI and commodity prices, 12-mo. % changes									
Consumer price index in USA	3.6	3.4	3.5	4.2	4.3	4.1	3.8	2.1	...
Consumer price index in euro area[3]	2.3	2.2	2.5	2.5	2.5	2.4	2.3	1.7	...
Commodity prices excl. oil	18.0	13.8	24.6	36.7	30.5	34.0	32.7	...	...
Petrol prices[4]	31.4	16.0	37.8	44.7	26.3	28.0	13.7	-1.0	...

1. Deviates from the CPI calculated by Statistics Iceland in that the latter includes own housing, education and health care. 2. Present value of price per m^2 in the Greater Reykjavík Area. 3. Harmonised index of consumer prices (HICP). 1996=100. 4. Crude oil.

Sources: EcoWin, Land Registry of Iceland, Statistics Iceland.

Chart 1

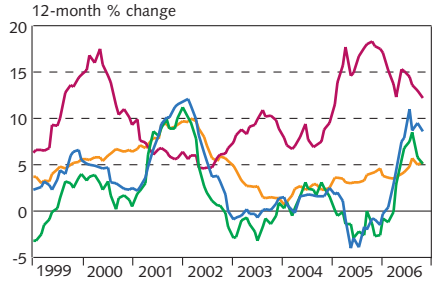
Consumer price index
January 1999 - October 2006



Source: Statistics Iceland.

Chart 2

Consumer price index by origin
January 1999 - October 2006



Domestic goods
Imported goods excluding alcohol and tobacco
Housing
Other services

Source: Statistics Iceland.

Table 4 Interest rates

All figures are in %	Annual averages[1] 2003	2004	2005	At end of month 2006 March	April	May	June	July	Aug.	Sept.
Central Bank rates										
Credit institutions' current accounts	2.9	3.7	7.7	9.25	10.00	10.75	10.75	11.50	12.00	12.50
Required deposits	4.2	4.9	8.5	10.00	10.75	11.50	11.50	12.00	12.25	12.75
Overnight loans (discount rates)	7.8	8.3	11.0	12.25	13.00	13.75	13.75	14.25	14.50	15.00
Repurchase agreements	5.4	6.1	9.4	10.75	11.50	12.25	12.25	13.00	13.50	14.00
Yields in the money market[2]										
REIBOR, O/N	5.1	6.1	8.9	10.4	11.1	11.7	11.8	12.5	12.9	13.4
REIBOR, 1-month	5.3	6.1	9.1	11.1	11.1	11.7	11.9	12.4	12.9	13.4
REIBOR, 3-month	5.3	6.3	9.4	11.3	11.7	11.9	12.5	12.6	13.3	13.5
REIBOR, 6-month	5.5	6.5	9.5	11.4	12.1	12.1	12.8	13.0	13.5	13.6
Treasury bills, 3-month	5.0	6.1	8.9	12.6	13.1	12.4	12.6	13.5	13.4	14.1
Treasury bills, 6-month[3]	5.0	...	...	...	...	...	...	...	...	...
Yields in the capital market [4]										
Treasury notes (RIKB 07 0209)	6.8	7.5	9.0	12.0	11.6	12.3	12.9	13.9	13.8	13.9
Treasury notes (RIKB 10 0317)	.	7.6	7.7	9.1	10.4	9.9	10.3	9.8	8.8	8.6
Treasury notes (RIKB 13 0517)	7.6	7.6	7.6	8.6	9.1	8.9	9.1	8.9	8.0	7.8
Treasury bonds (RIKS 15 1001)	4.4	3.9	3.7	4.4	4.3	4.0	4.4	4.5	4.3	4.1
Housing Financing Fund bonds (HFF150914)[5]	.	3.5	3.7	4.4	4.3	4.3	4.6	4.7	4.6	4.7
Housing Financing Fund bonds (HFF150224)[5]	.	3.8	3.8	4.4	4.5	4.3	4.5	4.6	4.4	4.4
Housing Financing Fund bonds (HFF150434)[5]	.	3.8	3.7	4.3	4.3	4.1	4.3	4.3	4.1	4.0
Housing Financing Fund bonds (HFF150644)[5]	.	3.7	3.7	4.2	4.2	4.1	4.2	4.2	4.1	3.9
Commercial banks' lending rates[6]										
Average rates on non-indexed securities	12.0	12.2	14.8	16.2	17.0	17.5	17.6	18.3	18.8	18.8
Average rates on indexed securities	9.1	8.0	7.2	6.8	6.8	7.0	7.1	7.2	7.2	7.2
Rates acc. to Interest Rate Act 38/2001[7]										
Penalty rates	17.3	17.3	20.3	21.5	21.5	21.5	21.5	23.5	23.5	23.5

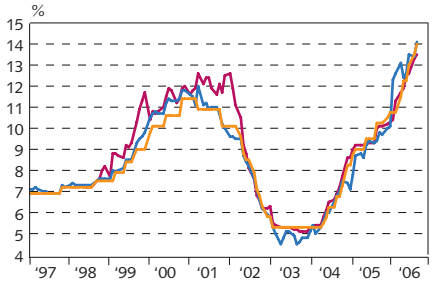
1. Arithmetic averages of end-of-month figures. Central Bank rates are time-weighted averages. 2. REIBOR are interest rates on the interbank market in Icelandic króna. For Treasury and bank bills, yields in trading on ICEX (Iceland Stock Exchange). 3. Treasury bills with the closest maturity to 6 months. 4. All bond yields are in real terms. 5. Housing bonds and Housing authority bonds were discontinued as of July 1, 2004. New bonds, Housing Financing Fund bonds (HFF), were issued instead and the majority of older issues were swapped into the new bonds. 6. From July 1, 2001, the Central Bank issues information on banks' average interest rates only as statistical information. 7. Interest rates that have legal status in the month shown. From July 1, 2001, penalty rates are revised at 6-month intervals.

Source: Central Bank of Iceland.

Chart 3

Short-term interest rates
January 1997 - September 2006

At end of month



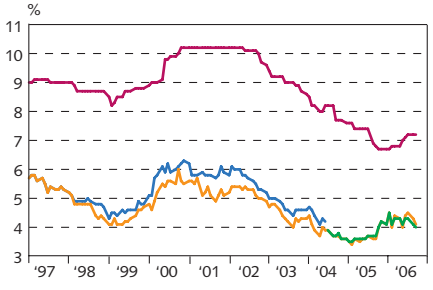
3-month Treasury bills
3-month REIBOR on the interbank market
Central Bank repo rate

Source: Central Bank of Iceland.

Chart 4

Long-term interest rates
January 1997 - September 2006

At end of month



Housing bonds
Secured bank loans
15-year Treasury bonds
30-year HFF bonds

Source: Central Bank of Iceland.

Table 5 Money and credit

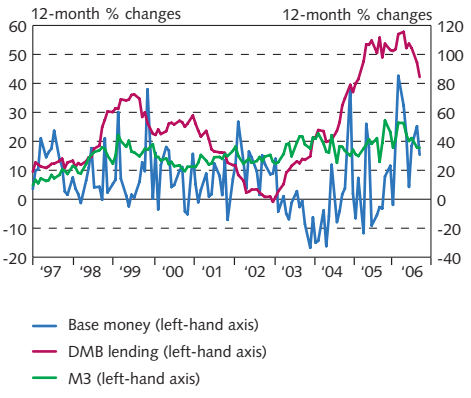
	B.kr.	% change over year			1-mo. change in b.kr.			12-mo. % change		
	Sep. '06	2003	2004	2005	Jul.'06	Aug.'06	Sep.'06	Sep.'04	Sep.'05	Sep.'06
Central Bank										
Net foreign exchange reserves	71.1	.	.	.	-2.8	-1.7	-1.3	.	.	.
Claims on Treasury and govt. institutions, net	-106.1	.	.	.	-13.1	-7.4	-1.0	.	.	.
Claims on deposit money banks	101.4	-65.2	32.2	144.8	20.6	0.1	-8.6	-82.7	409.5	107.1
Base money	35.8	-33.5	77.7	23.1	7.7	-6.2	-10.4	-8.3	-5.4	30.7
Notes and coins in circulation	9.8	9.4	9.0	14.8	-0.2	-0.2	-0.5	10.3	19.6	1.7
Reserves of deposit money banks	26.0	-46.7	121.0	25.6	7.9	-6.0	-9.9	-13.9	-15.0	46.5
Deposit money banks										
Central Bank items	-75.7	.	.	.	-13.2	-5.6	-1.4	.	.	.
Short-term position, net	-77.5	.	.	.	-14.0	-5.8	-0.4	.	.	.
Credit and listed securities[1]	3,795.9	28.2	40.4	75.7	7.5	-61.1	99.7	32.0	69.2	50.3
Credit[2]	2,870.1	22.8	43.0	67.6	-23.3	-60.9	70.9	33.4	69.1	47.0
Treasury and government institutions	14.4	8.1	1.6	-16.1	0.0	-1.5	0.2	-3.4	8.2	-9.4
Non-bank financial institutions	27.5	-45.2	.	.	2.0	-0.4	-2.1	.	-2.8	19.8
Businesses	1,486.0	15.5	2.1	25.1	17.8	-22.7	47.7	34.1	39.3	46.4
Households	662.6	9.9	8.1	12.7	2.4	0.7	9.4	25.0	126.0	36.6
Foreign sector	668.5	.	63.1	117.9	-46.1	-36.4	14.8	99.0	150.9	65.6
Listed securities	426.7	38.3	22.1	64.9	9.0	12.2	-11.1	14.7	44.7	59.1
Domestic credit and listed securities	2,792.1	22.6	35.6	54.2	24.0	-20.9	92.6	25.0	53.3	40.4
Domestic credit	2,201.5	14.8	39.5	51.5	22.7	-24.4	56.1	26.6	55.8	42.2
Deposits	1,080.3	22.5	13.5	29.7	3.2	-39.8	230.6	20.1	19.6	61.1
Domestic deposits	728.0	.	.	0.0	9.5	-18.9	8.4	135.3	12.8	18.0
Bonds	2,653.7	106.1	78.8	100.3	-61.6	125.5	-32.8	82.6	91.7	66.7
Domestic bonds	205.7	4.9	25.3	52.8	3.6	6.5	-6.7	17.1	58.0	51.9
Foreign liabilities, total[3]	3,251.4	67.3	59.2	96.4	-103.5	54.0	59.9	65.0	82.6	81.3
Banking system										
Foreign assets, net	-823.4	18.5	25.9	55.0	-7.5	15.7	-45.0	12.4	47.5	38.6
Domestic credit and marketable securities	,457.9	21.6	36.0	44.2	20.8	-34.5	76.9	25.9	46.4	40.3
Money supply (M1)[4]	199.2	22.6	30.1	23.5	-8.2	-3.1	12.1	17.1	22.3	21.2
M2 (M1 + demand savings deposits)	336.5	18.4	28.0	25.6	-9.1	-13.1	9.1	19.7	17.3	18.5
M3 (M2 + time savings deposits)	737.9	17.5	15.0	23.2	9.3	-19.1	7.8	18.3	12.9	17.8
M4 (M3 + securities issues)	943.6	15.5	16.4	27.7	12.9	-12.7	1.1	18.1	19.0	23.8

1. Treasury bills, equities and leasing contracts also included. 2. Lending series have been adjusted retroactively following reclassification under the ÍSAT standard. Data on lending to foreign entities available since January 2001. 3. Effective as of *Monetary Bulletin* 2005/3, this item includes securities issues abroad. 4. Sum of notes and coins in circulation and DMBs' demand deposits.

Source: Central Bank of Iceland.

Chart 5

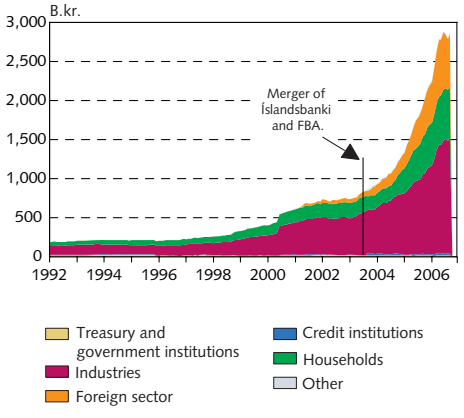
M3, DMB lending and base money
January 1997 - September 2006



Latest figures are preliminary.
Source: Central Bank of Iceland.

Chart 6

Deposit money bank lending by sector
January 1992 - September 2006[1]



1. Reclassification of lending in September 2003 based on the ÍSAT-95 standard led to a reduction in household debt figures and an increase in business and municipalities' debt figures. Latest figures are preliminary.
Source: Central Bank of Iceland.

Table 6 The credit system[1]

Assets	B.kr. June '06	% change over year 2000	2001	2002	2003	2004	2005	3-mo. % change Dec.'05	Mar.'06	Jun.'06
Domestic lending and securities	4,184.9	17.2	19.2	3.2	11.8	19.7	30.8	4.1	7.7	13.7
Banking system[2]	2,622.6	44.4	13.8	8.0	22.4	36.9	50.9	6.9	10.8	13.9
Miscellaneous credit undertakings	757.4	-3.8	20.8	-2.0	8.0	15.1	8.3	7.5	3.0	3.6
Housing Financing Fund	418.9	12.0	18.1	11.5	14.1	0.3	-10.5	1.4	-2.1	-1.0
Credit undertakings subject to minimum reserve requirements[3]	301.3	-34.9	30.3	-41.4	-19.0	133.6	75.5	31.1	11.9	10.5
Other credit undertakings[4]	37.2	17.2	16.1	9.0	0.8	-2.4	-23.8	-30.3	5.2	6.9
Pension funds	936.4	4.6	16.4	12.2	13.4	16.5	19.2	5.0	5.6	4.9
Insurance companies	76.2	24.1	12.2	6.3	14.8	4.1	36.3	2.9	4.6	6.5
Mutual and investment funds[5]	328.6	-14.0	22.3	39.2	47.0	38.9	9.3	3.5	-7.0	9.0
Foreign credit	4,188.1	39.6	29.5	-4.6	30.5	41.4	76.5	5.5	22.4	27.2
State lending funds	291.0	0.0	31.9	-2.9	-1.2	-4.3	-11.3	-3.3	-3.2	3.5
Total of above	9,200.3	18.4	21.6	3.1	19.2	27.8	43.0	5.5	12.0	16.4
Less inter-institutional transactions	-5,015.4	20.4	25.4	2.9	30.3	38.6	56.2	6.8	16.2	18.9
Assets = liabilities	4,184.9	17.2	19.2	3.2	11.8	19.7	30.8	4.1	7.7	13.7
Liabilities										
Domestic liabilities	2,736.8	7.1	14.1	7.2	19.4	16.5	16.5	7.7	11.7	0.7
Notes and deposits	655.4	11.1	14.9	13.4	21.9	9.8	9.8	4.1	10.2	-0.4
Securities	356.9	10.1	6.7	0.2	45.2	25.9	25.9	-6.2	-3.8	34.7
Insurance companies' indemnity fund	56.5	11.5	15.6	4.4	4.7	2.3	2.3	-2.3	11.6	0.1
Pension funds	1,344.4	9.9	13.7	4.9	21.1	19.8	19.8	7.4	9.2	4.1
Capital of financial institutions	735.1	14.3	26.0	19.4	19.7	71.0	71.0	13.6	9.4	3.3
Other items, net	-411.4	.	.	.	.	.	.	.	.	.
Foreign liabilities, net	1,448.1	50.2	31.0	-4.8	-5.7	28.7	28.7	7.9	16.2	20.6
Credit by sector[6]										
Central government	61.3	-8.6	25.8	1.8	0.0	24.1	-60.9	-36.5	-20.6	0.0
Municipalities[7]	133.3	15.9	23.0	4.1	6.3	5.1	0.9	-1.6	6.2	4.7
Businesses[7]	2,748.8	22.5	20.7	0.6	18.2	24.5	50.0	12.2	17.5	7.0
Households[7]	1,241.6	17.6	15.5	7.0	14.7	13.6	23.7	5.8	7.1	6.8

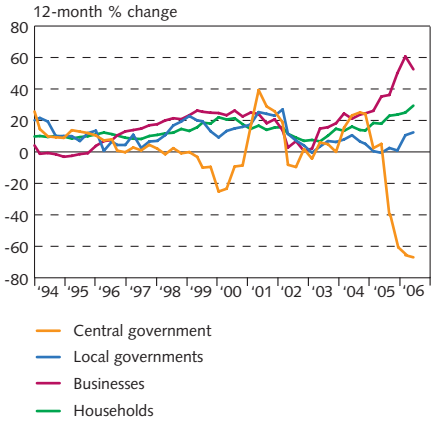
1. Partly preliminary or estimated. 2. In May 2003, Glitnir leasing company merged into Íslandsbanki and was thereby reclassified to "Banking system". 3. Credit undertakings subject to minimum reserve requirements comprise: Frjálsi fjárfestingarbankinn hf., Framtak fjárfestingarbanki hf., Lýsing, SP-fjármögnun, Europay, Greiðslumiðlun hf., MP fjárfestingarbanki (since November 2003) and Straumur fjárfestingarbanki (since January 2004). 4. Other credit undertakings comprise: The Agricultural Loan Fund, the Agricultural Productivity Fund, the Municipal Loan Fund and the Regional Development Fund. 5. Since December 2003 investment funds are included. 6. Partly estimated. 7. Since September 2003, lending by sector has been reclassified according to the ÍSAT standard. This produces a lower figure than otherwise for lending to households, and a higher figure for lending to municipalities and businesses.

Source: Central Bank of Iceland.

Chart 7

Growth of credit system lending 1994-2006

Lending by sectors[1]



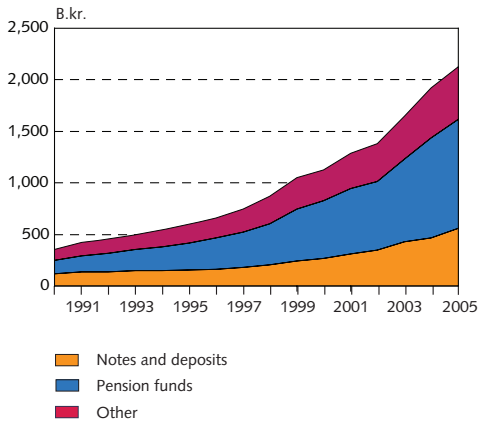
1. Reclassification of lending in September 2003 based on the ÍSAT-95 standard led to a reduction in household debt figures and an increase in business and municipalities' debt figures. Latest figures are preliminary.

Source: Central Bank of Iceland.

Chart 8

Credit system liabilities at end of year 1990-2005

At current prices



Latest figures are preliminary.

Source: Central Bank of Iceland.

Table 7 Financial markets

At end of period	Outstanding in b.kr. 2004	2005	Aug. '06	1-month % change June '06	July '06	Aug. '06	12-month % change June '06	July '06	Aug. '06
Money market[1]	39.4	84.1	78.7	2.5	12.1	5.0	-1.7	-55.4	-52.9
Securities market[2]	1,734.2	2,768.8	3,641.9	5.8	-0.4	2.0	61.9	52.8	55.0
thereof Treasury bonds	45.1	27.2	23.0	-3.2	-6.3	0.8	-7.1	-12.2	-11.9
thereof housing bonds	98.2	53.6	45.6	-2.0	-2.2	-0.9	-30.0	-29.5	-28.6
thereof HFF bonds	340.3	393.4	434.7	2.0	1.7	1.3	14.7	11.8	13.9
Market capitalisation of listed equities	1,083.7	1,815.9	2,111.9	-4.5	-3.2	14.6	35.9	27.8	35.8
Mutual funds' units (open-end)	272.7	328.2	414.1	-7.3	9.7	-5.9	25.5	35.8	25.2

1. Bills issued by Treasury, commercial banks, savings banks and investment credit funds. 2. Government bonds, government notes, housing bonds, housing authority bonds, HFF bonds and listed bond issues of banks, savings banks, investment credit funds, leasing companies, businesses, municipalities and non-residents. Open-end mutual funds' units not included.

Source: Central Bank of Iceland.

Table 8 Labour market

Changes in indices are in percent. Other changes indicate increase/decrease in jobs or permits	Averages 2004	2005	Sep. '06	1-month change Jul. '06	Aug. '06	Sep. '06	12-month change Sep. '04	Sep. '05	Sep. '06
Wage index (1990=100)	215.6	230.1	249.0	0.9	0.7	0.5	5.3	6.9	10.8
Real wages (1990=100)[1]	133.9	137.4	139.5	2.9	0.3	-0.1	1.8	2.0	3.0
Number of issued work permits	3,750	6,362	342	-638	185	-181	-109	843	-933
Job vacancies, total	668	1,379	811	-56	61	-101	140	954	-1,211
thereof Greater Reykjavík Area	204	475	653	-214	61	-100	163	239	-15

Period averages	2004	2005	2006	Jul. '06	Aug. '06	Sep. '06	Sep. '04	Sep. '05	Sep. '06
Number of unemployed	4,893	4,564	3,119	2,184	1,948	1,628	3,891	2,267	1,628
Measured unemployment rate (% of labour force)	3.4	3.1	2.1	1.4	1.2	1.0	2.6	1.4	1.0
Seasonally adjusted unemployment rate (% of labour force)	.	.	.	1.3	1.3	1.3	3.2	1.8	1.3

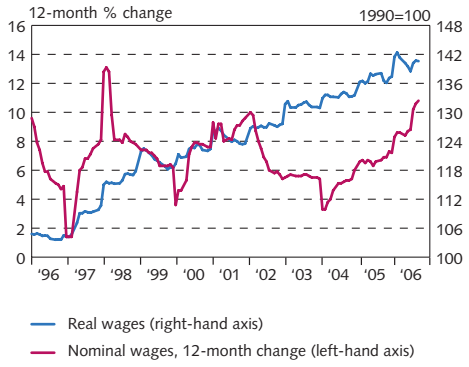
Quarterly measurements	Averages 2004	2005	Q3/06	3-month change Q1/06	Q2/06	Q3/06	12-month change Q3/04	Q3/05	Q3/06
Wage index (1990 = 100)	215.5	230.1	256.1	4.4	1.5	3.1	5.1	6.8	10.6
Wages in the private sector	196.9	210.6	235.0	4.5	1.0	3.9	5.4	6.1	11.3
Wages in the public sector and banks	246.3	262.4	290.9	4.2	2.4	1.7	4.8	7.7	9.6

1. Deflated by consumer prices.

Sources: Directorate of Labour, Statistics Iceland, Central Bank of Iceland.

Chart 9

Nominal and real wages
January 1996 - September 2006



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 10

Unemployment and labour participation[1]
January 1996 - September 2006

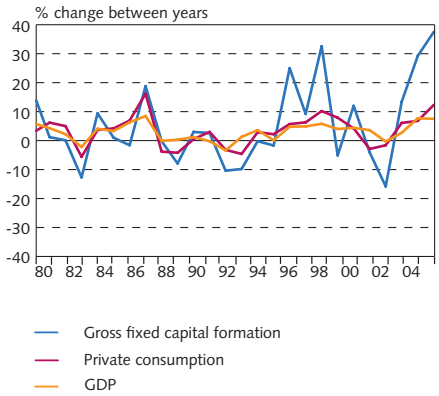
1. Statistics Iceland's labour market survey 1996-2005.
Sources: Directorate of Labour, Statistics Iceland, Central Bank of Iceland.

Table 9 National accounts – annual data (continued on next page)

B.kr.	*2000*	*2001*	*2002*	*2003*	*2004*	*Estimate 2005*
Gross domestic product (GDP), current prices	679.3	764.5	804.7	830.6	915.3	1,012.2
Current account balance, current prices	-69.4	-33.4	12.5	-40.1	-91.0	-162.8
GDP at 2000 fixed prices[1]	679.3	703.9	701.8	720.7	775.9	834.1
Volume changes between years, percent[1]						
Private consumption	4.2	-2.9	-1.6	6.1	6.8	11.9
Public consumption	4.3	3.1	5.1	1.6	2.9	3.3
Gross fixed capital formation	12.0	-4.1	-15.8	13.4	29.2	34.5
Business sector investment	11.1	-11.6	-20.0	21.3	32.6	60.5
Residential construction	12.7	12.1	12.4	3.9	14.1	11.9
Public works and buildings	14.7	7.9	-30.4	2.1	29.8	-13.1
National expenditure	6.0	-2.4	-2.8	6.1	9.9	15.8
Exports of goods and services	4.3	7.4	3.8	1.6	8.4	7.1
Exports of goods	-1.3	7.2	6.6	-1.2	9.2	-0.1
Exports of services	16.2	7.7	-1.7	7.3	7.0	19.9
Imports of goods and services	8.6	-9.1	-2.6	10.8	14.4	28.9
Imports of goods	2.8	-10.0	-3.4	7.3	15.8	25.2
Imports of services	21.5	-7.3	-1.0	17.2	12.1	35.7
Gross domestic product (GDP)	4.4	3.6	-0.3	2.7	7.7	7.5
Gross national income (GNI)	2.7	2.6	3.8	-0.3	4.4	8.6
Terms of trade (goods and services)	-2.4	0.3	0.6	-4.1	-1.3	0.9
Percent of GDP						
Private consumption	61.0	56.7	55.6	57.8	57.6	59.7
Gross fixed capital formation	22.5	21.3	17.7	19.8	23.3	37.5
Current account balance	-10.2	-4.4	1.6	-4.8	-9.9	-16.1
Gross national saving	12.7	16.7	19.3	14.8	13.2	12.3

Chart 11

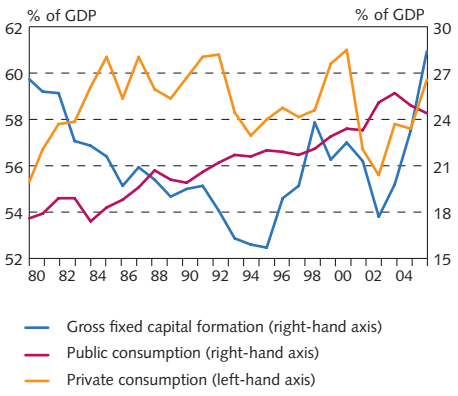
Growth of GDP, private consumption and gross fixed capital formation 1980-2005[1]



1. Preliminary 2005.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 12

Private consumption, public consumption and gross fixed capital formation 1980-2005[1]



1. Preliminary 2005.
Sources: Statistics Iceland, Central Bank of Iceland.

Table 9 (continued) National accounts – quarterly data

B.kr.	Private consumption	Public consumption	Gross fixed cap. format.	Changes in stocks	National expenditure	Exports	Imports	GDP
2003: Q1	112,747	52,449	37,692	2,261	205,150	70,906	-67,695	208,361
2003: Q2	120,132	53,005	40,137	-353	212,921	67,861	-78,552	202,230
2003: Q3	120,851	53,920	43,918	34	218,723	80,326	-87,508	211,541
2003: Q4	125,979	54,127	42,878	-3,395	219,589	69,460	-80,559	208,489
2004: Q1	122,822	55,961	46,292	3,412	228,488	73,098	-79,431	222,155
2004: Q2	132,266	57,083	49,461	-1,108	237,703	75,170	-94,599	218,274
2004: Q3	131,164	58,070	57,670	-3,596	243,308	90,028	-96,826	236,509
2004: Q4	140,858	57,172	59,441	374	257,845	78,607	-98,106	238,346
2005: Q1	138,211	59,768	59,060	4,068	261,108	72,780	-95,141	238,747
2005: Q2	154,825	61,689	65,955	-4,904	277,565	88,218	-115,734	250,049
2005: Q3	151,207	62,932	83,052	2,093	299,283	87,933	-121,989	265,228
2005: Q4	159,543	62,717	79,888	-2,119	300,028	75,392	-117,244	258,176
2006: Q1	159,529	66,538	82,727	719	309,513	73,824	-120,879	262,458
2006: Q2	174,412	69,069	78,458	794	322,733	96,619	-147,999	271,352
Volume change from same quarter in previous year (%)[1]								
2003: Q1	6.1	1.9	12.7	.	7.7	5.9	1.3	9.4
2003: Q2	5.3	2.1	13.8	.	6.4	-3.8	10.8	0.8
2003: Q3	5.9	1.4	13.2	.	5.7	4.0	16.4	1.0
2003: Q4	7.0	1.1	13.9	.	4.8	0.6	13.8	0.2
2004: Q1	6.7	3.0	22.4	.	9.1	4.9	16.9	4.9
2004: Q2	6.7	3.7	20.0	.	8.2	6.1	13.8	5.4
2004: Q3	5.3	3.6	28.7	.	7.8	10.3	7.5	8.7
2004: Q4	8.4	1.1	37.7	.	14.4	12.2	20.4	11.6
2005: Q1	9.4	2.5	26.5	.	11.4	2.0	23.6	3.8
2005: Q2	15.0	3.3	34.0	.	14.5	21.5	26.8	11.6
2005: Q3	13.6	3.8	47.6	.	22.0	3.3	33.9	10.0
2005: Q4	11.3	3.8	39.5	.	15.1	2.6	30.3	4.7
2006: Q1	11.9	4.1	36.6	.	14.2	-5.3	23.6	4.3
2006: Q2	4.6	2.7	6.5	.	7.0	-5.9	6.3	2.7

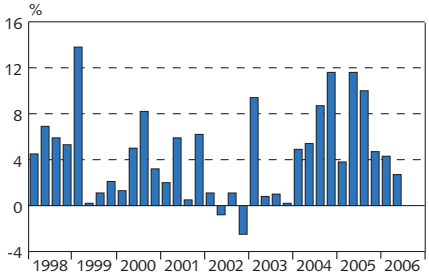
1. In September 2005, annual chain-linking was introduced for calculations of volume changes, replacing the earlier use of constant prices relative to a specific base year. Data extending back to 1997 have been revised on this basis.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart 13

Quarterly economic growth
Q1/1998 - Q2/2006[1]

Volume change in GDP over four quarters (%)

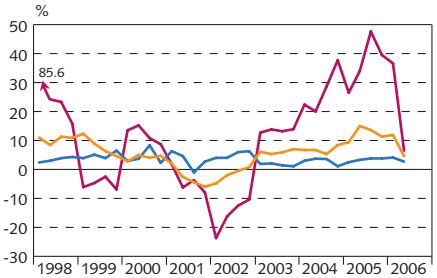


1. Latest data are preliminary.
Source: Statistics Iceland.

Chart 14

Components of economic growth
Q1/1998 - Q2/2006[1]

Volume change over four quarters (%)



Public consumption
Private consumption
Gross fixed capital formation

1. Latest data are preliminary.
Source: Statistics Iceland.

Table 10 Current account balance[1] (continued on next page)

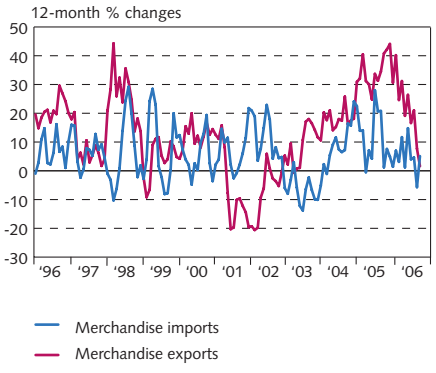
	B.kr.					% change from previous year[2]		
Trade in goods and services	*2002*	*2003*	*2004*	*2005*	*Jan.-Sep. '06*	*3-mo.*	*6-mo.*	*12-mo.*
Trade balance	13.1	-16.9	-37.8	-94.5	-102.2	.	.	.
Merchandise exports fob	204.3	182.6	202.4	194.4	173.2	4.5	4.2	5.5
Excluding ships and aircraft	202.0	181.2	201.6	184.7	166.6	8.0	11.0	7.0
Marine products	128.6	113.7	121.7	110.1	94.5	7.3	4.0	1.7
Aluminium and ferro-silicon	43.5	40.3	42.6	42.1	45.4	23.5	37.6	28.6
Other industrial products	14.5	21.6	28.4	24.7	21.1	-2.6	4.1	-0.0
Merchandise imports fob	191.2	199.5	240.2	288.9	275.4	2.2	9.4	19.8
Excluding ships and aircraft	180.0	195.7	231.7	276.8	271.4	5.0	12.6	24.2
Consumption goods	59.5	66.3	77.2	92.1	78.2	-0.4	-3.3	11.8
Investment goods	38.6	46.1	52.8	67.2	73.4	13.3	32.8	47.0

	B.kr.					% change from previous year[2]		
Services and income balance	*2002*	*2003*	*2004*	*2005*	*2006/Q2*	*3-mo.*	*6-mo.*	*12-mo.*
Services balance	-0.7	-9.2	-14.4	-31.3	-16.4	.	.	.
Services exports	101.2	105.6	113.9	128.7	30.3	-17.6	-11.3	5.3
Transportation	48.5	50.2	63.2	68.3	14.3	-31.5	-24.5	-7.4
Travel	22.8	24.5	26.1	25.8	6.9	3.0	8.7	8.6
Other receipts	29.9	30.9	24.6	34.6	9.1	-1.2	3.6	33.8
Services imports	-101.9	-114.8	-128.3	-160.0	-46.7	2.2	11.4	27.4
Transportation	-38.6	-39.7	-48.8	-55.5	-13.2	-18.2	-8.4	10.1
Travel	-33.4	-39.8	-48.5	-61.2	-20.8	17.1	22.8	33.6
Other expenditure	-29.9	-35.3	-31.0	-43.2	-12.8	7.7	21.6	43.3
Balance on income	-2.0	-13.9	-38.9	-36.7	-14.0	.	.	.
Receipts	27.1	28.7	32.9	90.2	37.1	62.4	90.1	156.7
Compensation of employees	5.4	6.2	5.6	4.6	1.2	-7.2	9.9	0.4
Interest payments	4.7	4.3	8.8	21.5	16.8	262.6	256.5	248.0
Dividends and reinvested earnings[3]	16.9	18.2	18.5	64.0	19.1	12.8	42.8	146.2
Expenditures	-29.1	-42.6	-71.8	-126.8	-51.1	79.6	88.9	101.2
Compensation of employees	-0.7	-0.5	-0.8	-1.5	-0.5	23.7	55.4	95.6
Interest payments	-29.2	-29.4	-35.5	-61.1	-35.9	135.2	134.1	129.6
Dividends and reinvested earnings[3]	0.8	-12.7	-35.5	-64.3	-14.7	14.8	32.5	72.5
Current transfer, net	1.2	-1.2	-1.2	-1.7	-0.6	83.0	116.7	142.9
Current account balance	12.5	-40.1	-91.0	-162.8	-65.4	.	.	.

Chart 15

Merchandise trade
January 1996 - September 2006

3-month moving averages at fixed exchange rates

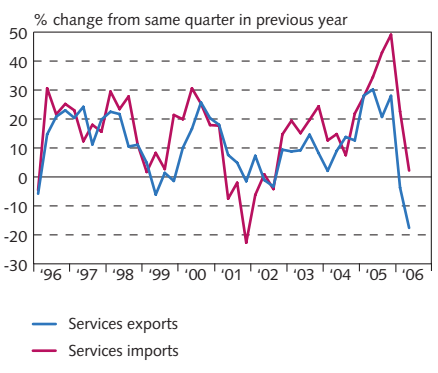


Latest data are preliminary.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 16

Exports and imports of services
Q1/1996- Q2/2006

At constant exchange rate



Latest data are preliminary.
Source: Central Bank of Iceland.

Table 10 (continued) Current account balance[1]

	B.kr.					Change from prev. year (b.kr.)[2]		
	2002	2003	2004	2005	Q2'06	3-mo.	6-mo.	12-mo.
Capital and financial account	-9.0	18.8	116.1	102.7	122.9	.	.	.
Capital transfer, net	-0.1	-0.4	-0.2	-1.7	-0.5	0.1	-0.1	-0.9
Financial account[4]	-8.9	19.2	116.3	104.4	123.4	143.0	85.9	31.9
Financial account excl. reserves	-3.3	42.6	130.5	109.1	112.0	131.4	81.8	31.9
Direct investment, net	-21.9	-3.7	-129.5	-290.8	-10.5	131.8	143.1	75.9
Abroad	-29.9	-29.1	-181.2	-444.2	-14.7	129.4	141.4	-25.0
In Iceland	8.0	25.5	51.7	153.4	4.1	2.3	1.7	100.9
Portfolio investment, net	13.6	230.0	466.4	769.6	167.1	-172.3	-265.2	-228.9
Assets	-28.9	-45.4	-115.4	-295.2	-20.0	37.1	8.6	-144.3
Equities	-23.8	-40.6	-111.0	-205.8	4.8	39.1	26.6	-61.3
Debt securities	-5.1	-4.8	-4.4	-89.4	-24.8	-1.9	-18.0	-83.0
Liabilities	42.5	275.4	581.8	1,064.7	187.1	-209.4	-273.7	-84.5
Equities	4.5	-3.6	20.2	5.3	23.2	23.6	28.8	15.2
Debt securities	38.0	278.9	561.6	1,059.5	163.9	-233.0	-302.5	-99.8
Other investment, net[4]	5.0	-183.8	-206.4	-369.6	-44.5	171.9	203.9	184.9
Assets	-30.4	-156.1	-237.6	-687.5	-47.2	281.7	73.6	-160.6
Liabilities	35.5	-27.7	31.2	317.9	2.7	-109.8	130.3	345.5
Reserve assets	-5.7	-23.4	-14.2	-4.7	11.4	11.6	4.1	0.1
Net errors and omissions	-3.5	21.3	-25.0	60.1	-57.5	.	.	.
Memorandum items								
Long-term borrowing, net	32.3	67.0	336.6	595.7	105.9	-51.4	-112.6	2.1
Assets	-41.2	-184.3	-256.2	-781.7	-60.6	291.4	59.7	-243.6
Monetary authorities	-5.7	-23.3	-14.2	-4.7	11.4	11.6	4.1	0.1
General government	0.0	0.0	0.0	0.0	-	-	-	-
Deposit money banks	-35.3	-162.6	-220.8	-726.5	-72.0	267.1	43.3	-227.1
Other sectors	-0.3	1.7	-21.2	-50.5	-0.0	12.7	12.2	-16.6
Liabilities	73.5	251.3	592.8	1,377.4	166.5	-342.8	-172.3	245.7
Monetary authorities	4.8	-15.9	0.0	0.0	-0.3	-0.2	-0.2	-0.2
General government	9.7	-10.4	9.9	-32.3	-14.8	-11.6	-1.6	-31.8
Deposit money banks	49.4	264.3	582.9	1,302.5	173.9	-306.6	-160.7	191.2
Other sectors	9.5	13.2	-0.1	107.1	7.7	-24.4	-9.7	86.5

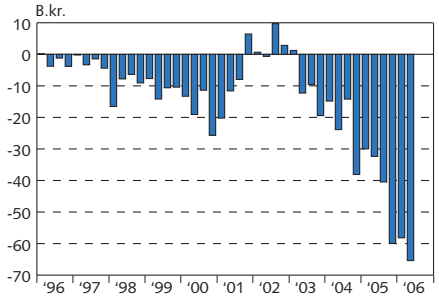
1. Latest figures are preliminary. 2. Changes in components of the trade and services accounts are in %, but changes in components of the capital and financial account in b.kr. At constant exchange rates 3. Dividend payments and reinvestment of earnings on direct investment. 4. Positive value represents inflow of capital due to foreign borrowing or decrease in assets. Negative value accounts for outflow of capital, debt repayments or increase in assets.

Source: Central Bank of Iceland.

Chart 17

Quarterly current account balance
Q1/1996- Q2/2006

At current exchange rates

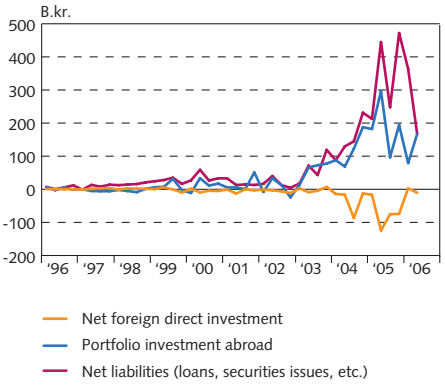


Latest data are preliminary.
Source: Central Bank of Iceland.

Chart 18

Selected financial account items
Q1/1996 - Q2/2006

At current exchange rates



Latest data are preliminary.
Source: Central Bank of Iceland.

Table 11 International investment position

B.kr.	Position at end of period								
	2001	*2002*	*2003*	*2004*	*2005*	*Sep. '05*	*Dec. '05*	*Mar. '06*	*June '06*
International investment position	-596.3	-579.7	-557.9	-665.7	-828.9	-697.3	-820.0	-993.6	-993.6
Total assets	415.9	409.4	708.2	1,153.5	2,398.4	1,899.2	2,508.9	3,115.7	3,115.7
Direct investment abroad	86.8	101.3	122.5	245.0	597.0	458.9	642.5	639.2	639.2
Equity capital	66.8	82.3	110.5	210.6	461.3	410.6	539.1	531.2	531.2
Other capital	19.9	19.0	12.1	34.3	135.7	48.3	103.4	108.0	108.0
Portfolio assets	197.3	159.7	262.3	374.2	627.6	565.2	695.6	892.7	892.7
Equity capital	184.8	149.3	239.2	356.4	528.2	510.1	589.7	756.4	756.4
Debt securities	12.5	10.4	23.1	17.8	99.4	55.1	106.0	136.2	136.2
Other investment assets	95.2	111.2	265.2	468.7	1,106.5	804.4	1,103.5	1,504.0	1,504.0
Reserves	36.6	37.2	58.1	65.6	67.3	70.7	67.3	79.9	79.9
Total liabilities	1,012.2	989.1	1,266.1	1,824.7	3,244.5	2,596.5	3,329.0	4,109.3	4,109.3
Direct investment in Iceland	70.7	64.3	84.6	127.4	252.0	149.6	252.1	278.8	278.8
Equity capital	62.9	56.1	61.8	94.1	228.3	105.7	228.4	254.8	254.8
Other capital	7.8	8.2	22.8	33.3	23.7	44.0	23.7	23.9	23.9
Portfolio liabilities	471.3	490.2	776.1	1,302.3	2,302.9	1,926.5	2,387.3	2,812.8	2,812.8
Equity capital	12.1	35.7	42.5	86.6	141.7	118.3	234.4	237.3	237.3
Debt securities	459.2	454.4	733.6	1,215.7	2,161.2	1,808.2	2,152.9	2,575.5	2,575.5
Other investment liabilities	470.2	434.6	405.4	395.1	689.6	520.3	689.6	1,017.7	1,017.7
Long-term debt	377.0	296.2	259.2	213.3	363.7	232.9	363.7	318.1	318.1
Short-term debt	93.2	138.4	146.2	181.8	325.9	287.5	325.8	699.6	699.6
Memorandum items									
Equity capital, net	188.8	150.5	234.6	388.7	770.1	701.1	745.6	879.5	879.5
Net external debt position	-785.1	-730.2	-792.5	-1,058.5	-1,574.3	-1,398.4	-1,565.7	-1,873.1	-1,873.2
Monetary authorities	21.7	20.8	58.1	65.5	67.2	70.5	67.2	79.5	79.5
General government	-239.8	-227.2	-220.9	-212.4	-169.1	-176.7	-171.7	-183.9	-183.9
Deposit money banks	-373.7	-361.8	-471.1	-778.2	-1,287.8	-1,137.2	-1,284.5	-1,564.5	-1,564.5
Other sectors	-193.2	-162.0	-158.6	-133.5	-184.7	-155.0	-176.7	-204.3	-204.3
Percent of gross domestic product[1]									
International investment position	-76.3	-69.9	-70.2	-82.1	-86.2	-92.2	-86.2	-88.6	-88.6
Net external debt[2]	100.4	99.3	100.1	130.6	161.4	147.0	161.4	167.6	167.6
External debt position[2]	118.9	142.7	144.3	198.8	293.8	244.4	293.8	322.8	322.8
Long-term debt	96.9	109.1	110.0	159.9	245.2	204.4	245.2	249.1	249.1
Short-term debt	22.0	33.6	34.3	38.9	48.6	40.0	48.6	73.7	73.7

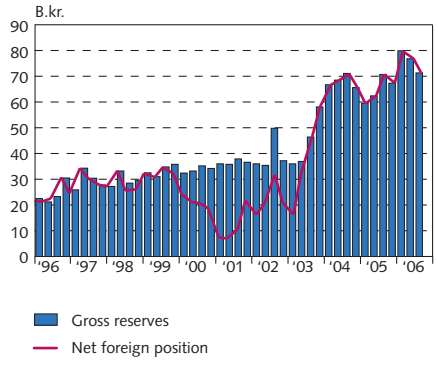
1. Foreign debt at year-end at annual average exchange rates (based on SDR). Quarterly ratios as percent of estimated annual GDP. 2. Direct investment capital and portfolio equities excluded.

Source: Central Bank of Iceland.

Chart 19

Reserve assets and Central Bank net foreign position, Q1/1996 - Q3/2006

Quarterly, at current exchange rates

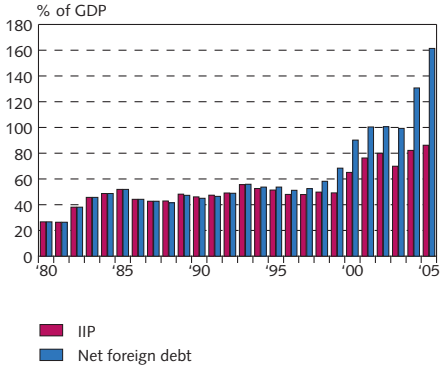


Latest data are preliminary.
Source: Central Bank of Iceland.

Chart 20

International investment position 1980-2005[1]

At end of year and latest quarter



1. IIP is shown here with positive sign but is actually negative (see Table 11). Latest data are preliminary.
Source: Central Bank of Iceland.

Table 12 Summary of Treasury finances[1]

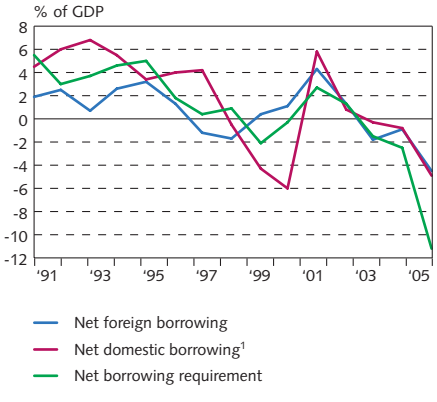
B.kr.	Accruals basis 2003	2004	2005	Jan.-Dec. 2004	2005	% ch. from prev. year	May-August 2005	2006	% ch. from prev. year
Revenues	274.6	302.4	421.2	280.7	399.3	42.2	105.0	121.5	15.7
Expenditures	280.7	300.4	308.4	280.4	308.4	10.0	100.6	109.3	8.6
Financial balance	-6.1	2.0	112.8	0.3	90.9	.	4.4	12.2	.
Miscell. short-term accounts	8.9	-3.8	-19.7	-0.6	-1.3	.	-1.2	-1.0	.
Net lending	5.7	26.3	13.7	26.4	13.7	.	5.0	0.1	.
Equity transactions	4.8	-0.7	11.1	-0.4	10.6	.	0.0	0.0	.
Balance before financing	13.3	23.8	117.9	25.7	113.9	.	8.2	11.4	.
Pension funds and deferred interests	-9.9	-12.8	-9.3	-10.8	-5.5	.	-1.4	-1.3	.
Net borrowing	-2.9	-3.6	-49.6	-6.6	-52.1	.	-1.7	17.9	.
Short-term domestic	8.5	-6.0	-0.5	-6.0	-0.5	.	5.0	5.7	.
Long-term domestic	4.6	11.3	-1.4	8.5	-3.9	.	4.0	8.5	.
From abroad	-16.0	-8.9	-47.7	-9.1	-47.7	.	-10.6	3.7	.
Cash balance	0.5	7.4	58.9	8.3	56.3	.	5.1	27.9	.
Revenues and expenditures									
Total revenue	259.2	274.6	302.4	280.7	399.3	42.2	219.3	246.1	12.2
Personal income taxes, gross	55.1	58.0	65.0	62.6	69.0	10.3	43.1	48.2	11.8
Other income and property taxes	27.5	30.8	38.3	26.4	39.0	47.5	21.9	33.1	51.4
Value-added tax	76.3	80.9	96.4	91.1	111.2	22.1	72.5	80.7	11.2
Taxes on commodities & imports	14.6	16.9	20.3	20.8	26.3	26.6	17.4	18.7	7.4
Payroll taxes	23.4	26.3	28.4	27.8	32.3	16.2	21.1	24.3	15.3
Other taxes	23.6	25.9	27.3	32.1	37.1	15.5	24.6	25.5	3.5
Interest, dividends and rent	18.7	14.4	14.1	12.0	16.6	38.7	12.4	6.3	-48.9
Profits from asset sales	11.7	12.0	1.1	0.2	58.5	.	0.3	0.5	85.7
Other revenues	8.3	9.3	11.6	7.8	9.3	19.4	6.0	8.7	46.8
Total expenditures[2]	280.7	300.4	308.4	280.4	308.4	10.0	294.5	314.3	6.7
Expenditure on goods and services	110.1	138.9	145.1	136.1	154.1	13.2	143.6	163.3	13.7
Current transfers	129.5	124.4	130.5	111.5	120.9	8.4	115.1	123.8	7.6
Interest payments	15.3	14.2	13.4	13.1	17.7	35.2	18.5	9.6	-47.9
Maintenance	6.3	5.0	4.9	3.7	3.6	-0.4	3.5	4.0	13.7
Capital expenditures	19.6	18.0	14.4	16.1	12.1	-24.6	13.8	13.5	-1.7

1. First three columns on accruals basis as in the Treasury accounts but latest figures on cash basis. 2. The most recent expenditure figures are not comparable with earlier data due to changes in the presentation of the accounts.

Source: State Accounting Office, Treasury accounts.

Chart 21

Treasury borrowing 1991-2005

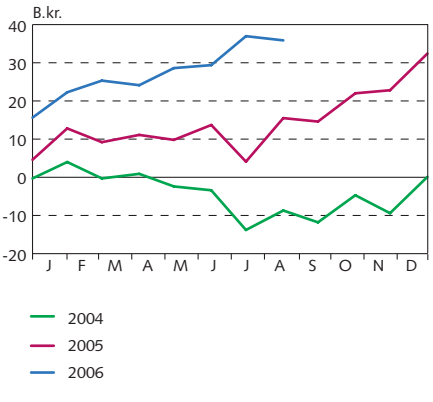


1. Including reduction in pension fund commitments and outstanding long-term interest.
Source: Treasury accounts 1990-2005.

Chart 22

Monthly Treasury balance 2004-2006

Cumulative from beginning of year excluding asset sales



Source: State Accounting Office.

Table 13 Public sector finances[1]

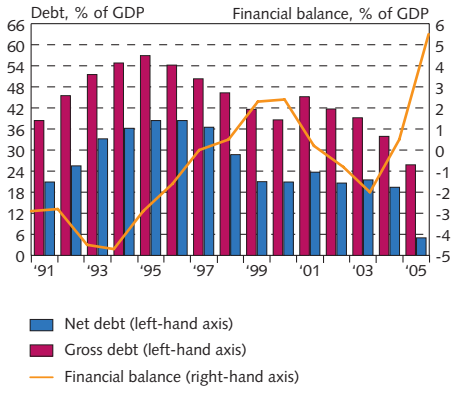
B.kr.	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*
Revenues	179.7	197.2	213.2	242.9	278.6	301.1	328.5	350.6	368.4	420.1	493.0
Expenditures	193.1	205.0	213.3	240.0	264.0	284.6	327.2	356.8	384.8	415.5	437.4
Financial balance	-13.4	-7.7	-0.1	2.8	14.6	16.6	1.3	-6.2	-16.3	4.6	55.6
Net debt[2]	174.6	187.2	192.0	167.7	131.6	141.8	181.2	165.7	178.5	177.6	50.8
Gross debt	267.6	274.4	279.4	280.5	271.5	278.0	354.6	340.7	341.6	326.6	275.9
Central government[3]											
Revenues	141.4	155.7	162.4	184.0	213.9	228.9	246.0	257.8	275.0	315.0	374.0
Expenditures	153.5	163.2	159.6	177.0	196.4	209.8	239.5	261.1	288.1	302.7	314.6
Financial balance	-12.1	-7.4	2.8	7.0	17.5	19.1	6.5	-3.3	-13.1	12.3	59.4
Net debt	150.7	163.9	167.7	138.3	103.5	110.5	150.7	133.0	142.3	134.3	31.5
Gross debt	232.6	239.2	241.6	237.8	226.0	228.5	298.3	281.1	277.2	253.0	196.1
Local government											
Revenues	40.9	46.9	55.5	62.9	69.9	77.7	89.5	99.8	104.3	114.9	125.9
Expenditures	42.3	47.4	58.5	67.2	72.8	80.3	94.8	102.8	107.6	122.7	129.9
Financial balance	-1.4	-0.4	-3.0	-4.3	-2.9	-2.6	-5.3	-3.0	-3.4	-7.8	-4.0
Net debt[2]	25.1	24.2	25.0	30.1	28.7	31.7	30.7	32.8	36.3	43.5	47.1
Gross debt	35.6	35.7	38.4	43.3	46.1	49.8	56.6	60.2	64.9	74.1	80.3
General government, % of GDP											
Revenues	39.6	40.4	40.5	41.5	44.4	44.3	43.0	43.6	44.4	45.9	48.7
Expenditures	42.5	42.0	40.5	41.0	42.1	41.9	42.8	44.3	46.3	45.4	43.2
Financial balance	-2.9	-1.6	0.0	0.5	2.3	2.4	0.2	-0.8	-2.0	0.5	5.5
Net debt[2]	38.4	38.4	36.5	28.7	21.0	20.9	23.7	20.6	21.5	19.4	5.0
Gross debt	58.9	56.3	53.1	47.9	43.2	40.9	46.4	42.3	41.1	35.7	27.3

1. According to the national accounts. 2. Treasury bank deposits lower net debt. 3. Including social security system.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart 23

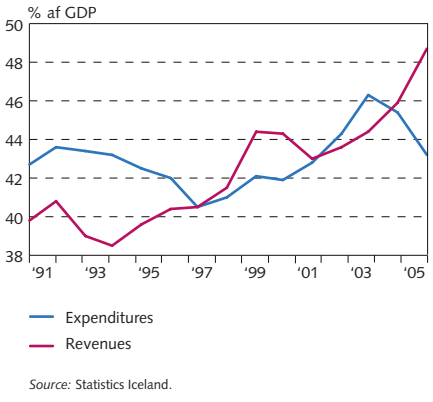
General government balance and debt 1991-2005



Sources: Statistics Iceland, Central Bank projections.

Chart 24

General government revenues and expenditures 1991-2005



Source: Statistics Iceland.

Table 14 Sectoral turnover[1]

	January-June			% ch. in previous year, Jan.-June[2]		
B.kr.	*2004*	*2005*	*2006*	*2004*	*2005*	*2006*
Industries, total	182.7	184.8	210	6.2	1.1	13.7
Industries, excluding fish processing	118.0	115.4	137	6.1	-2.2	18.8
Industries, excl. fish processing and power-intensive	95.1	95.0	108	6.4	0.0	13.8
Retail trade	96.1	104.9	114	6.4	9.1	8.8
Wholesale trade	179.3	202.7	230	16.2	13.1	13.2
Wholesale trade, excluding fuels	155.0	175.6	197	17.7	13.3	11.9
Construction	52.4	66.5	93	21.0	26.9	40.3
Total	791.7	848.9	964	12.0	7.2	13.5
Total, excluding fuels	724.0	746.0	931	13.4	9.9	16.9

1. Based on VAT reports. 2. Based on price-adjusted turnover, deflated by the consumer price index, in some cases excluding housing and petrol.
Sources: Statistics Iceland, Central Bank of Iceland.

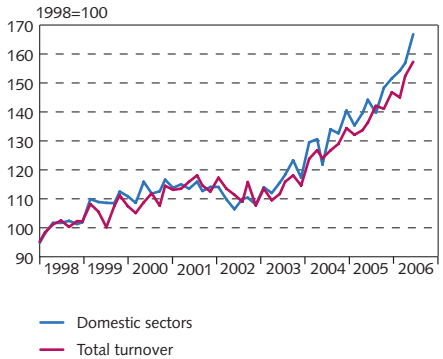
Table 15 Real effective exchange rate of the Icelandic króna[1]

	Annual averages					Q3	% change on previous year		
	2001	*2002*	*2003*	*2004*	*2005*	*2006*	*Q1 '06*	*Q2 '06*	*Q3 '06*
Real effective exchange rate (1980 = 100)									
based on relative consumer prices (CPI)	83.7	88.5	94.1	97.2	107.1	100.9	1.1	-6.9	-4.3
based on relative unit labour costs (ULC)	74.4	77.6	81.5	81.0	89.5	91.3	3.4	-4.1	8.4

% change on previous year	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*Prel. 2005*	*Forecast 2006*
Nominal effective exchange rate	1.5	0.0	0.2	-16.6	2.5	6.2	1.8	8.3	-6.5
Foreign consumer prices	1.6	1.6	2.3	2.1	1.7	2.0	1.8	2.3	2.3
Domestic consumer prices	1.7	3.4	5.1	6.6	4.8	2.1	3.2	4.0	4.9
Real exchange rate based on relative CPI	1.6	1.8	2.9	-13.0	5.7	6.3	3.2	10.2	-4.1
Foreign productivity	3.0	3.3	4.2	3.0	4.1	4.0	2.0	2.6	2.2
Domestic productivity	6.2	1.3	2.2	2.0	0.2	4.1	6.7	3.2	2.3
Foreign wages	3.0	3.3	4.2	3.0	4.1	4.0	2.0	2.6	2.2
Domestic wages	7.1	5.5	5.6	8.4	5.4	5.5	4.5	7.0	11.0
Real exchange rate based on relative ULC	1.0	1.7	0.9	-13.4	4.3	5.0	-0.6	10.4	0.4

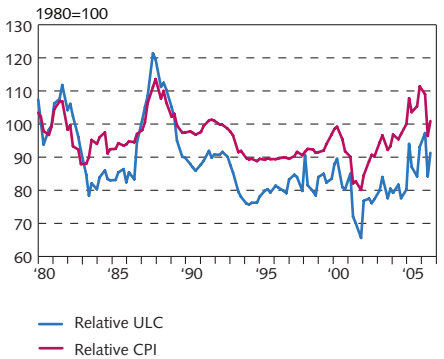
1. Latest values are preliminary and estimates.
Source: Central Bank of Iceland.

Chart 25
Turnover volume 1998/1 - 2006/3
Two-month periods at constant prices, seasonally adjusted



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 26
Quarterly real effective exchange rate of the Icelandic króna Q1/1980 - Q3/2006



Latest values are preliminary.
Source: Central Bank of Iceland.

Table 16 Real estate market and asset prices

					1-mo. % change		12-mo. % change		
Real estate market[1]	*2003*	*2004*	*2005*	*July '06*	*Aug. '06*	*Sep. '06*	*Sep. '04*	*Sep. '05*	*Sep. '06*
Residential housing price index[2]	177.7	200.5	271.3	313.1	0.4	0.4	12.1	38.9	9.6
Apartment housing price index[2]	160.7	179.9	201.3	304.0	0.5	0.5	10.9	36.1	8.9
Fish quota prices (period averages, kr./kilo)									
Price of long-term cod quota (kr./kilo)	1,223	1,126	1,363	1,895	3.3	1.9	-10.4	32.7	32.9
Price of short-term cod quota (kr./kilo)	117	119	124	155	-	-	-2.5	6.0	25.0

Equity market	At end of year				Sep. 29,	% change to Sep. 29, 2006			
Equity prices, Dec. 31, 1997 = 1,000	*2002*	*2003*	*2004*	*2005*	*2006*	*1 mo.*	*3 mo.*	*6 mo.*	*12 mo.*
ICEX-15	1,352.0	2,114.3	3,359.6	5,534.4	6,335.8	5.8	15.7	7.6	36.8
ICEX-MAIN (Main List index)	1,436.2	2,075.2	3,167.4	5,107.5	5,800.2	5.9	15.4	6.3	35.7
ICEX industry indices, Dec. 31, 2004 = 100[3]									
Fisheries (ICEXFISH)	107.3	100.0	120.7	130.1	130.1	3.4	8.4	7.9	4.2
Finance and insurance (ICEX40)	.	.	.	189.6	189.6	4.4	14.7	5.4	.
Consumer staples (ICEX30)	.	.	.	152.7	152.7	5.3	20.0	10.8	.
Health care (ICEX35)	.	.	.	171.4	171.4	2.8	8.1	13.0	.

1. Changes are based on 3-month moving averages. 2. Greater Reykjavík Area (GRA). January 1994=100. 3. New industry indices were introduced on April 1, 2005. Of the previous indices, only the fisheries index is still calculated, based on its initial value of 100 on December 31. 1997.

Sources: Federation of Icelandic Fishing Vessel Owners, Housing Financing Fund, Iceland Stock Exchange (ICEX), Land Registry of Iceland, Quota Exchange, Central Bank of Iceland.

Table 17 Households and businesses: assets and debt

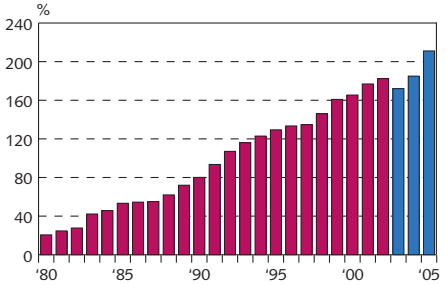
							Preliminary data		% change
B.kr. unless otherwise stated	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*'04-'05*
Household assets in residential housing and cars[1]	724.1	842.6	952.9	1,043.8	1,108.2	1,235.3	1,448.7	1,789.2	23.5
Assets in pension funds	398.2	507.3	557.3	640.1	664.6	805.1	964.6	1,176.1	21.9
Household debt with the credit system[2]	442.6	522.0	613.8	710.9	758.6	772.2	877.0	1,082.5	23.8
Household debt as % of disposable income[2]	146.1	160.9	165.4	176.9	182.4	172.0	183.5	214.7	17.4
Businesses' debt with the credit system[2]	509.4	668.8	801.1	962.3	972.6	1,171.0	1,457.7	2,172.2	50.0
Debt of firms in fisheries sector	139.7	160.3	165.2	195.5	191.9	185.5	208.4	216.0	3.7

1. National Economic Institute national wealth estimates. At average annual prices. 2. Due to reclassification of lending within the credit system, household debt is 50.3 b.kr. lower than would otherwise have been the case at the end of 2003 and business sector debt 27.9 b.kr. lower, compared with the former classification. Year-on-year changes are based on the former classification.

Source: Central Bank of Iceland.

Chart 27

Household debt as percentage of disposable income 1980-2005[1]

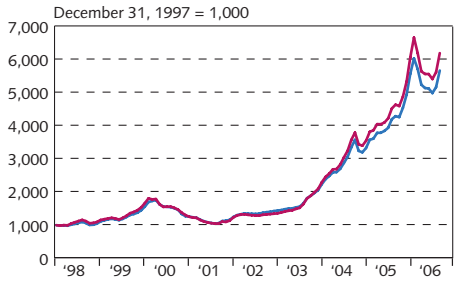


1. New classification from 2003 (blue columns). See footnote 2 to Table 17. Latest values are preliminary.
Source: Central Bank of Iceland.

Chart 28

Equity prices 1998-2006

Monthly averages January 1998 - September 2006



Source: Iceland Stock Exchange (ICEX).

Table 18 Businesses' financial accounts

Accounts of publicly listed companies[1]	*Jan.-Dec.*		*% of turnover*		*Jan.-June*		*% of turnover*	
All amounts in b.kr.	*2004*	*2005*	*2004*	*2005*	*2005*	*2006*	*2005*	*2006*
Profit before financial expense & depreciation	31.5	48.8	12.6	11.3	33.8	51.9	10.8	10.2
Fisheries	2.6	2.5	19.3	16.2	5.1	7.1	23.8	31.4
Transport	8.9	13.2	8.7	7.4	108.0	12.0	8.9	7.2
ICT	3.9	4.9	12.2	9.7	2.5	2.8	10.1	6.4
Industry and manufacturing	16.2	24.7	19.4	15.9	13.2	23.1	22.5	15.5
Profit after taxes	17.1	36.4	6.9	8.5	9.6	4.1	3.1	0.8
Fisheries	1.8	0.9	13.6	6.4	2.6	-3.6	12.3	-16.0
Transport	5.8	20.1	5.7	11.7	2.7	-0.6	2.2	-0.3
ICT	1.2	1.6	3.9	3	0.6	-1.8	2.6	-4.3
Industry and manufacturing	9.2	11.4	11	3.3	4.3	7.9	7.4	5.3
Equity ratio	35.8	36	.	.	34.9	30.0	.	.
Return on equity	11.9	8.7	.	.	6.4	2.1	.	.
Sample size at end of period	18	18	18	18	23	23	23	23

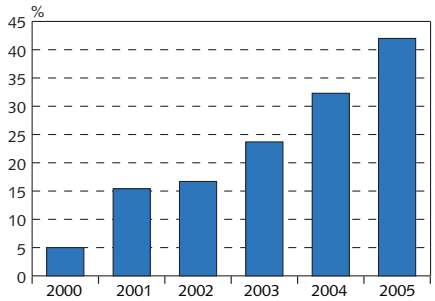
Accounts of commercial banks[2]							*% change*	
All amounts in b.kr.	*2001*	*2002*	*2003*	*2004*	*2005*	*Q2/2006*	*03-04*	*04-05*
Net interest income	24.8	23.9	30.5	45.8	79.1	66.9	50.1	72.8
Other operating income	8.2	15.6	40.9	66.2	120.2	81.5	61.9	81.6
Net operating income	33.0	39.5	71.4	112.0	199.3	148.4	56.9	78.0
Operating expenses	20.7	22.8	39.1	52.4	71.4	57.7	34.2	36.2
Provisions for bad and doubtful debts	5.7	7.3	11.4	11.4	10.5	7.7	0.3	-7.9
Taxes	0.5	1.7	2.5	8.2	21.3	14.0	222.1	160.2
Profit	6.0	7.7	16.3	42.9	95.2	72.8	163.3	121.6
Total assets at end of period	816.7	836.1	1,450.8	2,968.9	5,418.5	7,386.9	104.6	82.5
Stockholders' equity at end of period	48.8	52.5	97.7	246.1	400.9	503.6	151.8	62.9
% at end of period								
Return on equity	15.4	16.7	23.7	32.3	42.0	38.0	.	.
Cost ratio[3]	62.9	57.6	54.8	46.8	35.8	39.0	.	.
Capital ratio	11.2	11.4	12.0	12.9	12.6	13.3	.	.
Capital ratio excluding subordinated loans (Tier 1)	8.3	8.7	9.3	10.1	10.2	9.8	.	.

1. Companies listed on Iceland Stock Exchange (ICEX), excluding the finance and insurance sector. Two-year paired comparison. 2. The three largest commercial banks. Their accounts for 2005 and 2004 are compiled in accordance with IFRS (International Financial Reporting Standards). 3. Operating expenses as a percentage of net operating income.

Sources: Financial Supervisory Authority (FME), Central Bank of Iceland.

Chart 29

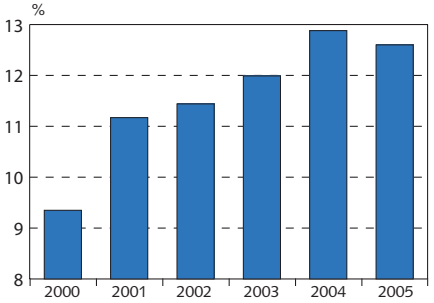
Commercial banks' return on equity[1]
2000-2005



1. The three largest commercial banks. Their accounts for 2005 and 2004 are compiled in accordance with IFRS (International Financial Reporting Standards).
Source: Banks' annual reports.

Chart 30

Commercial banks' capital ratio[1]
2000-2005



1. The three largest commercial banks. Their accounts for 2005 and 2004 are compiled in accordance with IFRS (International Financial Reporting Standards).
Source: Banks' annual reports.

Table 19 International comparison

Based on latest monthly data for each region	*EU-25*	*EMU-12*	*USA*	*UK*	*Japan*	*Sweden*	*Norway*	*Finland*	*Denmark*	*Iceland*
Inflation in previous 12 months	1.9	1.6	2.1	3.6	0.6	1.5	2.6	1.5	1.5	7.2
Unemployment[1]	8.0	7.9	4.6	5.5	4.2	4.9	3.4	7.9	4.2	1.3
Economic growth[2]	2.2	2.7	2.9	2.8	2.5	4.8	2.1	6.6	3.6	2.7
Long-term interest rates (nominal yield)[3]	.	3.7	4.6	4.9	1.2	3.6	4.1	3.7	3.7	9.2
Long-term interest rates (real yield)[3]	.	.	2.7	1.9	.	1.2	.	.	.	4.3
Short-term interest rates[4]	3.4	3.3	5.1	5.0	0.4	2.8	3.4	3.5	3.6	13.7
In 2004 (unless otherwise stated):										
GDP per capita based on PPP, in thous. US$[5]	.	27.1	37.6	29.9	28.0	29.0	37.1	28.6	30.7	29.4
Gross saving, % of GDP[6]	.	.	13.0	14.2	26.4	22.9	37.1	23.9	23.8	12.1
Gen. government financial balance, % of GDP	.	-2.4	-3.8	-3.2	-5.2	2.7	15.8	2.4	4.0	3.0
Gen. government gross debt, % of GDP	.	77.5	64.1	47.2	172.1	59.3	53.9	48.6	43.0	28.0
Gen. government expenditure, % of GDP	.	47.7	36.6	45.1	36.9	56.4	42.9	50.8	53.0	44.0
Current account balance, % of GDP	0.3	-0.2	-6.4	-2.6	3.6	6.1	16.8	2.7	3.2	-16.5

1. Seasonally adjusted. 2. Annual GDP growth based on latest quarterly figures. Seasonally adjusted except for Iceland. 3. Five-year Treasury bonds. Figures are omitted where price indexation is not applied. 4. Three-month T-bill rates. 5. 2003. Converted to US dollars at an exchange rate that eliminates the difference in price levels between the countries. 6. 2002 for Japan and 2003 for USA.

Sources: EcoWin, Eurostat, OECD.

Table 20 International economic developments

							Prelimary	*Forecast*	
Annual economic growth (%)[1]	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*	*2007*
World	3.7	4.9	2.6	3.1	4.1	5.3	4.9	5.1	4.9
Euro area	3.0	3.9	1.9	0.9	0.8	2.1	1.3	2.6	1.9
United Kingdom	3.0	3.8	2.4	2.1	2.7	3.3	1.9	2.6	2.4
United States	4.4	3.7	0.8	1.6	2.5	3.9	3.2	3.4	2.6
Japan	-0.2	2.9	0.4	0.1	1.8	2.3	2.6	2.8	2.2
Other emerging market and developing countries[2]	4.8	5.2	1.7	3.2	2.5	4.0	3.1	3.6	3.3
Annual growth in world trade (%)	5.7	12.1	0.3	3.4	5.4	10.4	7.3	8.0	7.5
Consumer price inflation (%)									
Euro area	1.1	2.1	2.3	2.2	2.1	2.1	2.2	2.3	2.2
United Kingdom	2.2	1.3	2.2	3.1	3.1	2.6	2.2	2.3	2.2
United States	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.5	2.5
Japan	-0.3	-0.4	-0.8	-0.9	-0.3	0.0	-0.6	0.3	0.5
Unemployment, % of labour force									
Euro area	9.2	8.2	7.8	8.3	8.7	8.9	8.6	7.9	7.6
United Kingdom	6.0	5.5	5.1	5.2	5.0	4.8	4.8	5.3	5.1
United States	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.7	5.0
Japan	4.7	4.7	5.0	5.4	5.3	4.7	4.4	4.1	3.8
General government financial balance, % of GDP[3]									
Euro area	-1.3	0.0	-1.9	-2.5	-3.0	-2.7	-2.9	-2.7	-2.5
United Kingdom	1.1	3.8	0.7	-1.7	-3.3	-3.2	-3.1	-3.0	-3.2
United States	0.9	1.6	-0.4	-3.8	-5.0	-4.7	-3.7	-4.2	-3.9
Japan	-7.2	-7.5	-6.1	-7.9	-7.7	-6.5	-6.5	-6.0	-6.0
Long-term interest rates[4]									
Euro area	4.6	5.4	5.0	4.9	4.1	4.1	3.4	3.7	4.1
United Kingdom	5.1	5.3	4.9	4.9	4.5	4.9	4.5	4.5	4.7
United States	5.6	6.0	5.0	4.6	4.0	4.3	4.3	4.7	4.8
Japan	1.7	1.7	1.3	1.3	1.0	1.5	1.4	1.8	2.3

1. Real GDP percent change between years. 2. In May 2004, the IMF revised its world economic classifications into two categories of countries. The category "Other emerging market and developing countries" comprises 146 countries. 3. General government, e.g. central government, local governments and social security transactions. 4. Yields on ten-year Treasury bonds.

Sources: Consensus Forecasts, International Monetary Fund, OECD.

Table 21 Historical economic indicators

	Consumer prices [1]		Króna effective exchange rate			Interest rates (%)			Money and credit			Ratio of gr. reserves to merch. imports[5]	External debt, % of GDP[6]	Growth of real GDP (%)
				Real exchange rate[3]			Banks' secured lending (real yield)		% change over year					
	Consumer price index	CPI inflation (%)	Nominal exchange rate[2]	Relative CPI	Relative ULC	Gov. bonds average yield[4]	Non-indexed	Indexed	M3	DMBs' lending	Credit system lending			
1977	2.4	30.3	9.7	113.1	114.2	3.5	-9.5	.	43.9	40.5	41.8	2.0	37.6	8.8
1978	3.5	44.0	13.9	105.3	106.6	3.3	-13.4	.	48.7	47.3	62.8	2.6	39.2	6.0
1979	5.0	44.5	18.7	100.0	100.7	3.5	-15.4	.	55.9	58.1	46.4	2.5	39.7	4.9
1980	8.1	61.8	25.9	100.0	100.0	3.5	-8.3	2.3	65.4	66.4	71.1	2.4	35.9	5.7
1981	12.2	50.8	34.7	104.4	106.3	3.2	-1.7	2.5	70.5	72.2	54.1	3.0	36.5	4.3
1982	18.4	51.0	54.5	95.8	102.2	3.5	-9.4	2.9	58.0	92.0	100.2	2.1	46.4	2.2
1983	33.9	84.2	100.0	90.3	84.3	3.8	-14.2	3.0	78.7	85.6	82.9	2.5	57.2	-2.2
1984	43.7	29.2	116.3	94.7	83.4	7.0	3.4	5.5	33.4	43.0	40.2	2.1	60.2	4.1
1985	57.9	32.4	148.7	93.2	84.5	6.9	-2.3	5.0	47.6	29.7	35.2	2.8	63.6	3.3
1986	70.2	21.3	171.0	95.0	86.4	8.5	4.3	5.2	35.0	19.1	20.1	3.6	56.5	6.3
1987	83.4	18.8	177.3	104.1	109.0	8.7	4.7	7.7	35.2	42.1	31.4	2.4	49.4	8.5
1988	104.6	25.4	202.6	109.4	113.4	8.7	11.8	9.2	24.0	37.2	34.0	2.4	51.3	-0.1
1989	126.7	21.1	254.7	100.6	98.1	7.4	6.5	7.8	27.2	25.2	33.8	3.0	56.8	0.3
1990	145.5	14.8	283.7	97.3	87.6	7.0	9.3	8.0	14.9	11.0	12.5	3.3	55.2	1.2
1991	155.4	6.8	283.6	99.9	89.6	8.1	10.0	9.2	14.4	11.6	15.4	3.2	56.0	-0.2
1992	161.2	3.7	285.0	99.8	90.8	7.4	11.8	9.3	3.8	5.3	11.8	4.0	58.8	-3.4
1993	167.8	4.1	308.8	94.4	82.7	6.7	11.5	9.1	6.5	5.0	11.1	4.3	66.7	1.3
1994	170.3	1.5	324.8	89.3	76.1	5.0	9.5	7.9	2.3	-1.3	4.5	2.6	63.4	3.6
1995	173.2	1.7	322.3	89.4	79.4	5.6	10.1	8.7	2.2	0.0	5.9	2.4	63.4	0.1
1996	177.1	2.3	322.9	89.7	80.3	5.5	10.5	8.9	6.8	11.8	9.3	3.0	62.5	4.8
1997	180.3	1.8	318.7	90.5	82.9	5.3	11.1	9.0	8.7	12.7	11.8	2.6	64.5	4.9
1998	183.3	1.7	313.6	91.9	82.5	4.7	11.8	8.8	15.1	30.3	15.1	2.2	69.5	5.8
1999	189.6	3.4	313.1	93.6	83.7	4.4	8.0	8.6	17.1	22.8	17.3	2.6	82.0	4.0
2000	199.1	5.0	313.3	96.2	84.7	5.1	12.7	9.5	11.2	26.2	17.2	2.1	101.5	4.4
2001	212.4	6.7	376.3	83.7	73.2	5.1	9.4	10.2	14.9	13.4	19.2	2.1	118.9	3.6
2002	222.5	4.8	365.2	88.5	76.9	5.2	13.7	10.1	15.3	0.9	3.2	2.5	122.5	-0.3
2003	227.3	2.2	343.3	94.1	80.5	4.4	9.4	9.1	17.5	14.8	11.8	3.5	142.7	2.7
2004	234.2	3.1	336.3	97.2	79.7	3.9	8.3	8.0	15.0	39.5	19.7	3.6	198.8	7.7
2005	243.6	4.0	301.8	107.1	89.6	3.7	10.7	7.2	23.2	51.5	30.8	2.9	293.8	7.5

1. Annual averages (May 1988=100) and changes between years. 2. Annual averages. Exchange rate of the króna against a trade-weighted average of foreign currencies. 1983=100. 3. 1980=100. ULC=unit labour cost. 4. Annual average yield of indexed Treasury bonds of all maturities. Yields on Iceland Stock Exchange from 1987. Before that primary market yields. 5. Gross foreign exchange reserves at end of period as a ratio of the average monthly value of merchandise imports. Calculated at fixed SDR exchange rates. 6. Gross debt. Direct investment capital excluded.

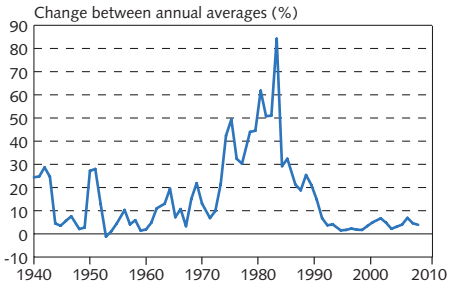
Table 21 (continued) Historical economic indicators

	Components of GDP (% change from previous year)			External trade (% change from previous year)				General government (% of GDP)[7]			Labour market (% of labour force)		Wages (% change from previous year)	
	Private consump-tion	Gross fixed cap. formation	National expendi-ture	Goods & services (volume changes) Exports	Goods & services (volume changes) Imports	Terms of trade	Curr. acc. balance (% of GDP)	Financial balance	Revenues	Expen-ditures	Unem-ployment	Labour particip.	Real wages[8]	Real disposable income
1977	12.9	11.5	15.0	8.9	20.6	1.2	-2.3	-0.2	30.5	30.7	0.3	72.5	.	15.5
1978	9.0	-5.5	2.1	15.2	3.7	1.8	1.2	0.1	31.0	30.9	0.3	73.6	.	8.5
1979	2.8	-1.8	3.4	6.3	2.5	2.6	-0.7	0.9	32.4	31.4	0.4	73.0	.	2.0
1980	3.4	13.9	5.9	2.7	3.0	3.9	-2.0	1.3	35.1	33.8	0.3	74.1	.	1.1
1981	6.2	1.2	5.6	3.2	7.1	5.8	-4.1	1.3	36.3	35.0	0.4	76.8	0.7	5.4
1982	5.0	0.1	5.0	-8.9	-0.6	9.0	-8.0	1.7	37.4	35.7	0.8	77.6	1.7	2.2
1983	-5.6	-12.7	-8.6	11.0	-9.7	16.0	-1.9	-2.0	35.6	37.6	1.0	77.4	-16.7	-12.5
1984	3.7	9.4	6.4	2.4	9.2	20.4	-4.6	2.2	36.6	34.4	1.3	77.6	-3.1	-2.5
1985	4.2	1.0	2.7	11.1	9.4	27.1	-3.9	-1.6	35.2	36.9	0.9	79.3	1.2	10.8
1986	6.9	-1.6	4.5	5.9	1.0	33.2	0.5	-4.0	35.3	39.3	0.7	80.9	5.7	9.5
1987	16.2	18.8	15.7	3.3	23.3	39.5	-3.4	-0.8	35.5	36.3	0.4	84.1	9.0	25.8
1988	-3.8	-0.2	-0.6	-3.6	-4.6	48.9	-3.4	-2.0	39.2	41.2	0.6	80.1	2.2	-2.7
1989	-4.2	-7.9	-4.4	2.9	-10.3	60.6	-1.3	-4.5	39.1	43.6	1.7	78.7	-9.1	-9.4
1990	0.5	3.0	1.5	0.0	1.0	70.3	-2.1	-3.3	38.8	42.1	1.8	77.5	-4.9	-4.6
1991	3.0	2.6	3.5	-5.9	5.3	75.4	-4.0	-2.9	40.5	43.5	1.5	76.2	1.4	2.1
1992	-3.2	-10.4	-4.6	-2.0	-6.0	78.2	-2.4	-2.8	41.6	44.5	3.1	75.5	-0.8	-2.7
1993	-4.6	-9.8	-2.9	6.5	-7.5	80.5	0.7	-4.5	39.7	44.3	4.4	75.3	-2.6	-7.6
1994	2.9	-0.2	1.7	9.3	3.8	82.6	1.9	-4.8	39.3	44.1	4.8	75.4	-0.3	0.0
1995	2.2	-1.7	2.2	-2.3	3.6	84.7	0.7	-3.0	40.4	43.4	5.0	75.7	2.8	2.7
1996	5.7	25.0	6.8	9.9	16.5	87.9	-1.8	-1.6	41.3	42.9	4.4	76.4	4.0	4.4
1997	6.3	9.2	5.8	5.6	8.0	89.8	-1.8	0.0	40.5	40.6	3.9	76.6	3.6	8.5
1998	10.2	32.6	13.3	2.5	23.4	92.6	-6.8	0.5	41.6	41.1	2.8	77.1	7.6	8.6
1999	7.9	-5.1	4.2	3.9	4.4	95.7	-6.8	2.3	44.3	42.0	1.9	77.3	3.3	6.8
2000	4.2	12.0	6.0	4.3	8.6	100.0	-10.2	2.4	44.4	42.0	1.3	77.3	1.6	5.4
2001	-2.9	-4.1	-2.4	7.4	-9.1	109.3	-4.4	0.2	42.9	42.8	1.4	77.5	2.0	1.4
2002	-1.6	-15.8	-2.8	3.8	-2.6	114.3	1.6	-0.8	43.8	44.6	2.5	77.3	2.3	-0.1
2003	6.1	13.4	6.1	1.6	10.8	116.6	-4.8	-2.0	44.5	46.5	3.4	76.6	3.4	5.2
2004	6.8	29.2	9.9	8.4	14.4	119.9	-9.9	0.3	45.6	45.3	3.1	76.3	1.6	3.4
2005	11.9	34.5	15.8	7.1	28.9	123.0	-16.1	3.0	47.0	44.0	2.1	76.0	2.6	8.1

7. Central and local governments and the social security system. 8. Deflated by consumer prices.

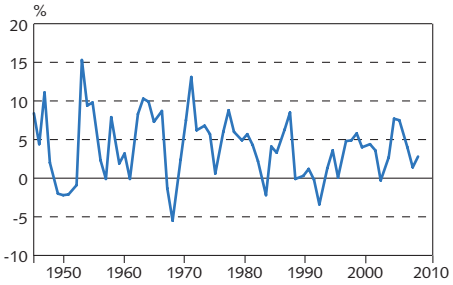
Sources: Directorate of Labour, Iceland Stock Exchange, Ministry of Finance, Statistics Iceland, Central Bank of Iceland.

Mynd 31
Consumer price inflation 1940-2008[1]



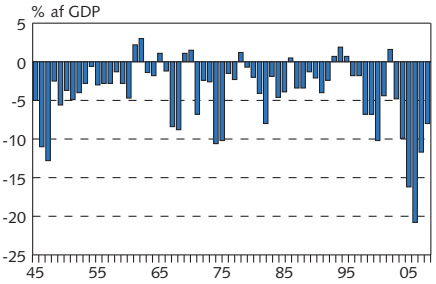
1. Central Bank forecast for 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 32
Economic growth 1945-2008[1]
Change in real GDP between years



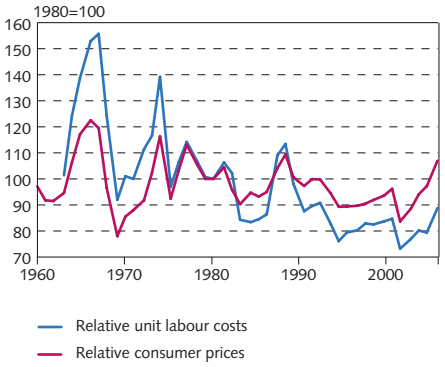
1. Preliminary 2005. Forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 33
Current account balance 1945-2008[1]



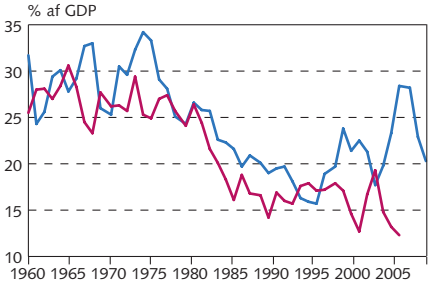
1. Preliminary 2005. Forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 34
Real effective exchange rate of the Icelandic króna 1960-2005[1]



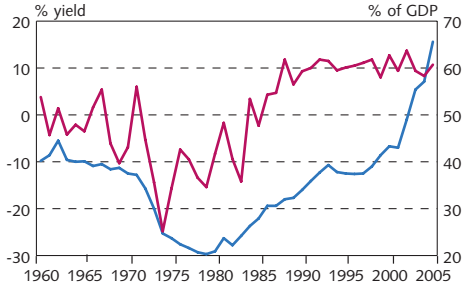
1. Preliminary 2005.
Source: Central Bank of Iceland.

Chart 35
Gross national saving and fixed capital formation 1960-2008[1]



1. Preliminary 2005. Forecast 2006-2008.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 36
Real yield and broad money 1960-2005
Real yield on non-indexed bank loans and M3 as % of GDP



Latest data are preliminary.
Source: Central Bank of Iceland.

Table 22 Structural indicators for the Icelandic economy

I Population and labour force (thous.)	*1970*	*2005*
Population at end of year	204.8	299.9
under 16 years of age	70.6	70.2
16-74 years of age	127.3	212.8
above 74 years of age	7.0	16.9
Average population growth in previous 5 years (%)	1.1	1.1
Labour force (thous. man-years)	82.7	152.1
Males	54.7	87.7
Females	28.0	64.5

II Employment by industry (%)	*1970*	*2001*
Agriculture	12.4	3.3
Fisheries	6.6	3.9
Fish processing	7.8	5.1
Manufacturing industry	15.2	12.1
Construction, electricity and water supply	11.3	10.3
Wholesale and retail trade, restaurants & hotels	13.5	16.7
Transport, storage and communication	8.4	6.7
Financial, insurance, real estate, business services	4.0	9.5
Producers of government services	12.4	18.9
Other services	8.3	13.4

III Merchandise exports		
Distribution by category (%)	*1970*	*2005*
Marine products	77.1	56.7
Manufactures	18.4	34.9
thereof aluminium and ferro-silicon	13.2	21.6
Agricultural products	3.4	1.9
By regions (%)	*1970*	*2005*
United States	30.0	8.8
European Union	52.8	74.6
Other	17.2	16.6

IV National income and output	*1970*	*2005*[1]
Gross domestic product (GDP), b.kr.	0.4	1,012.2
GDP, billion USD	0.5	16.1
National income per capita, thous. USD	2.0	52.5
GDP per capita (PPP) thous. USD[2]	2.7	36.4
Gross capital formation, % of GDP	25.3	28.4
Gross national saving, % of GDP	26.1	12.3
Net national saving, % of net national product	13.8	0.3
Export of goods and services, % of GDP	46.4	32.0
Public consumption, % of GDP	12.7	24.4
Gen. government total expenditures, % of GDP[3]	28.9	45.3
Total taxes, % of GDP[3]	28.9	38.9

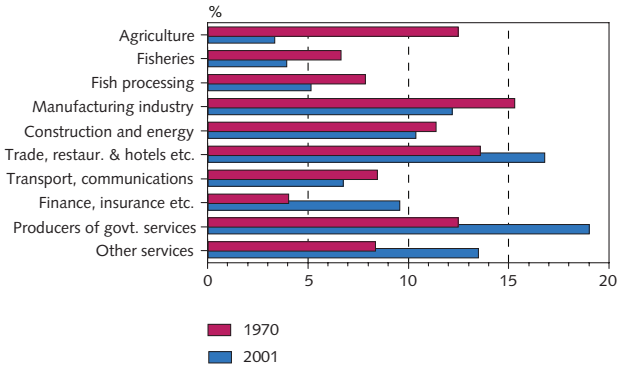
V Capital and debt		
% of GDP unless otherwise stated	*1970*	*2005*[1]
Fixed assets, % of GDP	3.4	3.4
Fixed assets, billion USD	1.8	46.0
Net external debt	20.1	161.4
Debt service, % of export revenue	11.3	71.9
General government total debt	13.0	35.2
General government net debt	-2.3	21.6
Broad money (M3)	37.5	65.6
Credit system total lending	484.8	342.4
to industries	53.6	215.7
to households	21.2	107.5
Market capitalisation of listed equities	.	177.4

1. Preliminary data. If preliminary data for 2005 are not available another year is stated. 2. Converted to US dollars at an exchange rate that eliminates the difference in price levels between the countries. 3. National accounts basis.

Sources: Iceland Stock Exchange, National Economic Institute, OECD, Statistics Iceland, Central Bank of Iceland.

Chart 37

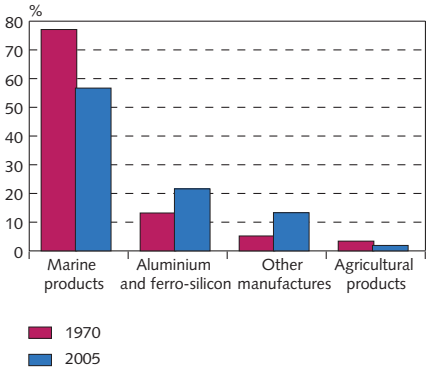
Employment by industry in 1970 and 2001



Source: Statistics Iceland.

Chart 38

Merchandise exports by category 1970 and 2005



Source: Statistics Iceland.

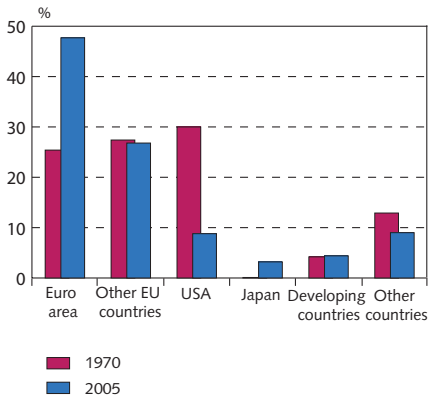
Table 23 Merchandise exports and imports by regions[1]

	Share of total (%)						B.kr.	
						Jan.-Sep.		Jan.-Sep.
Merchandise exports, fob	*1970*	*1980*	*1990*	*2000*	*2005*	*2006*	*2005*	*2006*
European Union	52.8	52.3	70.7	67.4	74.6	72.7	144.9	125.9
Euro area	25.4	30.2	37.6	42.3	47.7	50.3	92.8	87.2
Other EU countries	27.4	22.0	33.1	25.1	26.8	22.3	52.1	38.7
United Kingdom	13.2	16.5	25.3	19.3	17.8	15.6	34.6	27.1
Other Western European countries	2.8	2.3	3.4	7.8	5.9	8.2	11.5	14.2
Eastern Europe and former Soviet Union[2]	9.6	8.8	2.9	1.4	1.1	2.3	2.1	4.0
Russia	6.8	5.4	2.5	0.4	1.0	2.2	2.0	3.8
United States	30.0	21.6	9.9	12.2	8.8	7.5	17.1	13.1
Japan	0.1	1.5	6.0	5.2	3.2	2.5	6.3	4.4
Other OECD countries	0.5	0.6	0.5	2.0	1.5	1.2	2.9	2.1
Developing countries	4.2	12.9	5.5	3.0	4.4	5.1	8.6	8.8
Other countries	0.0	0.0	1.1	1.0	0.4	0.4	0.9	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	194.4	173.2
Merchandise imports, cif								
European Union	64.9	58.0	59.9	57.0	61.6	60.7	193.5	181.3
Euro area	32.0	33.2	35.5	33.5	33.7	34.4	105.8	102.8
Other EU countries	33.0	24.8	24.4	23.6	27.9	26.3	87.6	78.5
United Kingdom	14.3	9.5	8.1	9.0	5.8	5.3	18.1	15.9
Other Western European countries	5.4	8.1	5.2	9.7	9.5	10.5	29.7	31.2
Eastern Europe and former Soviet Union[2]	10.4	10.9	6.5	5.7	0.9	0.6	2.9	1.7
Russia	7.2	9.7	5.0	1.8	0.5	0.4	1.5	1.1
United States	8.2	9.4	14.4	11.0	9.3	7.0	29.3	20.8
Japan	2.9	4.0	5.6	4.9	5.3	5.1	16.5	15.2
Other OECD countries	0.4	5.8	3.7	4.5	3.8	5.3	11.8	15.8
Developing countries	7.2	2.7	3.1	5.6	8.6	9.9	26.9	29.5
Other countries	0.6	1.1	1.4	1.5	1.0	1.0	3.2	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	313.9	298.5

1. In data prior to the year 2000, country groups are based on the year 2000. 2. The eight Eastern European countries that acceded to the European Union in 2004 are included with the EU as of 2004 and removed from this category at the same time.

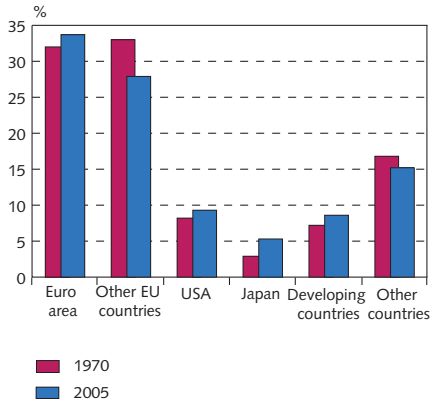
Source: Statistics Iceland.

Chart 39
Merchandise exports by region
1970 and 2005



Source: Statistics Iceland.

Chart 40
Merchandise imports by region
1970 and 2005



Source: Statistics Iceland.