Economic and monetary developments and prospects[1]

Slow disinflation process will delay policy rate cuts

Inflation has declined more slowly than the Central Bank of Iceland forecast at the end of March 2007, even though the real exchange rate has been higher than expected at that time. Underlying inflation – i.e. excluding volatile items and changes in public services prices, indirect taxes and mortgage rate payments – has decreased by much less than headline CPI inflation over the past year. At the beginning of June, underlying inflation was estimated at above 6%, while headline inflation was 4%. Current indicators of demand are also difficult to interpret, partly due to irregularities stemming from the strong base effect of exchange rate movements a year before. In spite of the tight monetary stance, economic activity appears to have picked up in recent months. After a slight dip shown in national accounts figures for Q1/2007, private consumption seems to have rallied in Q2. Rapid employment growth also indicates brisker first-quarter activity than preliminary data imply. The real estate market has been buoyant as well, fuelled by substantial growth in both disposable income and credit supply in recent months. Favourable global conditions have bolstered high-yielding currencies. In real terms the exchange rate of the króna is very high, especially if measured in terms of relative unit labour costs. This increases the likelihood that the króna will depreciate in the long run, as does the wide current account deficit. Although the current account deficit proved much smaller in Q1/2007 than forecast in March, it appears unlikely to end up much lower for the year as a whole. Uncertainties about the balance on income make the underlying current account trend difficult to discern. The inflation outlook one year ahead has deteriorated from the Central Bank's March 2007 forecast. In order to bring inflation to target within an acceptable horizon, it now appears necessary to keep the policy rate unchanged for longer than was expected in March.

I Inflation outlook and monetary policy

At the beginning of June inflation measured 4%, after slowing down in recent months. However, much of the disinflation has been driven by changes in indirect taxes and other temporary factors that are normally ignored in monetary policy decision-making. Underlying inflation is considerably higher, at above 6%. This is a high rate of inflation given the strong appreciation of the króna over the past few months, and significantly higher than in the last Central Bank forecast in March. The outlook for 2008 is that inflation will remain some way above the March 2007 forecast, even if the policy rate is not cut as quickly as assumed then. Providing that the policy rate is kept high for longer than was assumed in March, however, the long-term inflation outlook is broadly in line with that forecast, as described below.

Unwinding of imbalances will be delayed for a while

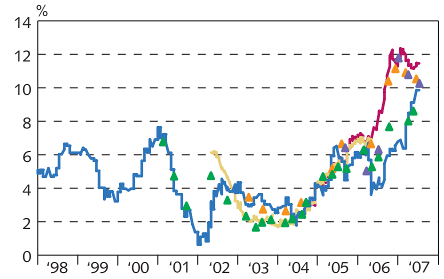
Recent economic indicators are difficult to interpret. The national accounts show zero output growth in Q1/2007, in spite of hefty growth of exports. There was a contraction in private consumption and, in particular, investment. However, to a large extent this outcome is the result of volatile items such as aircraft transactions. First-quarter figures must also be qualified by a strong base effect, i.e. the surge in growth a year before when private consumption rose by 11.5% year-on-year and investment by 36%. In a long-term context,

1. This article uses data available on July 3, 2007 but the forecast is based on data until June 19.

therefore, domestic demand is still buoyant. It is also important to qualify the national accounts data with other indicators, e.g. developments in the labour and housing markets, which indicate that demand growth in Q1 was stronger than suggested by the national accounts and gained pace in Q2. Wage drift appears to be increasing, despite a heavy inflow of migrant labour. Also, the slow rate of disinflation over recent months, in spite of the strengthening of the króna, also signals robust demand, which may well have been greater in 2006 than preliminary figures from Statistics Iceland indicate.

Most of the above indicators would seem to imply that the adjustment described in the last *Monetary Bulletin* in March will be delayed for a while longer. The question is whether the recent upswing is driven by temporary factors such as the general election in May and global market conditions, or whether the current conditions will be sufficiently long-lasting to require a firmer monetary policy response. While it would be premature to draw firm conclusions at this stage, there is every reason to be alert to this development and make a careful appraisal of whether the current stance is sufficiently tight.

Chart I-1
Central Bank policy interest rate in real terms[1]
Weekly data January 7, 1998 - July 3, 2007



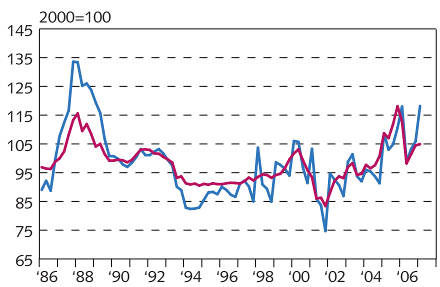
Interest rate in real terms according to:
- Inflation
- Breakeven inflation rate[2]
- Breakeven inflation rate[3]
- Household inflation expectations
- Businesses' inflation expectations
- Analysts' inflation expectations

1. Policy rate has been converted to annual yield. 2. Spread between RIKB 13 0517 and RIKS 15 1001. 3. Spread between RIKB 13 0517 and HFF150914. Household, business and analysts' inflation expectations are based on inflation one year ahead.
Source: Central Bank of Iceland.

Monetary stance is tight, but not as tight as expected in March

The real policy interest rate is high by all measures. However, inflation expectations have built up in recent months, except among households. This development reflects higher than expected inflation over this period. Higher inflation expectations entail a lower real policy rate than forecast in the last *Monetary Bulletin* in March. High household inflation expectations have moderated somewhat, however. Generally speaking, the transmission of monetary policy across the yield curve has been fairly smooth recently. Medium-term bond yields have risen sharply since *Monetary Bulletin* was published. A likely cause has been the Central Bank's decision to publish the policy rate path that its staff deem sufficient to rein inflation in to target within an acceptable horizon, although global interest rates have also risen. Interest rates on indexed bank lending have also gone up, while the Housing Financing Fund (HFF) has largely avoided raising its rates by funding its lending with bond issues at the longest maturities that it offers. The banks have responded to their eroding competitive position vis-à-vis the HFF by focusing more closely on foreign currency-denominated lending. A large share of these loans has been in low-yielding currencies, particularly the yen and Swiss franc. Households and businesses have thus temporarily side-stepped the tightening represented by high short-term interest rates, at the expense of increased interest rate risk and currency risk.

Chart I-2
Real effective exchange rate of the króna
Q1/1986 - Q1/2007



- Based on relative unit labour costs
- Based on relative consumer prices

Source: Central Bank of Iceland.

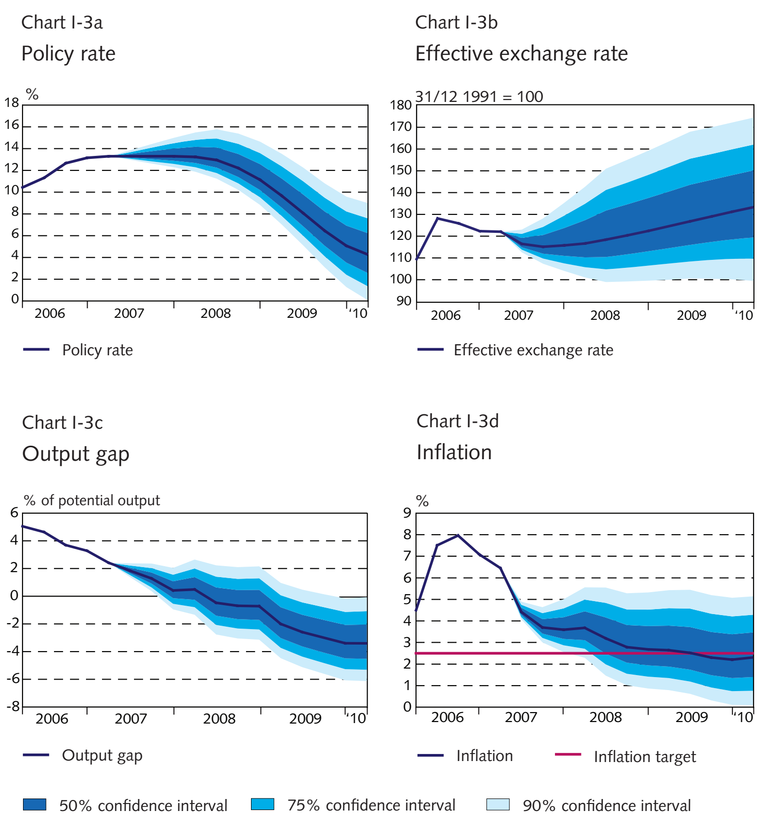
The króna and other high-yielding currencies have been extremely strong over the past few months and interest rates in currencies that are popular for borrowing at present are exceptionally low. Thus the currency risk is high, and compounded by the inherent interest rate risk in variable interest rates. Debt service on these instruments could easily double, judging from historical experience. Some borrowers are likely to underestimate the risks entailed by variable interest rates in a weak currency, if they are unusually low at the same time as the real exchange rate of the króna is probably well above long-term equilibrium and the likelihood of short-term overshooting of the exchange rate is significant. Growing demand for foreign currency-denominated loans partly offsets the tightening monetary stance in the short run and could amplify the contraction of credit during downturns.

Publishing the policy rate path has been effective

In this edition of *Monetary Bulletin*, the Central Bank presents its second macroeconomic and inflation forecast based on the policy rate path that the Bank's staff estimates as being compatible with the inflation target. The policy rate path is chosen with the aim of bringing inflation to 2½% within an acceptable horizon and stabilising it close to that target afterwards. Confidence limits are presented for the policy rate to underline the uncertainties surrounding the forecast. The Central Bank underlines that the policy rate path is based on current data and is liable to change over time as new data become available.

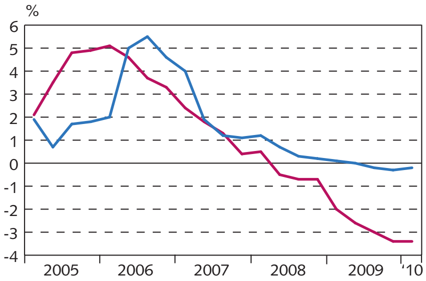
Publication of the policy rate path in the March *Monetary Bulletin* appears to have substantially affected market expectations about monetary policy. Forward rates and expectations among market and analysts have moved into much closer alignment with the policy rate path forecast in March than they were before the path was published (see Chart III-2 on p. 15). Greater transparency therefore appears to have strengthened the transmission of monetary policy along the yield curve, which was the aim of the exercise.

Chart I-3
Baseline scenario in *Monetary Bulletin* 2007/2
Forecasting period: Q2/2007 - Q1/2010



Sources: Statistics Iceland, Central Bank of Iceland.

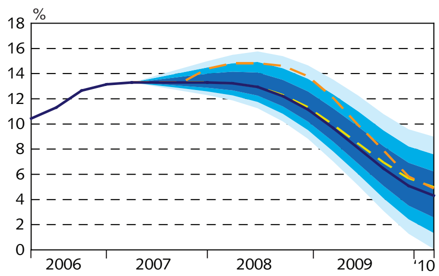
Chart I-4
Divergence of inflation from target and output gap



Divergence of inflation from target
Output gap (% of potential output)

Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-5
Policy rate – alternative scenarios



Baseline forecast
Alternative scenario with exchange rate depreciation
Alternative scenario with further aluminium investment
50% confidence interval
75% confidence interval
90% confidence interval

Source: Central Bank of Iceland.

Slower disinflation in 2007 and a tighter policy rate path

When the Central Bank appraised the inflation outlook in March, it concluded that the policy rate, which since December 2006 had remained unchanged at 13.3% (stated in the Central Bank's new presentation as a nominal discounted rate; this corresponds to an annual rate of return of 14.25%, the figure quoted in Central Bank interest rate announcements until June 2007), would suffice to bring inflation to target this year, or in 2008 if the effect of cuts in indirect taxes is excluded. It now appears obvious that this process will not take place as quickly as had been expected.

Chart I-3 summarises the main forecast findings. It shows that, in order to attain the inflation target within an acceptable horizon, the policy rate path will need to be somewhat tighter than was assumed in March. This could be achieved by raising the policy rate over the entire horizon or by maintaining a high rate for longer than was expected in the March forecast. Even so, inflation looks set to be considerably higher in 2008 than in the March forecast, when the target was expected to be attained in Q3/2007, based on headline inflation, which now seems highly unlikely. It would at least require a very sharp hike in the policy rate, given that the full transmission to inflation would take one to two years. By maintaining a high policy rate for longer, the current outlook is that inflation will be close to target at the end of 2008, both for the headline rate and if the tax effect is excluded.

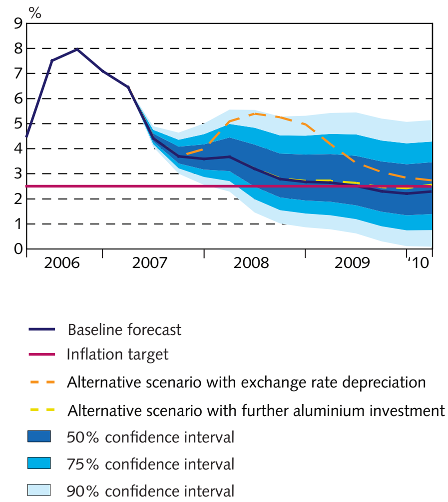
The main cause of the upward revision of the March inflation forecast for the next few months lies in the marked upswing in the housing market. This explains higher inflation at the start of the forecast horizon than in March. Moreover, house prices are now considered less likely to fall in the coming quarters. Offsetting this, the króna is stronger than was assumed in the March forecast. Although the effect has been unexpectedly subdued, the recent strong currency will keep the lid on price increases over the coming months, even if the króna weakens slightly again. In the long run, the current high real exchange rate makes a faster depreciation more likely. The narrowing interest rate differential with abroad following global interest rate hikes also contributes to this scenario. These two considerations are reflected in a rather steeper exchange rate path than in the March forecast.

A higher initial inflation rate, poorer outlook for inflation and inflation expectations over the first part of the horizon, a correspondingly lower real policy rate and a faster depreciation of the króna all call for a higher policy rate to create sufficient slack to counteract them. This is done in the forecast by delaying the reduction in the policy rate that was assumed in the March forecast. In fact, domestic demand will contract by less than previously forecast because of the initially lower real policy rate, and more of the economic adjustment will take place through the exchange rate and net trade.

Continued upside risk to the inflation forecast

Section IX on pp. 35-42 discusses uncertainties in the inflation forecast. As in the March forecast, the probability of inflation being above the central path of the baseline forecast is considered to be higher than the probability of inflation being below it. This indicates that a tighter monetary stance than assumed in the baseline forecast path could be required. Once again, the main uncertainties are exchange rate developments and large potential investment projects, which are reflected in two alternative scenarios (see Charts I-5 and I-6). In the first scenario a comparable depreciation to the March alternative scenario is assumed, but one quarter later. The latter scenario depicts the effects of investment in a new aluminium plant in Helguvík. The March alternative scenario also assumed that the Alcan smelter in Straumsvík would be expanded. The impact is therefore considerably weaker now. The results of the alternative scenarios are reflected in the confidence limits for the inflation, exchange rate, output gap and interest rate paths. In particular, substantially more negative exchange rate developments could force the policy rate to be raised further and kept higher for longer. As discussed in previous editions of *Monetary Bulletin*, the króna can be highly sensitive to changes in the global financial market outlook. International bond rates have been climbing without provoking any depreciation of the króna yet. The króna is bolstered by the fact that Iceland's domestic short-term interest rates are currently among the highest in the world.

Chart I-6
Inflation – alternative scenarios



Sources: Statistics Iceland, Central Bank of Iceland.

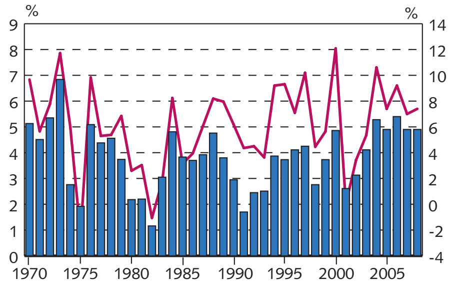
Large and persistent deviations from target can undermine confidence in monetary policy

The Central Bank's inflation target is to aim for an inflation rate of close to 2½% over the medium term, measured in terms of the twelve-month increase in the CPI. The target is flexible insofar as it is not assumed that the Central Bank can always keep inflation on target, but the Bank is obliged to ensure that deviations are neither systemic nor persistent. It is left to the discretion of the Central Bank how to interpret and respond to deviations, but strong requirements are made for monetary policy transparency and adherence to the target over the medium term.

Inflation has now been consistently above target since May 2004. Since Iceland adopted the inflation target in March 2001 inflation has ranged between 1.5% and 9.4%, and measured 4.7% on average. A large and persistent deviation from the target, as witnessed over the past three years, inevitably undermines confidence in monetary policy and causes expectations of persistent inflation to become entrenched. The longer this situation prevails, the more urgent it is for inflation to be brought to target as soon as possible. It should be underlined that a rate of inflation that is in line with the target on average can temporarily rise above or fall below it. In the current baseline forecast, inflation dips below target in late 2009. However, the deviation will be very modest and short-lived. Furthermore, given the risk profile of the forecast, there is a significant probability that the policy rate will need to be raised in order to prevent inflation from exceeding the target. In light of how entrenched inflation has been over the past few years, the risk of inflation above target is much more serious than a temporary undershoot. For this reason, the Central Bank will strongly emphasise maintaining inflation close to the target over the medium term, notwithstanding temporary over- and undershooting of the target, e.g. in connection with exchange rate volatility.

II External conditions and exports

Chart II-1
International economic developments 1970-2008[1]
Global GDP and trade, change on a year earlier



Global trade growth (right)
Global GDP growth (left)

1. Data for 2007-2008 are IMF forecasts.
Source: IMF.

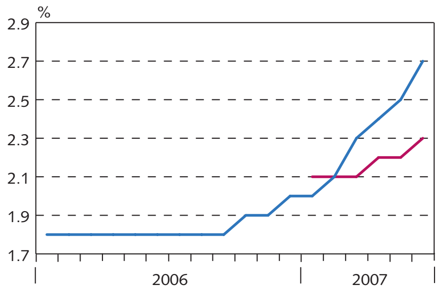
The outlook for external conditions has not changed much since the last *Monetary Bulletin* was published in March. However, the economic outlook is more solid in that growth is spread across more countries than before. Expectations that the contraction in the US housing market could infect other sectors, and eventually depress the global economy, have also waned. In April, the IMF forecast global growth of 4.9% in 2007, but recent indicators imply that it will be considerably greater. The current growth episode of four successive years is the longest since the early 1970s (see Chart II-1). The risk of higher global inflation appears to have increased, judging from wage developments in the euro area, ample liquidity in capital markets and rising oil prices, among other factors. Global interest rates have gone up as a result and will probably rise faster than previously forecast. Iceland's external debt service will therefore increase and the narrowing interest rate differential could put pressure on the króna.

Stable growth outlook in the euro area

Annual growth in the euro area in Q1/2007 was 3%, up 0.8 percentage points year-on-year. Main drivers of GDP growth were increased private consumption and government expenditure and a surge in investment. Growth forecasts for the current year have been revised sharply upwards in recent months. According to Consensus Forecasts (June 11, 2007) growth will reach 2.7% in 2007 but slow down again in 2008 (see Chart II-2).

Despite hikes in the European Central Bank's minimum bid rate in March and again in June, the monetary stance in the euro area is still on the accommodative side. Growth in M3 (see Chart II-4) and lending (see Chart II-3) has gained pace so far this year. Unemployment fell in April for the sixth consecutive month. It has now dropped by 0.9 percentage points year-on-year to the lowest level since harmonised measurements were introduced in 1993. CPI inflation and core inflation have been relatively stable in recent months at around 1.9%. However, if unemployment continues to fall, wage pressure could increase that could ultimately fuel inflation.

Chart II-2
Output growth forecast for euro area 2007 and 2008[1]



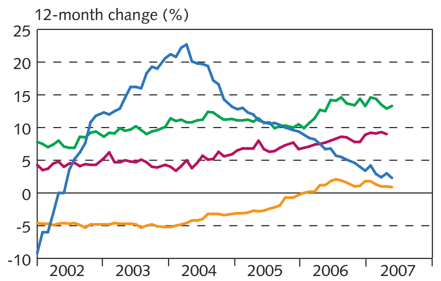
2007
2008

1. Time axis shows month of forecast.
Source: Consensus Forecasts.

US output growth declined in Q1/2007

According to preliminary data, output growth in the US dipped markedly in Q1/2007. Annualised GDP growth measured only 0.7% from the previous quarter. Year-on-year growth, at 1.9%, has not been lower since mid-2003. Slower growth can mostly be attributed to unfavourable merchandise trade developments and a contraction in government expenditure and residential investment. Growth is expected to pick up later in the year. Robust first-quarter corporate profits imply considerable scope for increased investment, which could reduce unemployment further. Likewise, the weakening of the dollar over recent months should bolster export growth and dampen imports. Consensus Forecasts expect 2.1% GDP growth over the whole of 2007, rising to 2.9% in 2008. US inflation has been on the

Chart II-3
Growth of DMB lending



US
Euro area
Japan
UK

Source: Reuters EcoWin.

increase over the year to date. If energy costs are excluded, however, it has remained fairly stable at close to 2½%.

Stable outlook in the UK and Nordic countries

Output growth remained strong in the UK in Q1/2007, although fractionally less than in 2006. For the first time, inflation breached the Bank of England's target limits in March when it measured 3.1%, but fell back to 2.5% in April and May. The Bank of England raised its bank rate by 0.25 percentage points in May and kept it unchanged in June, but further hikes are considered likely.

In the Nordic countries, the economic outlook is broadly stable. Output growth increased year-on-year in Finland and Norway in Q1/2007, but slowed down in Denmark and Sweden. So far in 2007, inflation has been slower in all the countries apart from Finland. The largest drop has been in Norway, where inflation measured only 0.3% in May, largely due to lower electricity prices.

Hefty growth in China but Japan is still tackling deflation

There are still no signs of a slowdown in the Chinese economy. Output growth measured 11.1% in Q1/2007. In the past few months the Chinese authorities have tried to smother overheating of the economy by raising interest rates, reserve requirements for credit institutions and taxes on equity transactions.

The economic situation in Japan is continuing to improve, although the deflationary episode is not over for certain. Domestic demand has remained fairly stable and exports are still one of the main drivers of output growth, which measured 2.2% in Q1/2007. After increasing until after mid-2006, inflation began to decrease again. So far this year it has been around zero.

Weaker demersal catches over the first five months of 2007

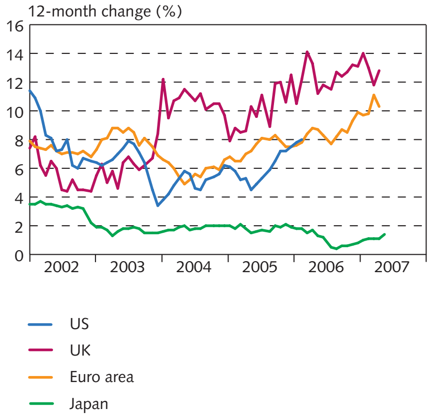
The total fish catch for the year to date amounts to 765 thousand tonnes, up 6% year-on-year. All of the increase is accounted for by an extra 65 thousand tonnes of pelagics, while the demersal harvest contracted by 17 thousand tonnes. The reduced catch of demersal species, which are more valuable, cut total catch value over the first five months of 2007 by 3% year-on-year, measured at constant prices. In foreign currency terms, marine export value was up by more than 10% year-on-year in the period January-April, largely due to an 8% increase in marine export prices. Unfished quotas at the end of May were roughly one-quarter more than a year before but are expected to be used in the coming months. Other things being equal, the landed catch this summer will therefore exceed that at the same time in the previous fishing year.[1]

Marine product prices still rising

Marine product prices have increased beyond the forecast made in *Monetary Bulletin* in March. At the end of April, the twelve-month

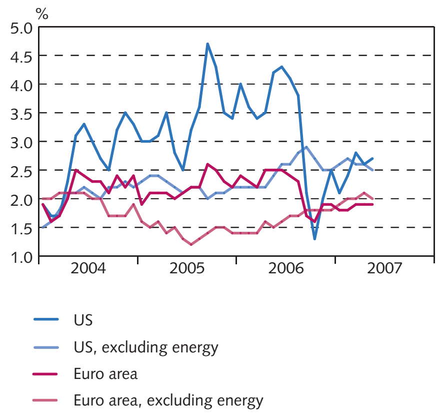
1. The fishing year is from September 1, 2006 to August 31, 2007.

Chart II-4
Growth of M3
January 2002 - May 2007



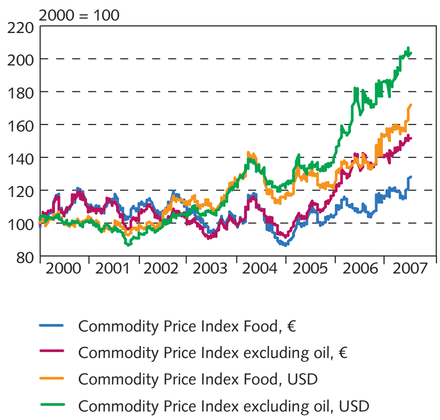
Source: Reuters EcoWin.

Chart II-5
Inflation in the US and euro area
January 2004 - May 2007
Inflation including and excluding energy prices



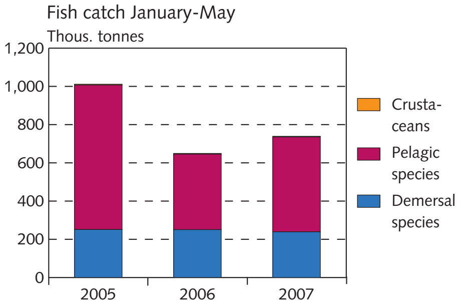
Source: Reuters EcoWin.

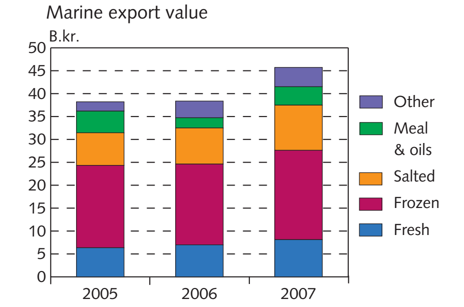
Chart II-6
World market commodity prices
Weekly data January 7, 2000 - June 22, 2007



Source: Reuters EcoWin.

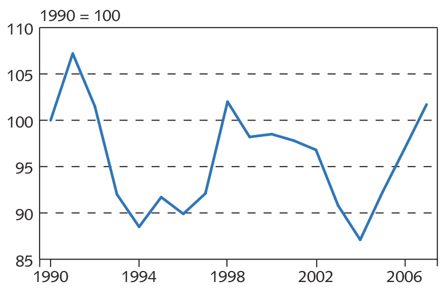
Chart II-7
Fish catch and marine export value





Sources: Directorate of Fisheries, Statistics Iceland.

Chart II-8
Export prices of marine products[1]



1. Deflated by the weighted CPI in main trading partner countries. Annual data for 1990-2006, latest value for May 2007.
Source: Statistics Iceland.

increase, measured in foreign currency, was more than 12% for marine products as a whole, and just under 8% for demersal species. Prices of meal and oil have climbed most sharply over this period, by 57%, while land-frozen demersals, fresh fish and saltfish products have also risen briskly. Conditions are favourable in almost all markets for demersal products. Iceland's competitive position has been strong and demand robust, as overall supply has contracted.[2] There are no indications that these conditions will unwind in the near future, but high prices naturally pose a risk that consumers will switch to cheaper competing goods. Commodity indices for food have risen steadily in recent times. The food index has risen by 23% over the past twelve months in US dollars, and by 17% in euros. In an informal survey towards the end of the winter, Icelandic market agents did not foresee further price rises over the coming months. Now, however, they expect increases again. In the macroeconomic forecast, marine product prices are assumed to rise by 7% year-on-year in 2007, but rather more modestly, by 3.7%, in 2008.

Smaller cod catch likely in the next fishing year

The outlook for Iceland's main demersal species is bleak. One main finding of the recent Marine Research Institute (MRI) report *The State of Marine Stocks 2006/2007* is that the cod stock has deteriorated sharply in recent years. Strong indications have emerged that the cod spawning stock off Iceland is dangerously small. The report also states that quotas for haddock, redfish and saithe need to be cut, in response to stock conditions. For the next fishing year, the MRI recommends cutting the cod quota by one-third, haddock by almost 10%, saithe by 25% and golden redfish by close to 40%. If these recommendations are followed, the contraction in catches of main demersal species will leave marine export value 22 b.kr. lower than otherwise in the calendar year 2008, and 5-6 b.kr. down in 2007. The Minister of Fisheries has not yet set the quota for the next fishing year, but in light of the MRI recommendations, a substantial catch reduction can only be expected. The current macroeconomic forecast assumes that the cod quota will be cut by 17%. Other demersal quotas are assumed unchanged from the current fishing year.[3]

Oil prices will remain high but aluminium prices will probably unwind over the next two years

Oil prices have risen since January and the average price in mid-June was roughly 12% above the average for December 2006. Futures

2. Catches of main North Atlantic demersal species are expected to end up 3% lower in 2007 than in 2004. The drop is particularly marked for the most valuable species: cod, haddock and flatfish. The cod catch is forecast to contract by 15% and redfish by 15%, while haddock will increase by 7% and saithe by 24%. By comparison, seafood consumption grew by 6% in 2006 in the UK, Iceland's largest market for marine products.

3. The macroeconomic forecast published in *Monetary Bulletin* in March assumed that marine export volume would grow by 4% in 2007 and remain unchanged in 2008. Incorporating the above cutbacks, volume is now expected to increase by 1% in 2007 but shrink by 6% in 2008. As ever, these assumptions are fraught with uncertainties; the capelin stock is highly uncertain and annual catch levels are highly volatile. Capelin will be a crucial determinant of catch value and export volume in 2008.

Table II-1 Exports and main assumptions for developments in external conditions

	Current forecast[1]			*Change from previous forecast (percentage points)*[2]		
	2007	*2008*	*2009*	*2007*	*2008*	*2009*
Exports of goods and services	12.0	9.5	5.5	2.4	-7.2	1.0
Marine production for export	1.0	-6.0	0.0	-3.0	-6.0	0.0
Metals production for export	61.9	61.2	1.0	-13.0	11.6	0.2
Export prices of marine products	7.0	3.7	2.5	1.6	0.7	0.5
Aluminium prices in USD[3]	10.0	-3.5	-3.0	-3.3	22.3	22.0
Foreign fuel prices4[4]	2.9	8.2	-1.0	8.2	1.3	-1.3
Terms of trade for goods and services	-0.1	0.6	0.0	-4.2	9.0	6.6
Global inflation[5]	1.8	1.9	1.9	-0.1	0.0	0.0
Global GDP growth	2.7	2.4	2.4	0.3	0.0	-0.1
Foreign short-term interest rates[6]	4.4	4.6	4.7	0.3	0.6	0.7

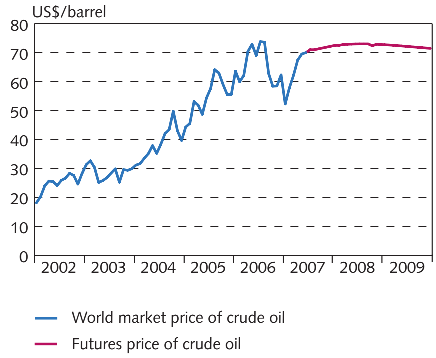
1. Percentage change year-on-year, except for interest rates. 2. Change since *Monetary Bulletin* 2007/1. 3. Based on aluminium futures. 4. Based on fuel futures. 5. *Consensus Forecasts*. 6. Based on weighted average forward interest rates of Iceland's main trading partner countries.

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

indicate that spot prices for oil will increase over the course of 2007 and into 2008. Fuel prices can therefore be expected to remain high for the next two years. One reason for this development is that OPEC has not agreed to step up production to match unexpected demand growth. Extra production by non-OPEC countries has also been less than expected. Oil prices in 2007 are therefore forecast to end up 3% higher than the 2006 average, rising by a further 8% in 2008 and then near-flattening in 2009.

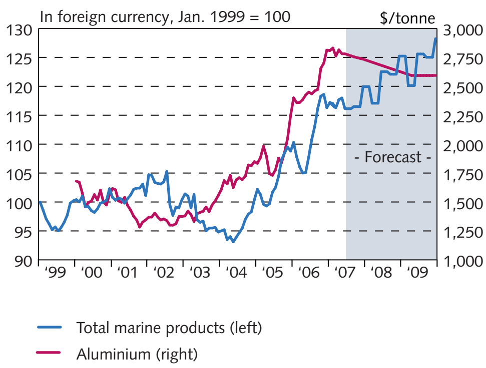
Aluminium prices have surged in recent years and have doubled since 2002. The main driver of prices has been spiralling demand in Asia, especially China and India. Over the first months of 2007, fundamentals in the aluminium market changed. The market position flipped over from demand-driven to supply-driven. In Q1/2007, global production rose by 12% year-on-year but demand by 9.5%. As a result, futures prices for 2008 and 2009 plunged in February. The main reason for the turnaround from excess demand to a glut of supply was massive production growth in China, at an annualised rate of 40% or more in recent months. The production deficit has returned over the past two months and the gap between stocks and consumption has narrowed. Demand for aluminium is currently strong or growing in most countries, except the US. This situation is expected to prevail until at least the end of the year. Demand is buoyant from the car and construction industries in Europe and Japan, and from stepped-up manufacturing of aircraft and consumer durables. Futures prices suggest that aluminium prices will dip slightly in the first half of 2008, then head downwards for the rest of that year and 2009. Some analysts predict that ongoing strong demand growth, coinciding with slower growth of Chinese aluminium production, will drive prices up again in 2010. The current macroeconomic forecast assumes that average aluminium prices in 2007 will be 10% higher than in 2006, then slip by 3.5% in 2008 and 3% in 2009. In the previous macroeconomic forecast in *Monetary Bulletin* in March, on the other hand, prices were expected to drop by a much steeper 25% each

Chart II-9
World market price of crude oil
Monthly data January 2002 - December 2009



Sources: Bloomberg, NYMEX, Reuters EcoWin.

Chart II-10
Prices of marine exports and aluminium



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

year in 2008 and 2009, reflecting the latest futures prices at that time. Thus the terms of trade will not deteriorate by as much as forecast in March. Instead of turning downwards in 2007 and the following two years, the terms of trade for goods and services are now expected to remain broadly unchanged across the forecast horizon.

III Financial conditions

The presentation of the policy rate forecast in *Monetary Bulletin* in March appears to have had the intended effect on market expectations about the policy rate. They have moved very close to alignment with the policy rate path forecast in March. Increased communication appears to have enhanced transmission of monetary policy across the yield curve and boosted its effectiveness. Measured by the real policy rate in terms of past inflation or household inflation expectations, the monetary stance has tightened, but it has eased slightly if the real rate is measured on the basis of the breakeven inflation rate on four-year Treasury notes. Higher inflation than was forecast in *Monetary Bulletin* in March has led to a downward revision of the real policy rate forecast for this year. Yields on indexed Housing Financing Fund (HFF) bonds have remained high since the government announced planned cuts in indirect taxes. This has not been reflected in HFF mortgage lending rates, which have only been raised slightly since the announcement. Policy rate hikes are likely among Iceland's main trading partner countries in the near future, on the back of sizeable increases in recent months. Medium- and long-term interest rates have risen considerably since March. Foreign interest rates are affecting the Icelandic economy more as carry trade volume grows, and the share of foreign currency-denominated credit in total household borrowing has increased. The króna has appreciated over the year to date. Expectations that the policy rate will be kept high for longer than previously assumed have probably contributed to this trend. As often before, however, movements in the króna have tracked those of other high-interest currencies such as the New Zealand dollar, which indicates that conditions in global financial markets have been a strong factor at work.

Slowdown in inflation leaves policy rate higher in real terms

The policy rate has been unchanged since December 2006. Measured against past inflation, the real policy rate has risen by almost 2 percentage points since the March *Monetary Bulletin*. An important factor has been the temporary dip in inflation due to cuts in indirect taxes. The real policy rate has also risen slightly in terms of household inflation expectations, but gone down relative to the breakeven inflation rate on four-year Treasury notes. Market agents' inflation expectations softened after the government's tax cuts were announced. Inflation has not decreased as fast as expected, however, which has caused bond market and business expectations to rise again.

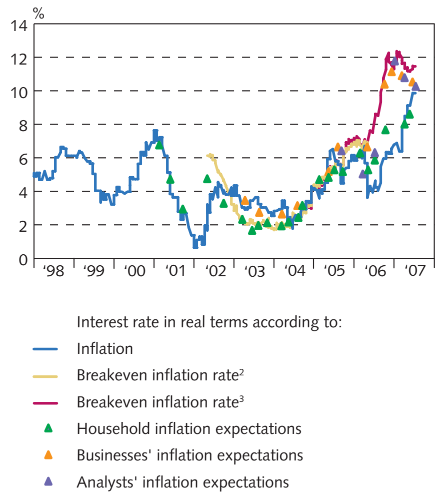
Presentation of the policy rate path appears to enhance monetary policy transmission

In recent years, market agents' expectations about the policy rate path have diverged quite widely from the Central Bank's view. At the beginning of 2007, however, they moved closer into line, when distortions in forward rates, which had been caused by glacier bond (króna-denominated Eurobond) issuance and other effects, began to diminish. *Monetary Bulletin* in March contained the first policy rate

Chart III-1

Central Bank policy interest rate in real terms[1]

Weekly data January 7, 1998 - July 3, 2007

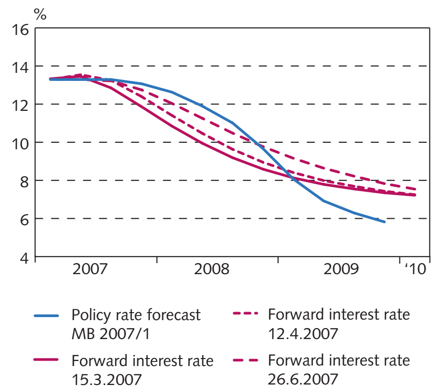


1. Policy rate has been converted to annual yield. 2. Spread between RIKB 13 0517 and RIKS 15 1001. 3. Spread between RIKB 13 0517 and HFF150914. Household, business and analysts' inflation expectations are based on inflation one year ahead.
Source: Central Bank of Iceland.

Chart III-2

Expected Central Bank policy rate based on forward interest rates and policy rate forecast in MB 2007/1

Q1/2007 - Q1/2010

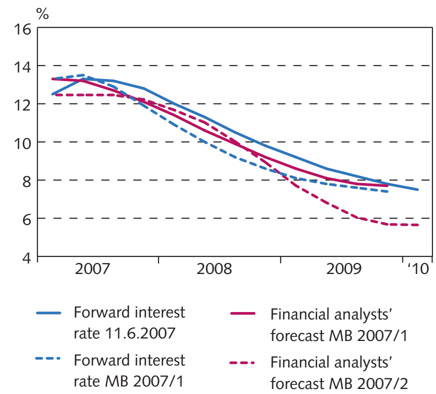


Source: Central Bank of Iceland.

Chart III-3

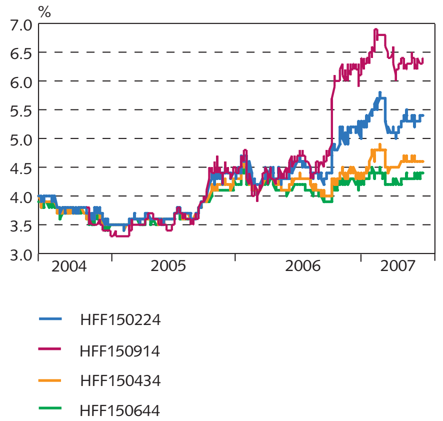
Expected Central Bank policy rate based on forward rates and analysts' projections

Q1/2007 - Q1/2010



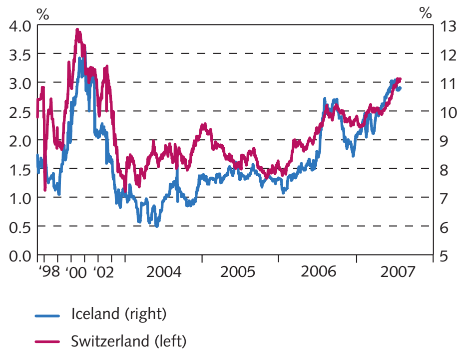
Source: Central Bank of Iceland.

Chart III-4
HFF bond yields
Daily data July 8, 2004 - July 3, 2007



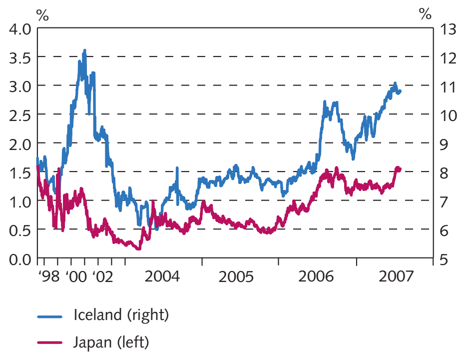
Source: Central Bank of Iceland.

Chart III-5
Yield on 5-year Treasury bonds
in Iceland and Switzerland
Daily data July 9, 1997- July 3, 2007[1]



1. Weekly data until 2004.
Sources: Reuters, Central Bank of Iceland.

Chart III-6
Yield on 5-year Treasury bonds
in Iceland and Japan
Daily data July 9, 1997- July 3, 2007[1]



1. Weekly data until 2004.
Sources: Reuters, Central Bank of Iceland.

forecast by Central Bank staff. Although experience of this arrangement is limited for drawing firm conclusions, developments in recent months indicate that the Central Bank has succeeded in delivering a clearer monetary policy message. Market expectations about the policy rate path that are implied in forward rates have recently been broadly in line with the policy rate path in the Central Bank's March baseline forecast. Beyond a two-year horizon they diverge, however. Market agents now expect the policy rate to be kept fairly high for longer than in the March baseline forecast. The probable reason is that they expect new investments in the aluminium and power sectors, which were not included in the baseline forecast assumptions. In such an event, the policy rate path in the alternative scenario that includes aluminium investments may be more closely comparable (see Box IX-2 on p. 40).

After mid-2008, analysts apparently expect the policy rate to be considerably lower than forward rates would imply, which is the first time they have done so since the Central Bank began its surveys. The analysts' forecast hardly diverges from the policy rate path in *Monetary Bulletin* in March, even though a majority of them expect new aluminium and power sector investments.

HFF mortgage rates lag behind HFF bond yields

Yields on indexed HFF bonds rose in October with the announcement of plans to cut indirect taxes. The increase was most marked in two shorter maturities. These higher yields were therefore likely to unwind over the following months, but this only happened on a smaller scale than was expected. Expectations of a higher real policy rate over the lifetime of the bonds probably bolstered high yields on the shortest maturities. Although HFF bond yields have risen by 0.4-2.3 percentage points since the government's tax cut announcement, the current HFF mortgage lending rate is only 0.1 percentage point higher.

Outlook for interest rate hikes in international markets

Since the publication of *Monetary Bulletin* in March, the European Central Bank (ECB) and Bank of England have raised their policy rates by 0.25 percentage points. Further hikes may be expected in Europe in 2007, and also in Japan. Expectations of a cut in the US federal funds rate have waned. Forward rates also imply expectations of interest rate hikes by major central banks on top of recent sizeable increases in medium- and long-term rates. Iceland's increasing integration into global financial markets has heightened the effect of global interest rate developments on domestic rates as foreign currency-denominated borrowing by households and businesses, and carry trades, have grown rapidly.

The króna has appreciated this year

The króna has appreciated since the beginning of 2007 and in real terms has moved further away from long-term equilibrium. Expectations that the policy rate will be kept high for longer than was considered likely at the beginning of the year have supported the króna. Global interest rates have been on the increase, narrowing the differential with abroad. So far, however, this has not put downward pressure on the króna. Iceland's carry-to-risk-ratio increased sharply from the beginning of January to the end of May. Hence, the brisk carry trading over that period was to be expected. In June, however, carry trade volume has moderated, possibly because of reduced interest rate differentials. The narrowing interest rate differential could dampen incentives for carry trades with króna-denominated instruments. A growing correlation has been noted between the króna and other high-yielding currencies such as the New Zealand dollar in the wake of increased carry trades. Since *Monetary Bulletin* was published in March, the New Zealand dollar has also appreciated. Issuance of glacier bonds has had less effect on the exchange rate of the króna than before. This could be because maturing contracts are being refinanced. Although the impact of their issuance has waned, glacier bonds are clearly shoring up the króna. Many foreign investors are also exploring new carry trade products using króna-denominated instruments. General trading in them has probably grown since March. Commercial banks have built up their forward positions in recent months and position-taking against the króna is more expensive as a consequence.

Credit supply has increased so far this year, led by foreign currency-denominated loans

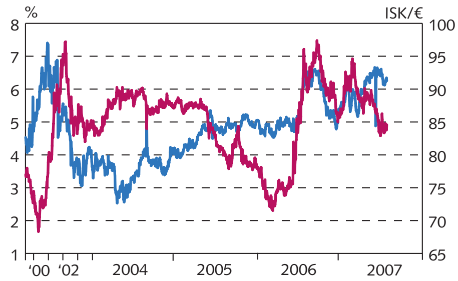
At the end of February the HFF raised its maximum loan-to-value ratio from 80% to 90% and its mortgage loan ceiling from 17 m.kr. to 18 m.kr. – bringing both back to the limits in effect before the government's economic policy measures in June 2006. Credit supply from the commercial banks increased around the same time. Fierce competition with the HFF has hindered the banks from raising their CPI-indexed mortgage lending rates, despite rising yields on indexed bonds.[1] This may have prompted them to step up supply of foreign currency-denominated loans, an area in which they are not exposed to competition from the HFF. The wide interest rate differential and public debate about high interest rates have probably also driven foreign currency-denominated borrowing by households and businesses.

Increased risk on foreign borrowing ...

Growth in lending by the credit system reached a historical high in Q4/2006, then slowed down sharply in Q1/2007. The current growth rate is similar to that at the end of 2004. However, deposit money bank (DMB) lending growth has been regaining pace in recent months. Growth of foreign currency-denominated lending to households, adjusted for exchange rate movements, has been robust since the beginning of 2005, and over the past year in particular. Even though last year's depreciation of the króna drove up debt service on foreign loans, borrowers appear to have discounted the risk of a further depreciation; a lower real exchange rate generally ought to represent more favourable conditions in the long run for borrow-

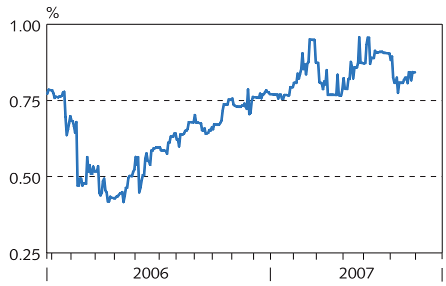
1. CPI-indexed average prime rates of commercial banks and savings banks have risen by more than the HFF's CPI-indexed mortgage rates.

Chart III-7
5-year interest rate differential and exchange rate against the euro
Daily data, July 1, 1999 - July 3, 2007[1]



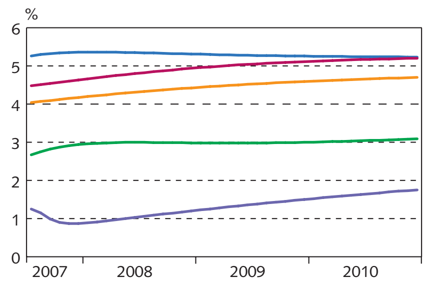
1. Weekly data until 2004.
Sources: Reuters, Central Bank of Iceland.

Chart III-8
Carry-to-risk ratio[1]
Daily data January 25, 2006 - July 3, 2007



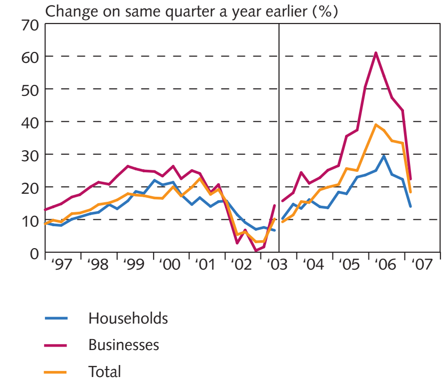
1. Three-month interest rate differential divided by the implied volatility of an ISK/EUR option.
Source: Bloomberg.

Chart III-9
Forward interest rates
Monthly data July 2007 - July 2010



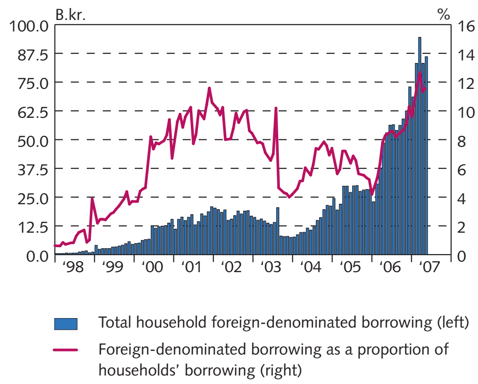
Source: Reuters.

Chart III-10
Quarterly credit system lending growth[1]
Q1/1997 - Q1/2007



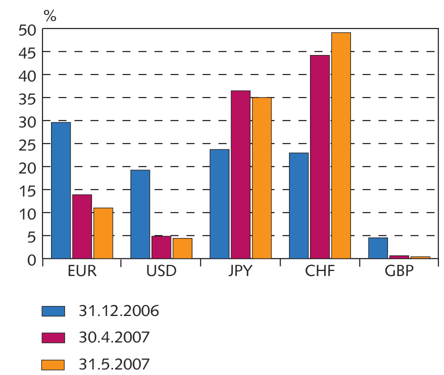
1. Due to a reclassification of lending, after Sept. 2003 data by sector are not comparable with earlier data.
Source: Central Bank of Iceland.

Chart III-11
DMB Foreign currency-denominated borrowing by households and as a share of their total borrowing
Monthly data January 1998 - May 2007



Source: Central Bank of Iceland.

Chart III-12
Currency composition of households' foreign currency-denominated borrowing
Kaupthing, Landsbanki, Glitnir



Source: Central Bank of Iceland.

ing in foreign currencies. The effective exchange rate of the króna is now much stronger again, however, without significantly denting demand.

Currency composition has also shifted notably over the past half-year. While 47% of the three largest commercial banks' foreign currency-denominated lending to households was in the Swiss franc and yen at the beginning of 2007, this share had grown to 85% in May.

... especially because low-yielding currencies predominate

The predominance of low-yielding currencies heightens risks in three ways. First, debt service is generally more volatile on foreign currency-denominated borrowing than on price-indexed borrowing. Unlike much of the business sector, households tend not to have exchange rate hedges – neither income flows in the currencies in which they borrow, nor forward agreements – and are therefore exposed to exchange rate volatility. Second, the main currencies for borrowing at present pose a special risk. Because they are very weak in real terms from a historical perspective, they could potentially appreciate substantially, especially the yen. A depreciation of the króna coinciding with a further strengthening of these currencies could have a hefty impact on debt service on loans denominated in them. Third, these loans carry variable interest rates, which are currently low as well. Forward interest rates in the three currencies accounting for more than 95% of the three largest commercial banks' foreign-denominated lending to households – the Swiss franc, the yen and the euro – imply that interest rates are expected to rise significantly in the near future. Compounding all these risks, it is likely that, for example, an interest hike in Japan would cause the yen to appreciate and the króna to depreciate. Thus the risks are interconnected. It is vital for borrowers to be aware of this.

Although foreign currency-denominated loans now account for 11-12% of total DMB lending to households,[2] domestic interest rate developments and credit supply are still by far the most important determinants of household financial conditions in Iceland. Businesses are in a different position. Foreign currency-denominated loans account for 60% of total DMB corporate lending. Many companies have foreign currency income and much easier access to hedges. Thus more often than not, foreign currency-denominated lending poses far less exchange rate risk to businesses than to households. Conditions in global financial markets weigh more heavily for businesses. Higher foreign base rates may to some extent be offset by the banks' lower spreads on their borrowing. Credit terms for Icelandic banks are now similar to just after Moody's upgraded their ratings in February. This is likely to be reflected in the credit terms they offer to households and businesses.

2. The share reached 13% in March but has inched back since due to exchange rate movements.

IV Domestic demand and production

On first impression, preliminary data from Statistics Iceland and the Central Bank's balance of payments figures for Q1/2007 appear to indicate that the adjustment of the economy has been faster than the Central Bank forecast in March. However, irregular items and the base effect of a surge in private consumption and investment in Q1/2007 give a misleading picture. Most other indicators, for example from the labour and real estate markets, imply robust demand growth. Inflation has been above the March forecast and will continue to be for the next few months. This is a clear signal of strong demand and has produced a lower real policy rate than was forecast in March, since then and for the near term ahead. The policy rate forecast presented in this edition of *Monetary Bulletin* implies that in order to attain the inflation target within an acceptable horizon, the Central Bank will need to leave its policy rate unchanged for longer than was assumed in March. Exchange rate movements will have rather more impact on the adjustment process via foreign trade than was forecast then. Nonetheless, the bulk of the adjustment will take place through a contraction in national expenditure, which is now expected to measure 8½% from 2007 to 2009, compared with 10½% in the March forecast (for further details of the forecast, see Table 1 of Appendix 1 on p. 43).

Real policy rate lower in the first part of the forecast horizon, then higher

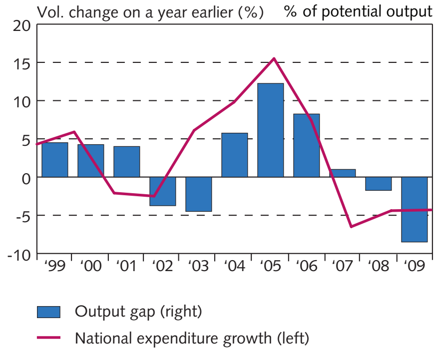
Changes in projections of domestic demand since the March forecast are mainly explained by lower than expected growth in Q1/2007, larger rises in house prices over 2007, lower real interest rates, more wage drift and somewhat less unemployment for the entire forecast horizon.

Domestic demand is forecast to contract more this year than according to the March projections. The main reason is that the greater contraction in investment outweighs higher private consumption growth. In 2008, however, domestic demand will decline by just over two percentage points less than in the March forecast. One contributing factor is lower real interest rates, which combined with more favourable asset price and real wage developments lead to a considerably smaller contraction in investment and private consumption than was forecast then. A tighter monetary stance over the second half of the horizon than was forecast in March, however, will drive national expenditure lower in 2009.

Private consumption to grow more in 2007 and shrink less in 2008 and 2009

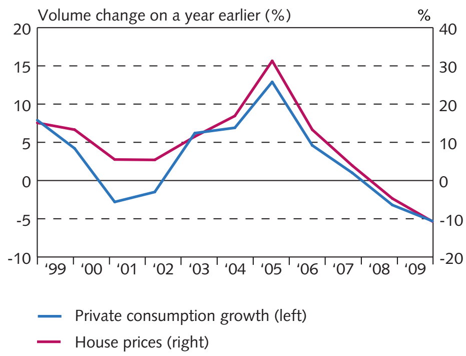
According to preliminary data from Statistics Iceland, private consumption contracted by 1.2% year-on-year in Q1/2007. Soaring private consumption has been one of the two main drivers of output growth in recent years, and this was the first contraction in more than four years. In March, the Central Bank forecast that Q1/2007 would be the last quarter of private consumption growth, followed by a contraction for the whole forecast horizon. While Statistics Iceland's

Chart IV-1
Growth of national expenditure and output gap 1999-2009[1]



1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-2
Private consumption growth and house prices 1999-2009[1]



1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

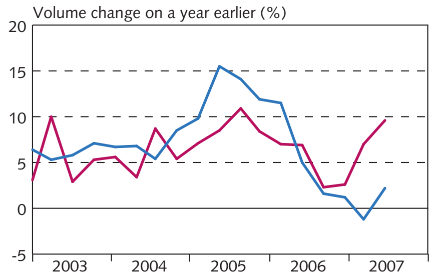
Table IV-1 Indicators of private consumption 2005-2006

% year-on-year change unless otherwise stated	*Quarterly figures*				*Most recent period*		
						Change based on	
	Q2/2006	*Q3/2006*	*Q4/2006*	*Q1/2007*	*Month*	*same period in prev. year*	*year-to-date figures*
Groceries turnover (in real terms)	6.9	2.3	2.6	7.0	May	11.1	8.1
Payment card turnover (in real terms)	5.7	1.5	4.8	1.2	May	9.9	5.1
of which domestic	12.0	9.5	15.3	7.5	May	27.6	13.1
of which abroad	16.4	12.2	-7.3	-16.0	May	-2.2	-10.1
Domestic retail debit card turnover	0.7	-4.8	-2.7	-4.8	May	-4.9	-2.2
Car registrations (increase in number)	-15.4	-25.4	-31.8	-40.4	May	7.4	-26.0
General imports (volume change)[1]	22.4	13.1	9.8	-8.4	April	.	-2.0
Imports of consumer goods (volume change)[1]	9.3	2.9	-1.0	-14.9	April	.	-6.8
Private motor vehicles[1]	10.9	-1.9	-7.8	-41.9	April	.	-34.3
Consumer durables, e.g. household appliances[1]	9.3	3.1	0.0	-2.3	April	.	6.5
Consumer semi-durables, e.g. clothing[1]	12.2	8.8	5.2	0.0	April	.	8.4
Food and beverages	5.8	6.1	5.3	8.6	April	.	11.9
Imports of investment goods excluding ships and aircraft (volume change)[1]	47.7	32.5	22.1	-6.3	April	.	-2.4
Gallup confidence index	-18.2	-18.3	8.5	7.9	June	43.8	21.5
Current situation	-10.2	-15.2	5.0	2.5	June	38.0	14.0
Expectations six months ahead	-25.0	-21.3	11.9	12.3	June	49.5	28.2

1. Quarterly figures are year-to-date.

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

Chart IV-3
Private consumption growth and groceries turnover 1999-2009[1]



1. Groceries turnover growth is the average for April and May, while private consumption growth is the Cental Bank forecast.
Sources: Statistics Iceland, Central Bank of Iceland.

preliminary data give the impression that private consumption is decreasing more rapidly than forecast, in fact the contraction is confined to motor vehicle purchases. Most other components of private consumption show a fair pace of growth.[1] Excluding car purchases (based on figures for the drop in new vehicle registrations and car purchases as a proportion of private consumption in 2006), private consumption would have grown by 2-3% year-on-year. Most indicators show some growth in private consumption in Q2/2007 (see Table IV-1 and Charts IV-3 and IV-4).

Private consumption is forecast to increase by 1% in 2007 but contract by just over 3% in 2008 and more than 5% in 2009. The explanation for the upward revision for 2007, in spite of a contraction in the first quarter, is that higher house prices and lower real interest rates will stimulate private consumption growth this year, in line with indicators for Q2. Also, credit supply and demand both appear to have firmed up recently. The increasing demand for foreign currency-denominated borrowing appears particularly marked, or the banks have steered demand into that channel. Higher disposable income and lower unemployment also contribute to more private consumption over the whole forecast horizon than was expected in March. Over the next two years, private consumption will therefore shrink by less than previously forecast.

Smaller contraction in investment over the forecast horizon

Preliminary data show a drop in investment of more than 28% during Q1/2007. Business investment shrank by 41% and public sector

1. The first-quarter contraction in private consumption should be interpreted with caution due to strong base effects. Annual growth in Q1/2006 was very brisk at 11.5%, and year-on-year growth then had been in double digits for some while. Seasonally adjusted figures show slight growth in Q1/2007, both quarterly and year-on-year.

investment by 7%, while residential investment was up by 6.6% year-on-year. Irregular items and the base effect of brisk earlier growth strongly affect these estimates.[2]

Table IV-1 Investment forecasts in June and March 2009

	Forecast in Monetary Bulletin 2007/2[1]			*Change from previous forecast (percentage points)*		
	2007	*2008*	*2009*	*2007*	*2008*	*2009*
Total investment	-25.6	-15.8	-8.9	-3.2	6.9	-3.1
Business investment	-37.7	-30.2	-14.1	-6.9	8.7	-3.3
Residential investment	1.2	-9.2	-9.9	5.8	-0.3	-1.2
Public sector investment	5.9	37.7	4.5	8.0	-2.0	-5.1

1. Volume change from a year before (%).

The contraction in investment is a major factor in the prospective macroeconomic adjustment. It contracts for the entire forecast horizon, but by four percentage points less than was forecast in March. Nonetheless, the ratio of investments to GDP decreases to one-fifth, as in the previous forecast, over the second half of the horizon.

Real interest rate developments and aircraft transactions explain changes in forecast business investment

Business investment is forecast to contract by almost 38% in 2007, 30% in 2008 and 14% in 2009. The additional contraction by seven percentage points in 2007 is largely the result of the drop in the first quarter (see footnote 2). Investment in the aluminium and power sectors remains unchanged from the earlier forecast at 52 b.kr. A decrease in aluminium and power sector investment by more than 60 b.kr. and aircraft sales of more than 9 b.kr. go a long way towards explaining the 38% contraction in business investment. Heavy investment is still expected in shopping malls, supermarkets, business premises and a combined quayside conference centre/concert hall in Reykjavík. The bulk of further planned investment in the fisheries sector is expected to be postponed, however.

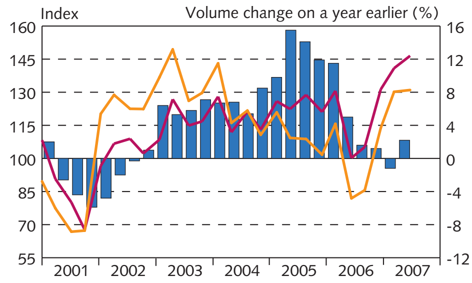
In 2008, the decline in investment will be just over eight percentage points less than was forecast in March. Mostly this is due to a fall in real interest rates following the upward revision of inflation and inflation expectations. The contraction in business investment in 2009 is larger, reflecting higher real interest rates over the second half of the horizon than in the previous forecast.

Business sentiment could indicate a higher investment level

Apart from decreasing investment in the aluminium, power and fisheries sectors and the impact of aircraft sales, there are signs that other investment is growing fairly rapidly. Business sentiment was upbeat in a Capacent Gallup survey conducted in May. The index for the

2. Exports of aircraft to the value of almost 10 b.kr. are recorded as a negative business investment in Statistics Iceland's national accounts, reducing the aggregate by a corresponding amount in Q1/2007. Excluding these aircraft, which were imported the year before but not captured immediately in the national accounts, business investment would have contracted by 20 percentage points less, reducing the decrease in gross fixed capital formation by half. If this item is excluded, the outcome is in closer alignment to the March forecast.

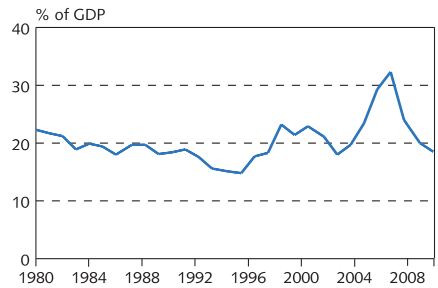
Mynd IV-4
Private consumption and consumer confidence Q1/2001 - Q2/2007[1]



Private consumption growth (right)
Gallup confidence index (left)
Gallup confidence index expectations six months ahead (left)

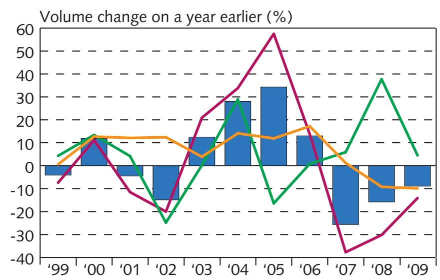
1. Value for private consumption growth in the quarter is Central Bank forecast.
Sources: Capacent Gallup, Statistics Iceland.

Chart IV-5
Gross fixed capital formation as % of GDP 1980-2009[1]



1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

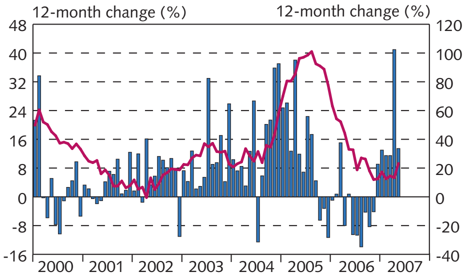
Chart IV-6
Gross fixed capital formation growth and its main segments 1999-2009[1]



Total gross fixed capital formation
Businesses
Residential
Public sector

1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

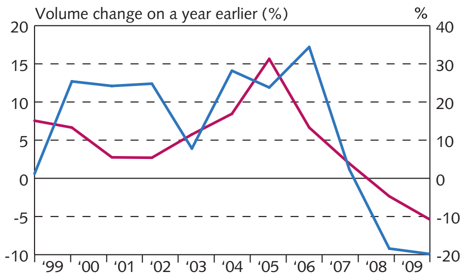
Chart IV-7
Housing market turnover and prices in Greater Reykjavík
Monthly data January 2000-May 2007



Turnover (right)
Prices (left)

Source: Land Registry of Iceland.

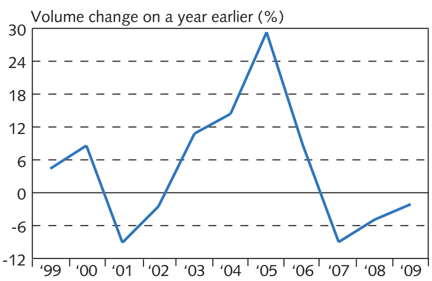
Chart IV-8
Growth of residential investment and house prices 1999-2009[1]



Growth of residential investment (left)
Annual change in house prices (right)

1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-9
Import growth 1999-2009[1]



1. Central Bank forecast for 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

economic situation hit a new high, with 84% of executives describing conditions as good and only 1.5% bad. However, the index for the outlook six months ahead is down from the previous survey in February. More businesses foreseeing a downturn reflects the current bright position. Sentiment in the financial and insurance sector is very upbeat, with 13% of businesses in it forecasting a much better economic outlook six months ahead. Interestingly, 31% of fisheries companies forecast an improvement in conditions then, undoubtedly because they expect the króna to depreciate.

The index of domestic demand has also edged up since the February survey, with almost 50% of businesses expecting an increase over the next six months and only just over 5% a decrease. Again, the financial and insurance sector and retail sector are highly upbeat about the domestic demand outlook, with 57% of financial companies and 66% of retailers expecting an increase.

The executives' responses may indicate that investment will not shrink as sharply as forecast. Growth in imports of capital goods in the first months of the year points in the same direction. These indicators are incorporated into the risk profile of the inflation forecast (see Table IX-1 on p. 37).

Residential investment forecast to grow in 2007, and not decline as was forecast in March

In March, residential investment was expected to contract for the entire forecast horizon. Since then the real estate market has rallied, house prices have risen and turnover has soared. Imports of construction materials and cement sales also indicate a sizeable upswing in residential investment in recent months. Statistics Iceland's preliminary figure for residential investment growth in Q1/2007 is 6.6%. Residential investment is now forecast to increase by just over 1% in 2007 but contract by 9% in 2008 and by 10% in 2009. Nominal house prices are expected to rise by 4% in 2007 but decline considerably afterwards.

Smaller contraction in imports

Imports will contract by less over the forecast horizon than was expected in March, although the difference is negligible apart from this year. The smaller contraction in 2008 and 2009 is in line with the smaller contraction in national expenditure than was forecast in March. In 2007, the smaller contraction is explained by the stronger króna and greater private consumption growth.

Output stagnant after 10% growth over the past three years

The episode of robust output growth is over and the adjustment has begun. In 2004-2006, GDP grew by 10% in real terms. It is now forecast to remain broadly unchanged from the current year until 2009. The growth outlook is marginally flatter than in the March forecast, especially in 2007 and 2009. Negligible output growth is forecast for this year, at a mere 0.2%. The change from the previous forecast is explained by the sharper contraction in national expenditure. The forecast for growth of output in 2008 is virtually unchanged at 0.8%. Domestic demand will shrink by much less than in the previ-

Box IV-1

Financial market analysts' assessments of the economic outlook

For each issue of *Monetary Bulletin*, the Central Bank surveys financial market analysts' assessments of the economic outlook. The latest survey was conducted in mid-June and participants were the research departments of Glitnir, Kaupthing Bank and Landsbanki. The main changes from the previous survey in March are that analysts have revised their forecasts for 2007 upwards for inflation and downwards for output growth. One year ahead, they forecast a stronger króna, higher policy rate and greater increase in asset prices than in the previous survey.

Deterioration in the short-term inflation outlook

The short-term inflation outlook has deteriorated since the last survey in March. Analysts forecast year-on-year inflation in 2007 of 4.4%, which is similar to the Central Bank's baseline forecast. However, the baseline forecast projects an underlying inflation rate of more than 6% in 2007.[1] The analysts' average forecast for year-on-year inflation in 2008 is broadly unchanged from the last *Monetary Bulletin* in March, at 3.6%. The majority expect inflation to be close to target in 2009, when their year-on-year forecast is 3% on average. The rate of disinflation is faster in the Central Bank's baseline forecast, which assumes a somewhat higher policy rate in 2008 and inflation close to the target at the end of that year.

Output growth to pick up in 2008

Analysts have revised their March forecasts for growth in 2007 some way downwards to an average of 1.3%. The Central Bank's baseline forecast, which assumes a more rapid adjustment, puts output growth at a mere 0.2%. One survey respondent also forecasts negligible output growth in 2007. Analysts agree that output growth will pick up in 2008, rising to 3.5%. For 2009, they expect average output growth of just under 3%. The Central Bank's baseline forecast diverges quite markedly, projecting output growth of just under 1% in 2008 and a contraction in 2009. It should be noted that most analysts expect further investments in the aluminium and power sectors in the years to come.

Stronger króna forecast until 2008

The króna has appreciated sharply in recent months. Analysts forecast an average exchange rate index of just over 120 one year ahead and roughly 125 two years ahead. Views for one year ahead differ quite widely, with forecast exchange rate values in the range 112-130. The Central Bank's baseline forecast for exchange rate developments is similar, with an average exchange rate value of just under 120 in 2008 and 128 in 2009.

Higher policy rate across the forecast horizon

In their policy rate forecasts, the analysts are broadly in line with the policy rate path published in *Monetary Bulletin* in March. The Central Bank's policy rate has been unchanged at 13.3% since December 2006.[2] On average, analysts forecast a policy rate of just over 11% one year ahead, just below 7% two years ahead and just below 6% after three years. They all expect the policy rate to be lowered in the final quarter of 2007.

No let-up in asst price increases

Equity prices have risen sharply over the past few months and the OMXI15 index has repeatedly reached record heights. On June 20

1. Based on the CPI excluding the impact of cuts in VAT.
2. A new presentation of the policy rate took effect on June 21 whereby it is now stated as a nominal discounted value and not in terms of annual yield. The policy rate is currently 13.3%, which corresponds to an annual yield of 14.25%. Analysts' survey responses have been converted to the corresponding nominal discounted rate.

it stood close to 8,200, a gain of 9% since mid-March. On average, analysts forecast an index value of almost 9,500 one year ahead and above 10,700 two years ahead.

House prices have followed the same pattern recently, reflecting the positive correlation between asset prices and the exchange rate of the króna. Analysts forecast that real estate prices will increase by just over 4½% on average over the next twelve months and continue to rise across the forecast horizon by 2-3% annually.

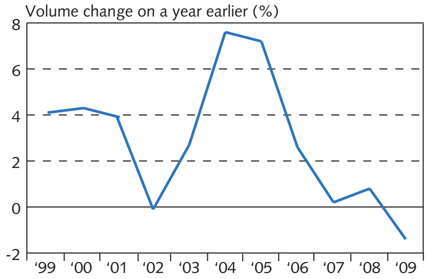
Overview of forecasts by financial market analysts[1]

	2007			2008			2009		
	Average	*Lowest*	*Highest*	*Average*	*Lowest*	*Highest*	*Average*	*Lowest*	*Highest*
Inflation (year-on-year)	4.4	4.4	4.5	3.6	2.8	4.3	3.0	2.5	3.8
GDP growth	1.3	0.5	2.0	3.4	2.5	4.2	2.8	2.6	3.0
	June 2008			*June 2009*			*June 2010*		
Inflation	3.8	3.7	3.9	3.1	2.6	3.9	2.7	2.5	3.2
Effective exchange rate index of foreign currencies vis-à-vis the króna (Dec. 31. 1991=100)	121	112	130	125	122	127	127	125	130
Central Bank policy interest rate	11.3	11.1	11.6	6.8	6.6	7.0	5.8	5.8	5.8
Nominal long-term interest rate[2]	7.5	6.8	8.4	6.7	6.1	7.6	6.5	6.0	7.2
Real long-term interest rate[3]	3.8	3.8	3.9	3.5	3.4	3.6	3.4	3.3	3.5
OMXI15 share price index	9,470	8,750	10,003	10,736	9,800	11,457	12,294	11,000	13,529
House prices (12-month change)	4.6	4.0	5.0	2.1	1.5	2.5	2.7	2.5	3.0

1.The table shows percentage changes between periods, except for interest rates (percentages), the foreign exchange rate index and OMXI15 index (index points). Participants in the survey were the research departments of Glitnir, Kaupthing Bank and Landsbanki. 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).

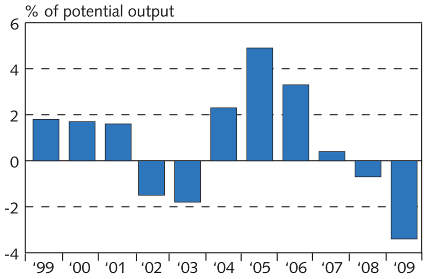
Source: Central Bank of Iceland.

Chart IV-10
Economic growth 1999-2009[1]



1. Central Bank forecast for 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-11
Output gap 1999-2009[1]



1. Central Bank forecast for 2007-2009.
Source: Central Bank of Iceland.

ous forecast, but the contribution from foreign trade is considerably more negative. Export growth has been revised downwards by seven percentage points and the contraction in imports is slightly less. The contraction in GDP in 2009 has been revised to 1.4% from 1% in the March forecast due to less domestic demand, even though the forecast foreign trade contribution has improved.

The output gap turns negative half a year earlier than previously forecast

According to the current forecast, output will have roughly adjusted to potential in the first half of 2008, half a year earlier than forecast in March. The weaker output growth prospects and a revision of potential output cause the output gap to close faster. A lower depreciation ratio on the capital stock compared with March forecast has a positive effect on the size and growth of potential output and contributes towards narrowing the gap. While the output gap estimate for 2007 has been lowered from 1% to 0.4%, this is almost entirely explained by a downward revision of output growth. In 2008 the output gap is forecast to be negative by 0.7%, compared to the previous forecast for a positive output gap of 0.3%. Revised figures for the potential output of the economy have a crucial effect here, because the output growth forecast is broadly unchanged. In 2009, greater potential output and less output growth than in the March forecast combine forces to turn the output gap negative by 3½%. Slack in the economy will peak at the end of the forecast horizon butd begin to decline in Q2/2010.

V Public sector finances

The outlook is for less worsening in the public sector balance than was forecast in March, largely due to less contraction in private consumption over the forecast horizon and a higher real exchange rate in 2007 and 2008, which will stimulate imports.

Sizeable public sector revenue growth in Q1/2007

According to national and government accounts for Q1/2007, general government revenue was up 8% year-on-year in real terms, or by 11 b.kr. The increase can be traced to higher revenues from corporate and indirect taxation. General government expenditure increased by 5½% in real terms, driven by greater wage expenditure, transfers and interest on funds for relending.[1]

More modest contraction in private consumption reduces the deterioration in the balance

There are no major changes in assumptions affecting public sector finances. No numerical expenditure targets were outlined in the new government's policy statement. Hence expenditure assumptions have been left unchanged. Nevertheless, the downturn in the public sector balance for 2007 will be less than was forecast in March. A surplus of 4.7% of GDP is forecast for 2007. Over the next two years, the estimated deterioration in the balance amounts to 8.8 percentage points of GDP, as against 9½ points in the March forecast. As before, the deterioration is mostly due to the effects of the contraction in domestic demand, tax cuts and real exchange rate movements on Treasury revenues. Spending on transfers and infrastructure will also increase. However, the current outlook for exchange rates and private consumption in 2007 and 2008 is more favourable for revenue than in March. Moreover, lower relative prices of public consumption dampen the increase in expenditures as a ratio of GDP in 2008 and 2009. The ratio is projected to rise by 3.6 percentage points instead of 6½ percentage points in *Monetary Bulletin* 2007/1 in March.

Table V-1 Public sector 2005-2009

% of GDP	*2005*	*2006*	*2007*	*2008*	*2009*
Revenues	47.6	46.7	48.4	46.0	43.3
Expenditure	42.3	41.4	43.7	45.5	47.3
Balance	5.2	5.3	4.7	0.5	-4.1
Structural balance	2.9	3.8	4.3	0.4	-2.9
Net debt[1]	1.6	0.8	0.8	1.0	5.2
Total debt	24.1	30.7	25.9	25.0	28.5

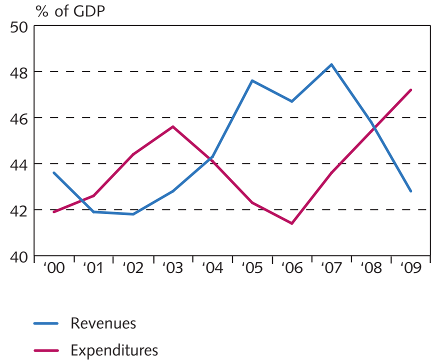
1. Including Treasury liquidity.

Sources: Ministry of Finance, Statistics Iceland, Central Bank forecast 2007-2009.

1. Interest expenditure on funds for relending is offset by interest revenues.

Chart V-1

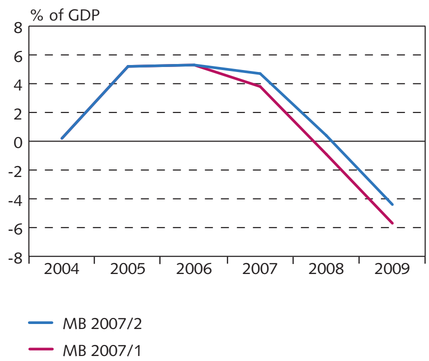
Public sector revenues and expenditures 2000-2009[1]



1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland forecast.

Chart V-2

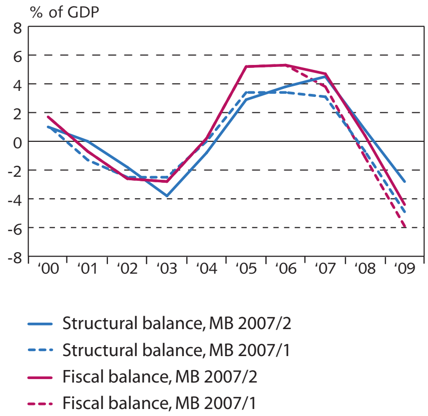
Public sector fiscal balance 2004-2009[1]



1. Central Bank forecast 2007-2009.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart V-3

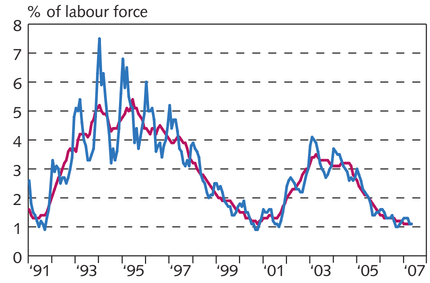
Structural balance of the public sector 2000-2009[1]



1. Central Bank forecast 2007-2009.
Source: Central Bank of Iceland.

Chart VI-1

Unemployment rate
January 1991 - May 2007

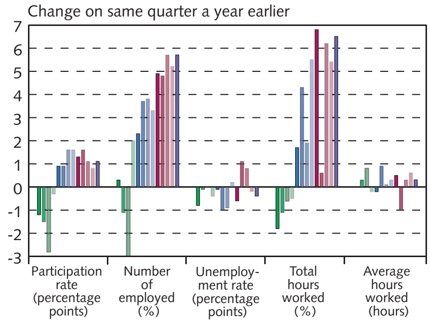


— Unemployment rate
— Unemployment rate (seasonally adjusted)

Sources: Directorate of Labour, Central Bank of Iceland.

Chart VI-2

Changes in labour market
2003-2007

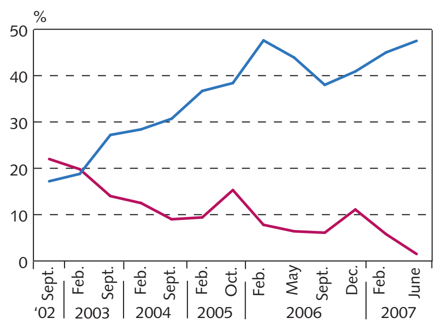


Q1/2004 Q1/2005 Q1/2006
Q2/2004 Q2/2005 Q2/2006
Q3/2004 Q3/2005 Q3/2006
Q4/2004 Q4/2005 Q4/2006
Q1/2007

Source: Statistics Iceland.

Chart VI-3

Recruitment and redundancy plans of
businesses over the next 6 month



— Planning recruitment
— Planning redundancies

Source: Capacent Gallup.

VI. Labour market and wage developments

Since *Monetary Bulletin* was published in March, the labour market has become even tighter. Unemployment continued to fall in April and May. Growth in labour demand does not appear to have slowed down and the number of companies wanting to cut back on staff has never been smaller. Increased demand is still largely met with imported labour, but restrictions on labour migration from outside the European Economic Area (EEA) have made it difficult to respond to a shortage of professionals and other skilled workers by recruiting from abroad. Wage drift has widened as a result and wage rises so far this year have exceeded the Bank's March forecast.

Unemployment is still falling ...

Registered seasonally adjusted unemployment measured 1.1% in April and May. Over the year to date, unemployment has averaged 1.2%. The labour market is now expected to remain tighter than was forecast in March, and projected unemployment has been revised downwards by half a percentage point each year across the forecast horizon. Average unemployment is now forecast at 3% in 2008 and marginally above 4% in 2009.

... and labour use is increasing

Labour use in Q1/2007 went up year-on-year by all measures in Statistics Iceland's labour market survey. The annual rate of increase was greater than in the previous quarter. Hours worked increased by 6½% year-on-year, the number of employed by 5.7% and the participation rate by 1.1 percentage point to 82.2%. The most marked growth in the number of employed was in the youngest age group, 16-24 years (10.3%), unlike last year, when the increase was led by those aged 25-54.

More businesses want to recruit

Surveys of the 400 largest companies in Iceland can provide leading indicators of labour demand.[1] The May 2007 results show a jump in businesses' demand for labour from the previous survey in February. More than 51% of businesses reported that labour was in short supply in May, compared with 40% in February. Almost half the surveyed companies – 3 percentage points more – wanted to recruit over the coming six months. Those wanting to cut back on staff reached a record low at a mere 1½%. Only once before has such a large proportion of businesses wanted to recruit employees, in September 2005.

Companies' attitudes to recruitment vary quite considerably depending on their location. More than half of businesses in and around Reykjavík are eager to take on staff, but just over one-third in regional Iceland. For the first time since these surveys were launched, there was no regional bias among those wanting to reduce staffing levels. In earlier surveys, noticeably more regional companies have

1. Regular surveys have been conducted since September 2002, commissioned by the Ministry of Finance, Confederation of Employers and Central Bank of Iceland.

wanted to cut back than those in and around Reykjavík. Planned recruitment was least in the fisheries sector (17%) but most pronounced in financial services and insurance and specialised services (72-76%).

Growing shortage of skilled employees

The recent pattern of importing labour to meet demand has continued. For each month over the first five months of 2007, on average 470 new foreign nationals joined the labour market and a further 330 migrants moved to new employers. More than 90% of new employees originated from the EU-8 countries.[2]

As yet there is no indication of any let-up in labour supply from EU-8, despite a marked drop in unemployment on the continent. Job growth there could have exacerbated Iceland's recent shortage of skilled employees, however. According to the survey of leading companies, the financial services and insurance and specialised services sectors are keen to recruit more staff and more than 70% report shortages. Posts in these sectors appear more difficult to fill from the EEA and obtaining work permits for employees from outside it is a lengthy process. Employers have therefore increasingly been overbidding for local specialists.

Growing wage drift among professionals

The opening of the Icelandic labour market to EU-8 countries eased underlying wage pressures somewhat in the second half of 2006, especially for unskilled workers. Firm demand has amplified the shortage of skilled labour in recent months, however, creating substantial wage pressures among these groups.

Growing excess demand which cannot be met with imported labour has been reflected in sizeably higher wage rises for these groups than for other sections of the labour force so far this year. While most of the labour force received a 2.9% rise on January 1 under general wage settlements, the quarterly rise in the wage index for the labour market as a whole amounted to 4.2% in Q1/2007. Wages of professionals, technicians, semi-professionals and clerks went up by considerably more, in the range 4.8-5.9%.[3]

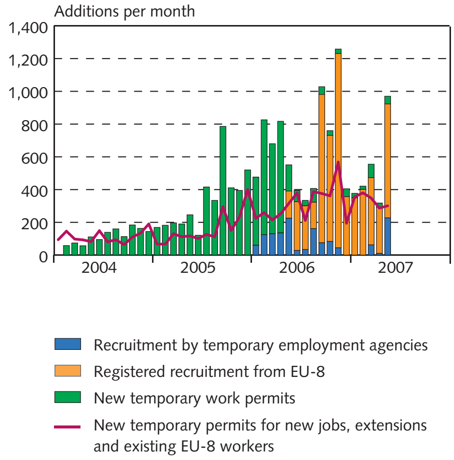
Higher wages creep up the entire pay scale

Following the review of private sector wage settlements agreed between the Icelandic Federation of Labour (ASÍ) and the Confederation of Icelandic Employers (SA) in summer 2006, the Central Bank assumed in its forecasting that increases for the lowest-income groups, which had been the main aim of the review, would spread up the pay scale in such a tight labour market. This appears to have happened, although the wage drift emerged later than the Central Bank had

2. EU-8: EU accession states whose nationals were allowed free movement of labour on May 1, 2006, i.e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

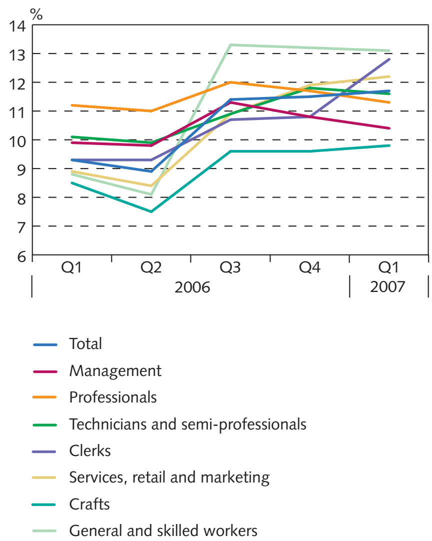
3. With the current rapid labour turnover rate, Statistics Iceland's index probably underestimates wage changes quite significantly, since it measures only wage changes for employees with the same employer. Wage changes for people who switch to higher-paid jobs are not reflected in the index.

Chart VI-4
Foreign labour



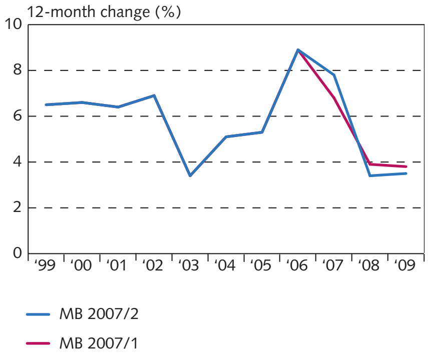
Source: Directorate of Labour.

Chart VI-5
Private sector wage index by occupational group
Change on a year earlier (%)



Source: Statistics Iceland.

Chart VI-6
Unit labour cost 1999-2009[1]



1. Central Bank forecast 2007-2009.
Source: Central Bank of Iceland.

forecast. Wage costs were overestimated in the forecasts published in *Monetary Bulletin* 2006/2 and 2006/3 in July and December last year. In March 2007 the wage projections were revised downwards on the assumption that the dampening effect of migrant labour on wage drift could have been underestimated. Substantial wage drift has been noted since then, however, especially in the managerial and professional segments, and far in excess of the forecast in March. Leading indicators also imply that even stronger labour demand will build up in the coming months.

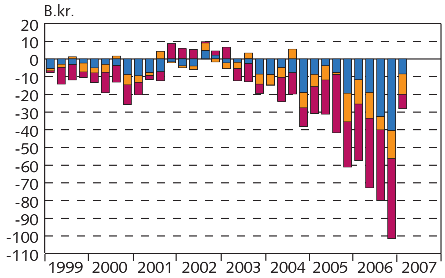
Uncertainty about migrant labour supply and pending wage settlements

In light of the tighter labour market, the Central Bank's forecast for the increase in unit labour costs (ULC) has been revised upwards since March, to 7.8% from 6.8%. However, as a result of faster growth of productivity, the projected increase in ULC in 2008-2009 has been revised downwards, but wage assumptions are broadly unchanged. The risk in the wage cost forecast for the coming years is to the upside. A higher forecast rate of inflation over the first part of the horizon fuels uncertainties about wage increases in the years to come due to the pending wage settlements, and supply of migrant labour is also more uncertain.

VII External balance

The current account deficit in Q1/2007 amounted to 28 b.kr., a decrease of almost 74 b.kr. from the previous quarter. This is the greatest change within a single quarter since quarterly measurements were introduced in 1990. Around half of the contraction derived from a smaller deficit on the merchandise account, 4% on the service account and 46% on the balance on income. Net current transfer grew sharply to 1.4 b.kr. in Q1/2007, however, due to increased contributions to development aid and international agencies.

Chart VII-1
Current account balance components[1]
Q1/1999 - Q1/2007



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

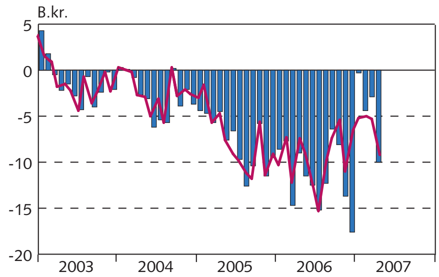
Irregular items explain the smaller current account deficit

In light of heavy imbalances in Iceland's foreign trade in recent years, news of a contraction in the current account deficit is certainly encouraging. However, most of this sharp reduction is attributable to irregular items rather than an easing of underlying imbalances. Increased merchandise exports compared with the March forecast are largely explained by transactions involving aircraft. Statistics Iceland's revised data on merchandise trade in 2006 contain a large-scale import of aircraft that was not included in preliminary figures. These aircraft were then re-exported in the first months of 2007. As a result of this adjustment, total imports in 2006 were considerably greater than initial statistics indicated. By the same token, aircraft exports have a major impact on the merchandise account balance in Q1/2007. If irregular items (i.e. sales and purchases of ships and aircraft) are excluded, the merchandise account deficit in Q1/2007 is more than double, at almost 18 b.kr. instead of just over 8 b.kr. (see Chart VII-2).

Imports of goods and services in Q1/2007 were in line with the Central Bank's forecast, while exports of goods and services were much greater, even if irregular items are excluded. Merchandise account data for April and May imply that the trade deficit in Q2/2007 will be broadly in line with the forecast presented in *Monetary Bulletin* in March.

In Q1/2007, the service account deficit decreased by just over 2 b.kr. year-on-year. Growth in tourist arrivals and overnight stays so far this year indicates a sizeable increase in tourism receipts ahead in 2007. However, there are indications of increased foreign travel by Icelanders during the year, which will drive up service expenditures. Offsetting this, service imports connected with investments in the aluminium and power sectors will decline year-on-year in 2007. On the whole, the service account deficit may be expected to continue to narrow over the coming quarters.

Chart VII-2
Merchandise account balance
Monthly data at constant prices



Sources: Statistics Iceland, Central Bank of Iceland.

Sharp drop in the income deficit in Q1/2007

A marked quarterly change took place in the balance on income.[1] Income receipts grew by 37 b.kr., but income expenditures by less than 5 b.kr. It should be borne in mind that Iceland's gross external

1. The balance on income captures wage, interest and dividend flows to and from Iceland. Reinvested earnings, i.e. profits of outward foreign direct investments net of profits of inward foreign direct investments, are also classified under the balance on income.

debt is substantially larger than gross external assets, to the tune of 1,283 b.kr. Thus the income account figures reflect a major turnaround in returns on the asset stock. The sharpest increase was in dividends and reinvested earnings, which soared from 35 b.kr. in Q4/2006 to almost 65 b.kr. in Q1/2007. Reinvested earnings accounted for the lion's share of the increase, at almost 61 b.kr., mainly due to hefty profits by a single company in which Icelandic residents have a major shareholding.

How the balance of income will develop over the coming quarters is difficult to predict, given the predominant role of returns on foreign direct investment. Returns depend on the operating performance of foreign companies in which residents hold investments. Likewise, non-resident holding companies own large shares in resident companies. If these companies perform well, they can exert a negative effect on the current account deficit via the balance on income.[2]

Marginal quarterly improvement in the international investment position

Iceland's international investment position (IIP) was negative by 1,283 b.kr. at the end of Q1/2007 and had narrowed by 114 b.kr. from the end of 2006. Both foreign assets and foreign debt swelled over this period, but the former by more, as the change in IIP reveals. However, most of this increase may be attributed to the strengthening of the króna.

Current account outlook broadly unchanged from previous forecast

Given the decrease in the current account deficit in Q1/2007 – due to irregular items in the merchandise account and an unexpected narrowing of the balance on income – the forecast for the current account deficit in 2007 has been revised downwards. A rough estimate based on average return on investment stocks produces the contrary indication of a substantial risk that it will deteriorate. The forecast for 2008 is broadly unchanged, while a smaller deficit is also forecast for 2009, reflecting an improvement in the outlook for the development of the terms of trade.

2. This topic is discussed in more detail in a paper by Daníel Svavarsson and Pétur Örn Sigurdsson on pp. 53-73 of this edition of *Monetary Bulletin*.

VIII Price developments

Although the real exchange rate has been higher than forecast in *Monetary Bulletin* in March, inflation has been higher than expected as well. Twelve-month headline inflation has slowed down, in particular due to cuts in consumption taxes and base effects. The hefty price rises in spring 2006 caused by a sharp depreciation of the króna have now passed out of the twelve-month CPI figures. By this measure, inflation dropped from 5.9% in March 2007 to 4% in June, even though the CPI rose by 2% over the same period. Underlying inflation is considerably higher. Excluding volatile items, public services and changes in mortgage costs and indirect taxes, twelve-month inflation now measures 6.2% (see Box VIII-1 on p. 32). Thus strong inflationary pressures are still present, fuelled by robust domestic demand and sharp increases in domestic costs over the past year.

Higher than expected inflation in Q2/2007

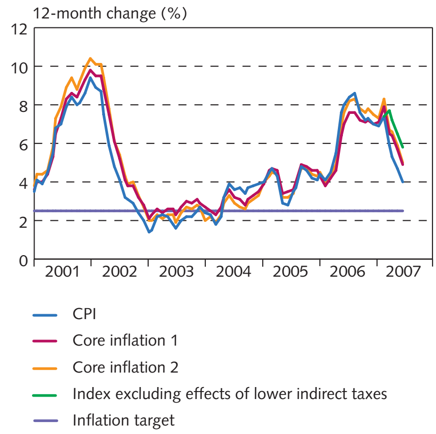
Annual inflation in Q1/2007 measured 6½%, in line with the Central Bank forecast which was made towards the end of the quarter. It is heading for 4.4% in Q2/2007, almost one percentage point more than forecast in March. Most of the deviation is explained by unexpectedly large rises in house prices. CPI measurements including and excluding the housing component have diverged sharply in recent months. Twelve-month inflation excluding housing measured 1.7% in June, which is over two percentage points less than the full CPI. The difference was under one percentage point at the beginning of 2007.

No let-up in house price inflation

So far this year the real estate market has picked up sharply and been characterised by brisk turnover and rising prices. For a long time, analysts had predicted a sizeable cooling of the housing market. It appeared to have begun towards the end of 2006. Over the year to date, however, house prices have again been driving inflation, causing the CPI to rise by almost 1½ percentage points over that period. Since the publication of *Monetary Bulletin* in March, seasonally adjusted house prices in and around Reykjavík have gone up by more than 4% and seasonally adjusted turnover in the real estate market by just under 4% (based on day of sale agreement, not registration of property transfer). In June 2007, the twelve-month rise in the housing component of the CPI amounted to 11%.

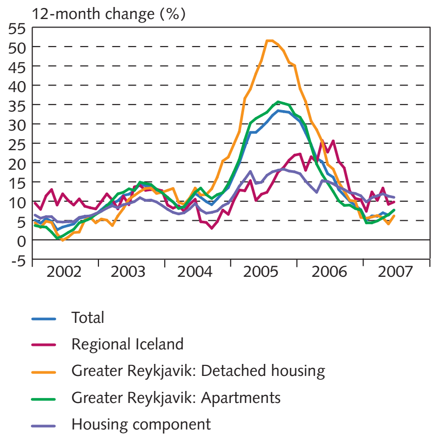
In light of economic developments in recent months, the resurgence in house prices is not surprising. Real disposable income has soared over the past year, boosted by large wage rises, tax cuts and increased employment. A strong housing market furthermore tends to coincide with a strong króna. These conditions are reflected in the current peak in consumer sentiment. Also, the residential housing market has turned more turbulent again after the Housing Financing Fund (HFF) raised its loan-to-value ratios and mortgage ceilings in February. The commercial banks responded by raising their own loan-to-value ratios and easing mortgage terms, as well as broadening their range

Chart VIII-1
Inflation January 2001 - June 2007[1]



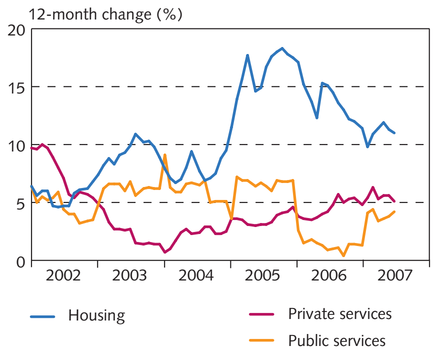
1. The core indices are compiled on the same basis as the CPI, with Core Index 1 excluding prices of agricultural products and petrol, and Core Index 2 also excluding prices of public services.
Source: Statistics Iceland.

Chart VIII-2
The CPI housing component and market prices of housing January 2002 - June 2007



Source: Statistics Iceland.

Chart VIII-3
Prices of housing and services
January 2002 - June 2007



Source: Statistics Iceland.

Box VIII-1

Estimating underlying inflation

The Central Bank of Iceland's inflation target aims at an average rate of inflation, measured as the twelve-month increase in the CPI, of as close to 2½% as possible. In order to attain the target, the Central Bank's monetary policy must be forward-looking. It makes little difference if twelve-month inflation has been 2½%, if underlying inflation pressures are building up. Thus the Central Bank attempts to distinguish transitory and one-off components of past inflation from the core components, or underlying inflation, that provide indications about future inflation developments.[1]

Estimates of underlying inflation attempt to isolate price changes that reflect volatile and short-lived effects, such as changes in indirect taxes, supply-side shocks and changes in relative prices. Central banks generally consider it unnecessary to respond to first-round effects of such price changes, even if they cause short-lived deviations from target. Under certain conditions, however, temporary fluctuations can have lasting effects that call for a response.

Measures of core inflation

Statistics Iceland publishes two monthly core inflation indices alongside the headline consumer price index (CPI). The core indices have the same base as the CPI but Core Index 1 excludes prices of vegetables, fruit, other agricultural products and petrol, and Core Index 2 excludes these items and public services prices as well. Some of these subcomponents are highly volatile, their prices are determined in global markets or regulated, and therefore more or less beyond the influence of monetary policy.

Changes in indirect taxes and subsidies affect prices at the time that they take place. They also have a temporary impact on headline inflation. However, they do not necessarily affect underlying inflationary pressures in the economy and therefore do not indicate a lasting change in the inflation rate.

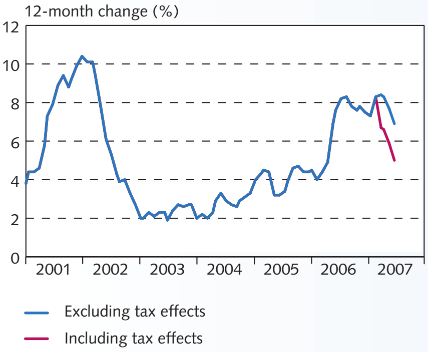
In March 2007, the Icelandic government cut value-added tax and excise taxes on a variety of goods and services, with the aim of lowering food prices. At this juncture, Statistics Iceland began publishing an index excluding the first-round effects of cuts in indirect taxes, in which VAT is kept constant at the rate from the preceding February. This index will provide an important measure of underlying inflationary pressures until the first-round effects of the cut in VAT are no longer captured by the index, in March 2008. Another indicator of underlying inflation is core inflation excluding the first-round effects of cuts in indirect taxes, which shows general price developments excluding volatile items and regulated prices.[2]

Marked divergence between headline and underlying inflation

When the effect of the reduction in indirect taxes was felt in March, the CPI fell by 0.3% and twelve-month inflation from 7.4% to 5.9%.[3] However, the index excluding the tax effects rose by 1.4%, driven by strong underlying inflationary pressures. For this reason, a marked divergence has formed between twelve-month headline inflation and measures of underlying inflation that exclude these tax effects. Headline inflation in June measured 4%, the lowest rate since August 2005. Excluding the effects of the tax cuts, however, the inflation rate was

Chart 1

Core inflation including and excluding tax effects January 2001 - June 2007[1]



1. Based on core inflation 2 which excludes agricultural products, petrol and public services.
Source: Statistics Iceland.

1. This topic is discussed in Pétursson, Thórarinn G. (2002), Evaluation of core inflation and its application in the formulation of monetary policy, *Monetary Bulletin* 2002/4, 54-63 and in The new framework for monetary policy, *Monetary Bulletin* 2001/2, 40-45.
2. Various other methodologies are used to estimate underlying inflation. These include statistical techniques such as the trimmed mean and multivariate time series. Another common approach is to reduce the weighting of highly volatile subcomponents on the basis of historical standard deviation. See further Pétursson (2002), op. cit.
3. Prices of food and beverages decreased by 7.4%, catering by 3.2%, private sector services by 0.6% and public sector services by 0.9%.

5.8%, after falling from 7.7% in March. The difference between headline inflation and core inflation excluding the tax effect is even more pronounced. In June, the twelve-month increase in Core Index 2 was 6.9%, down from 8.4% in March.

Furthermore, estimates of underlying inflation should ignore the impact of real interest rates on measured inflation. Since monetary policy has a direct effect on the interest cost component (largely reflected in the housing component of the index), it would be misleading to regard it as part of underlying inflation. The first-round upward effect of higher interest rates on the CPI amounted to 0.7 percentage points in the last twelve months. In terms of core inflation excluding tax effects and after adjustment for higher real interest rates, underlying inflation currently measures more than 6%. When such high underlying inflationary pressures are present, the Central Bank is still a long way from attaining its inflation target.

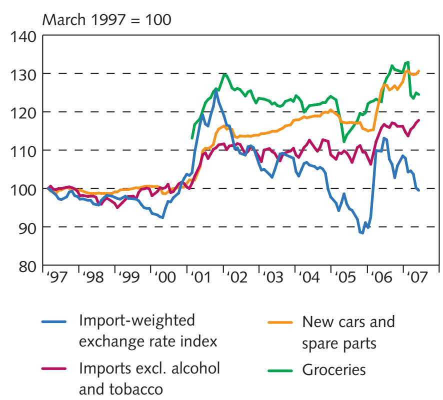
of housing credit products in both domestic and foreign currency. A reduction in the HFF mortgage rate in April also fuelled demand. To redress their competitive position, the banks promoted low-interest foreign currency-denominated loans. The recent stability and strengthening of the króna may have made foreign loans an attractive option for homebuyers, even though its current strength increases the likelihood of a subsequent depreciation and correspondingly heavier debt service. Another factor has been the recent debate about the benefits of foreign currency-denominated loans over indexed mortgage credit in the current climate of high domestic interest rates and persistent inflation. Also, market agents appear to expect the króna to stay strong for as long as the short-term interest rate differential with abroad remains wide.

Exchange rate developments ease inflationary pressures

The króna has been buoyant since autumn 2006, strengthening by almost 4% since the last *Monetary Bulletin* was published in March. The exchange rate index reached a low of 112 at the end of May. Exchange rate developments have eased inflationary pressures but not led to much reduction in import prices. Compared with how quickly imported goods prices rose when the króna took a dive in spring 2006, they seem much stickier in the other direction. Several explanations are possible. Domestic costs have risen steeply over the past year, counteracting the stronger domestic currency to some extent. Retailers who regard the appreciation as transitory are less likely to cut prices, especially if domestic demand is robust. Nonetheless, the twelve-month change in prices of imported food and beverages is negative by more than 3%, mostly because of the cut in value-added tax.

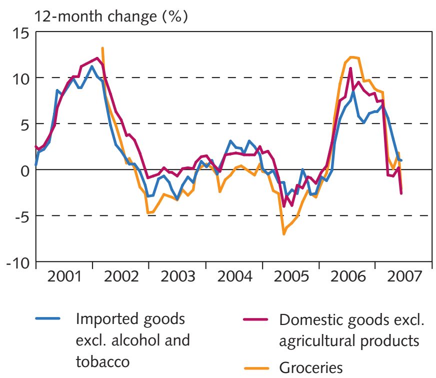
Petrol prices have been volatile over the past year, reflecting changes in world market prices. Over the past three months, petrol prices have risen by almost 8%, despite the higher real exchange rate. This has contributed just over 0.4 percentage points to the CPI over this period. Last autumn's drop in petrol prices, and the fact that the surge in petrol prices in spring 2006 has now passed out of the measurements, mean that petrol prices have actually fallen by 0.3% over the past twelve months. Excluding petrol, prices of imported goods have gone up by 1.5% at the same time.

Chart VIII-4
Import-weighted exchange rate and import prices March 1997 - June 2007



Source: Statistics Iceland.

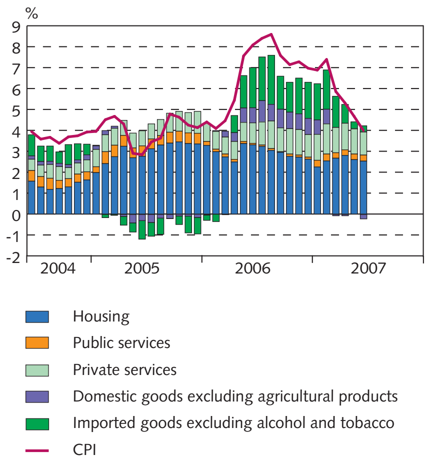
Chart VIII-5
Goods prices January 2001 - June 2007



Source: Statistics Iceland.

Chart VIII-6
Components of the CPI
June 2004 - June 2007

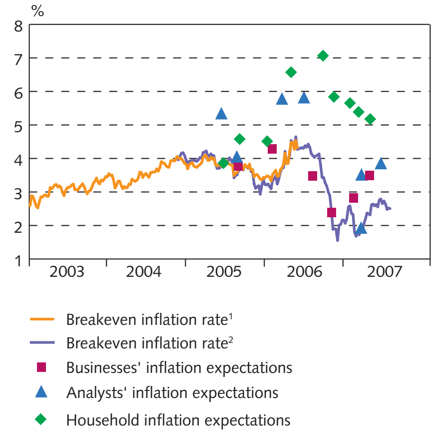
Contribution to CPI inflation in past 12 months



Source: Statistics Iceland.

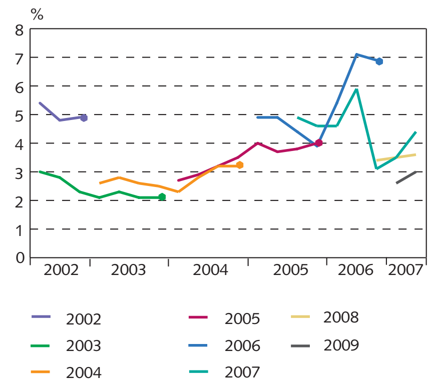
Chart VIII-7
Inflation expectations

Weekly data January 7, 2003- July 3, 2007



1. Breakeven inflation rate is the spread between RIKB 13 0517 and RIKS 15 1001. 2. Breakeven inflation rate is the spread between RIKB 13 0517 and HFF150914. Household, business and analysts' inflation expectations are based on inflation one year ahead.
Source: Central Bank of Iceland.

Chart VIII-8
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.

Impact of cuts in indirect taxes and excise taxes

A precise estimate of the aggregate impact of the cuts in indirect taxes and excise taxes in March is difficult to make. A comparison of twelve-month CPI figures including and excluding the tax changes implies that the total impact was about 1.8 percentage points. The reduction in VAT on food and beverages was passed on in full when goods prices fell by 7.5% in March. The impact of lower excise taxes was estimated at 0.2 percentage points, half of which has been passed on to prices. The impact on the catering segment was much slighter than expected, at less than 0.2 percentage points – Statistics Iceland had forecast 0.4 percentage points. Thus some caterers have retained the reduction in VAT, perhaps in response to growing demand and higher domestic costs, especially large wage rises. Prices of domestic goods excluding agricultural products have fallen by more than 2.5% over the past twelve months, and domestic food and beverages by more than 4.5%.

Recent wage drift could fuel services price inflation

Services price inflation has recently slowed down slightly and the twelve-month increase in prices of private sector services stood just above 5% in June, after peaking at 6.3% in February. Twelve-month services price inflation could continue to fall in the summer, partly because of the base effect caused by substantial rises in summer 2006. However, it could equally be exacerbated by greater cost pressures resulting from recent wage drift (as discussed in Section VI on p. 26). Noticeable changes in subcomponents of private sector services include increases of 25% in accommodation rates and 50% in hotel services over the past twelve months.

Inflation expectations up by most measures

Most measures of inflation expectations have been on the rise recently as inflation outstrips forecasts. In a survey of business sentiment among Iceland's largest companies, conducted on May 8-31, executives forecast 3.6% inflation on average over the next twelve months, up from 2.9% in the previous survey in February. Household expectations have inched downwards, however. A survey conducted on May 15-29 showed that households expect 5.3% inflation over the next twelve months, down by 0.4 percentage points since February. Thus households still expect inflation to run high in the near-to-medium term.

In another survey in June (see Box IV-1 on p. 23), financial market analysts upped their inflation expectations in 2007 from the forecast published in *Monetary Bulletin* in March. On average, analysts forecast 4.5% inflation year-on-year in 2007 and their forecast for 2008 was unchanged at 3.6%.

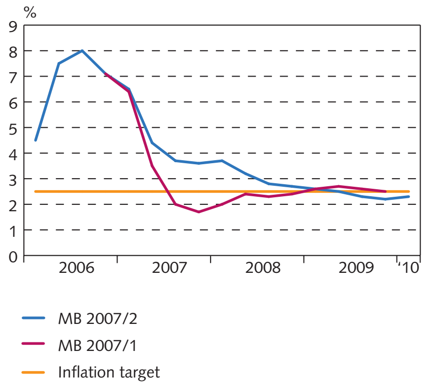
Measured by the breakeven inflation rate in the bond market, inflation expectations have risen since the last *Monetary Bulletin* in March, and averaged 2.6% between April 3 and July 3.

IX Inflation forecast

Slower disinflation than previously forecast

As pointed out in preceding sections of this edition of *Monetary Bulletin* and discussed in more detail in Box IX-1 on p. 38, underlying inflationary pressures appear to have been stronger than expected in the last macroeconomic and inflation forecast in March. The disinflation process has therefore been slower than forecast and business and household inflation expectations have risen. The current outlook is that the inflation target will be attained later than was forecast in March. Inflation is now not expected to be brought to target until the first half of 2009, instead of reaching target immediately in mid-2007 and stabilising there from mid-2008 (see also Table 2 in Appendix 1 on p. 43).

Chart IX-1
Inflation – comparison with MB 2007/1



Sources: Statistics Iceland, Central Bank of Iceland.

Faster depreciation will boost inflationary pressures ...

The króna is stronger now than in March and the real exchange rate is close to a historical peak. As a result of the high real exchange rate and faster rises in global long-term interest rates, the króna is expected to depreciate more rapidly than was forecast in March, and end up somewhat weaker at the end of the forecast horizon.

The appreciation of the króna in recent months has only driven down inflation to a limited extent. Retailers have probably expected the recent strength of the króna to prove short-lived and therefore not fully adjusted prices. Accordingly, they may have some leeway when the depreciation begins. However, there is a risk that a significant depreciation will drive up inflation. Domestic demand is robust and domestic costs have increased by more than is compatible with price stability. The prospect of a more rapid depreciation has thus caused the inflation outlook to deteriorate.

... which must be met by closing the output gap faster

As pointed out in Box IX-1, potential output growth has been revised upwards from March and output growth downwards on average, despite a somewhat milder contraction in domestic demand in 2008. Accordingly, the exchange rate of the króna and net trade will bear more of the brunt of the adjustment.

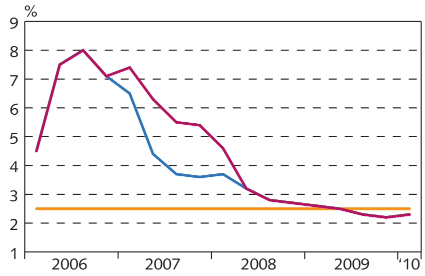
Higher potential output growth and slower output growth will close the output gap faster than was forecast in March. It is now expected to turn negative around mid-2008, roughly half a year earlier than previously forecast.

Headline and underlying inflation close to target at end-2008

As discussed in Section VIII on p. 31 and Box VIII-1 on p. 32, underlying inflation is still running high. Demand and cost pressures have been strong and house prices have soared instead of the slow decline forecast in March.

In its March *Monetary Bulletin*, the Central Bank criticised the timing of cuts in consumption taxes for contributing to higher real disposable income and, other things being equal, relaxing the fiscal stance, at the same time as the main task of economic policy was to

Chart IX-2
Inflation including and excluding first-round effects of indirect taxes



- Baseline forecast
- Inflation forecast excl. first-round effects of indirect tax cuts
- Inflation target

Sources: Statistics Iceland, Central Bank of Iceland.

dampen domestic demand pressures. It also underlined that monetary policy decisions would ignore the temporary first-round effects of tax cuts on headline inflation.

Chart IX-2 shows the slower reduction in inflation excluding the first-round effects of the tax cuts than in headline inflation. Inflation excluding the first-round effects is forecast at 5½% in Q4/2007, but headline inflation 3½%. It will remain consistently higher until Q2/2008, when the effects pass out of the twelve-month inflation measures. Headline and underlying inflation will be close to target in late 2008, but the target will not be fully attained until the first half of 2009.

Great uncertainty about how developments will unfold

Central Bank staff base their assessment of the economic outlook three years ahead on macroeconomic models as well as possible shocks that could affect developments. Such forecasts are invariably fraught with uncertainties, especially in a climate where imbalances are so huge that historical precedents or comparable scenarios from other countries are lacking.

As Table IX-1 shows, the main uncertainties are broadly unchanged. There is still considered to be some risk that the króna will weaken, given the high real exchange rate and heavy funding requirement for the current account deficit (see further Box IX-2 on p. 40). Likewise, the inflation outlook could deteriorate if the fiscal stance turns out slacker than in the baseline forecast and further investments in the aluminium and power sectors are decided within the forecast horizon. The baseline forecast does not assume any new investments in the aluminium and power sectors (see Box IX-2). Offsetting this, a fall in asset prices and quicker monetary policy transmission could ease underlying inflationary pressures compared with the baseline forecast. It is also conceivable that the pass-through of a faster depreciation of the króna would be less than historical experience would suggest, if the economy can be cooled sufficiently quickly and if inflation expectations are sufficiently anchored. Although higher global interest rates would contribute to a depreciation of the króna and short-term inflationary pressures, they would also spur an increase in domestic interest rates. In the long run this would tighten the monetary stance, thereby narrowing the output gap and reining in inflation. There is also a risk that wage increases in forthcoming national settlements are underestimated, although migrant labour might ease pressures in the labour market.

Risk profile still tilted to the upside ...

In assessing the economic outlook and in monetary policy decision-making, it is important to consider not only the baseline forecast but also the risk profile. Alternative scenarios are presented to highlight the impact of specific risks, and important asymmetric risks are assessed.

Chart IX-3 shows the confidence intervals of the exchange rate. Reflecting the overview of the main asymmetric risks in Table IX-1, the probability distribution of the exchange rate is tilted to the upside.

Table IX-1 Main asymmetric uncertainties in the baseline forecast

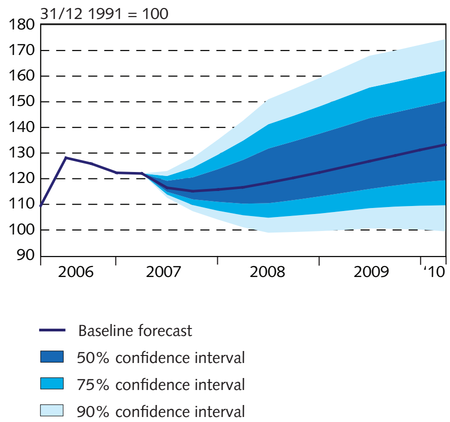
Uncertainty	*Explanation*		
Exchange rate developments	Wide current account deficit and high real exchange rate could exert more downward pressure on the króna. So could foreign inverstor flight and rises in global interest rates if they are underestimated		
Private consumption	Falling asset prices and growing debt service could curtail private consumption growth beyond what is forecast		
Public sector finances	The fiscal stance could be laxer than is assumed		
Output gap	Turnover indicators and survey findings could imply that economic activity in 2006 and the year to date is underestimated		
Wage costs	Wage rises in connection with forthcoming national settlements could be underestimated		
Debt service	The speed and scale of rises in foreign interest rates could be underestimated, increasing external debt service beyond what is forecast		
Planned investments in aluminium and power sectors	Decisions on investments in aluminium-related projects could spur confidence and bolster the króna and domestic demand, ultimately generating inflationary pressures when the initial impact on the exchange rate unwinds		
Transmission of monetary policy	If the transmission of monetary policy is stronger than assumed in the forecast, disinflation could be faster		
Central Bank risk profile	*One year ahead*	*Two years ahead*	*Three years ahead*
Monetary Bulletin 2006/3	Upward	Upward	...
Monetary Bulletin 2007/1	Upward	Upward	Upward
Monetary Bulletin 2007/2	Upward	Upward	Upward

However, the forecast is more symmetric than in March, because more allowance is made for a depreciation in the baseline forecast itself. The baseline forecast risk profile and alternative scenarios in Box IX-2 on p. 40 also indicate that the output gap risk profile over a three-year horizon is tilted to the upside (Chart IX-4). Consequently, the risk profile of both headline inflation and inflation excluding the temporary first-round effects of cuts in consumption taxes is titled to the upside as well (Charts IX-5 and IX-6). As underlined above, inflation is not likely to be brought back to target until the first half of 2009, but the probability finally exceeds 50% around the middle of 2008.

... with a significant probability that a tighter monetary stance than projected in the baseline forecast will be needed

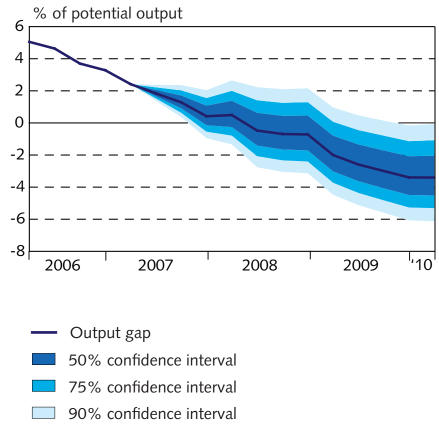
Uncertainties in assessing the macroeconomic and inflation outlook make the policy rate path that is required to bring inflation to target within the forecast horizon highly uncertain. The policy rate will need to respond if economic developments unfold differently from the baseline forecast or monetary policy is not transmitted as expected.

Chart IX-3
Effective exchange rate
Forecasting period: Q2/2007 - Q1/2010



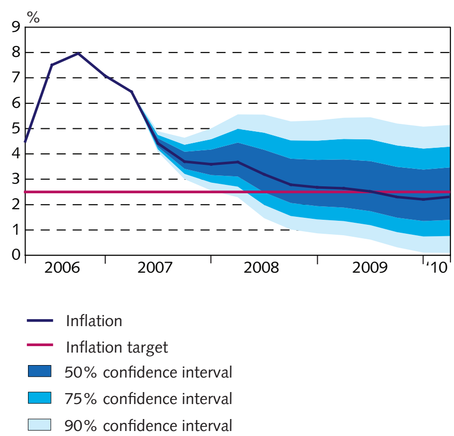
Source: Central Bank of Iceland.

Chart IX-4
Output gap
Forecasting period: Q2/2007 - Q1/2010



Sources: Statistics Iceland, Central Bank of Iceland.

Chart IX-5
Inflation
Forecasting period: Q2/2007 - Q1/2010



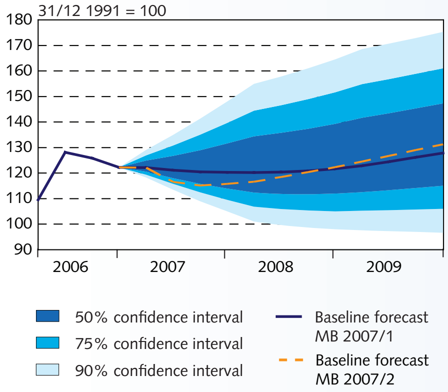
Sources: Statistics Iceland, Central Bank of Iceland.

Box IX-1

Changes in the baseline forecast from Monetary Bulletin 2007/1

Chart 1
Effective exchange rate

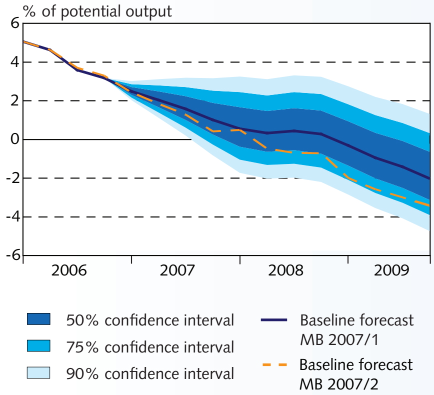
Baseline forecast and uncertainty bands MB 2007/1
and baseline forecast MB 2007/2



Source: Central Bank of Iceland.

Chart 2
Output gap

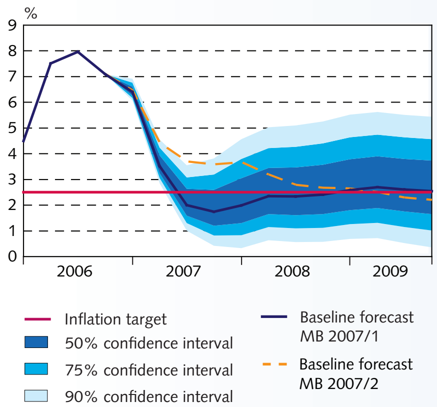
Baseline forecast and uncertainty bands MB 2007/1
and baseline forecast MB 2007/2



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 3
Inflation

Baseline forecast and uncertainty bands MB 2007/1
and baseline forecast MB 2007/2



Sources: Statistics Iceland, Central Bank of Iceland.

As new data become available, the economic position and outlook are reassessed and forecasts revised accordingly. This Box describes the main changes in the macroeconomic and inflation forecast since *Monetary Bulletin* 2007/1 in March and compares the current baseline forecast with the probability distribution of the previous one.

The main finding is that a rather tighter monetary stance is now needed to bring inflation to target within an acceptable horizon. Leaving the policy rate path unchanged from the March baseline forecast would have meant an even slower return to the inflation target, inviting the risk that inflation expectations would move above target again at the end of the horizon. A crucial factor is the faster depreciation of the króna in the current baseline forecast.

Faster depreciation than in the previous baseline forecast

In March, a minor appreciation of the króna was forecast for the first part of the horizon, gradually unwinding in the latter part of 2008. However, the króna has appreciated by more than was forecast and is currently roughly 10% stronger than at the beginning of this year. As Chart 1 shows, such a strong appreciation was considered fairly unlikely in March. Given the high real exchange rate, the expected persistent current account deficit and higher global long-term interest rates than in the last forecast, underlying downward pressure on the króna has probably increased since the last *Monetary Bulletin*. The current forecast assumes a faster depreciation. At the end of the horizon the exchange rate index stands at 133, having weakened by more than 12% over that period instead of only 6% in the March forecast.

Output gap turns negative earlier due to less output growth and revised potential output

The potential output of the economy has been revised since March. Estimated depreciation of the capital stock has been revised, which changes the underlying growth potential of the economy. The capital stock will hence grow more rapidly than was expected in March. This also implies faster growth of total factor productivity and labour productivity over the next few years. The output growth forecast for 2007 and 2009 has been revised downwards, but is broadly unchanged for 2008. Thus the output gap will close more rapidly and is forecast to turn negative in mid-2008, almost half a year earlier than in the March forecast (Chart 2). Slack will increase until the end of the forecast horizon, then begin to reverse afterwards.

Slower disinflation than forecast in *Monetary Bulletin* 2007/1

Inflation in Q2/2007 turned out higher than was forecast in March, even though the króna appreciated. The forecast for Q2/2007 was 3.5% but the actual rate was one percentage point higher. An even wider divergence is seen for Q3/2007, when the current forecast falls just outside the 90% confidence bands of the March forecast (Chart 3).

Most of this discrepancy is explained by soaring house prices. In March, house prices were forecast to remain virtually unchanged over 2007. Rising petrol prices, higher wage rises and growing wage drift have contributed as well. Persistent inflationary pressures may also indicate that the robustness of the economy in 2006 was underestimated. There are numerous indications that domestic demand growth and output growth were higher than is shown in the preliminary national accounts figures. If so, underlying inflationary pressures would have been underestimated in March, which is reflected in underforecast inflation in the first quarters of this year.

The outlook is therefore for slower disinflation in 2007 than was expected in March. Inflation in Q4/2007 is currently forecast at 3½%, instead of less than 2% in the March forecast. From the second half of 2008, however, the inflation outlook is broadly the same as in the previous forecast. Thus inflation will move onto target somewhat later, in the first half of 2009 instead of Q3/2007.

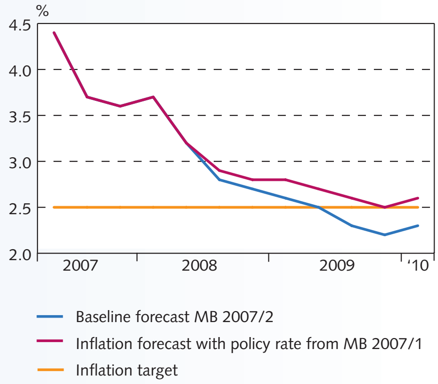
Impact on the policy rate path in the baseline forecast

Because the inflation rate has fallen more slowly and inflation expectations have been higher than was expected in March, the real policy rate has edged down since the last *Monetary Bulletin*. The monetary stance is therefore not as tight as previously forecast. In order to offset the weaker real policy rate, higher starting rate of inflation and faster forecast depreciation of the króna, the output gap needs to be closed more rapidly with a larger degree of slack later in the forecast horizon.

However, it would seem difficult to prevent a delayed adjustment back to the inflation target by tightening the monetary stance, since underlying cost pressures are so strong that this can only be achieved with a substantially greater cost in the form of lost output. The stance is therefore tightened by postponing the downward cycle of the policy rate by one quarter and implementing it more slowly. Nonetheless, the policy rate will begin to decline more rapidly later along the horizon and end at a lower level than was forecast in March. This policy rate path is sufficient to bring inflation to target in the first half of 2009, as mentioned above, which will prevent a resurgence of inflation and inflation expectations in spite of a fairly fast depreciation of the króna in the second half of the forecast horizon. The policy rate path used in the baseline forecast in the March *Monetary Bulletin* would have resulted in even slower disinflation, creating a risk that inflation expectations would have moved above the target beyond the horizon (Chart 4).

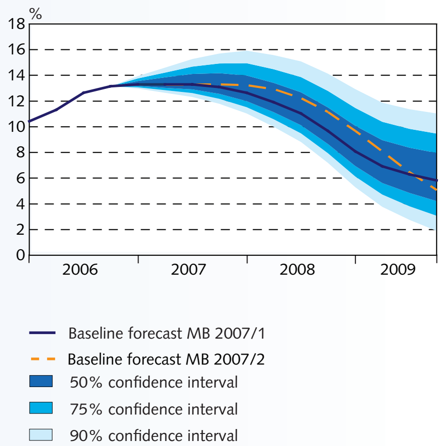
According to the revised path, the policy rate remains unchanged until early next year, when it gradually lowers. It is just over 11% in Q4/2008, compared with just under 10% in the last *Monetary Bulletin*. In Q4/2009, on the other hand, the policy rate is down to 5% in the current forecast, almost 1 percentage lower than projected in March. The policy rate path lies within the 50% confidence limits of the March forecast (Chart 5).

Chart 4
Inflation
Baseline forecast and forecast with policy rate from MB 2007/1



Sources: Statistics Iceland, Central Bank of Iceland.

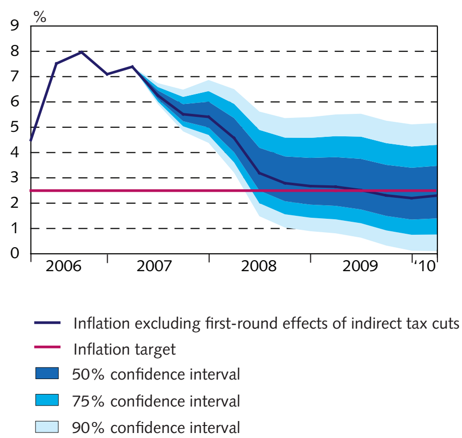
Chart 5
Policy rate
Baseline forecast and uncertainty bands MB 2007/1 and baseline forecast MB 2007/2



Source: Central Bank of Iceland.

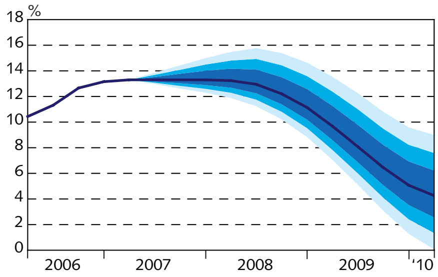
Although a tighter monetary stance is assumed now than in the March forecast, the overview of the main risks in Table IX-1 implies that Central Bank will be more likely to have to raise its policy rate than be able to lower it faster than in the baseline forecast. The risk profile for the policy rate in the baseline forecast is therefore tilted to the upside as in *Monetary Bulletin* in March (Chart IX-7). However, the asymmetry is less pronounced because the revised forecast for exchange rate developments reduces the tilt of the risk profiles for the exchange rate and inflation forecasts. Investments in the aluminium and power sectors, which are assessed in alternative scenarios, also have less impact. These scenarios are discussed in more detail in Box IX-2 on p. 40. They describe possible monetary policy responses to a sharp depreciation of the króna at the end of 2007 following a downturn in global financial conditions, and to a decision to build an aluminium smelter in Helguvík.

Chart IX-6
Inflation (excluding first-round effects of indirect tax cuts)
Forecasting period: Q2/2007 - Q1/2010



Sources: Statistics Iceland, Central Bank of Iceland.

Chart IX-7
Policy rate
Forecasting period: Q2/2007 - Q1/2010



Policy rate
50% confidence internal
75% confidence internal
90% confidence internal

Source: Central Bank of Iceland.

Given the probability distribution for the policy rate path, there is a high probability that the policy rate will be in the range 12¾-14% on average in Q3/2007 and in the range 12¼-14½% in Q4.[1] Further along the forecast horizon the confidence interval has become very wide, showing the great uncertainty currently surrounding economic developments.

1. Expressed as nominal discounted rate, instead of as an annual yield, which the Central Bank has used hitherto.

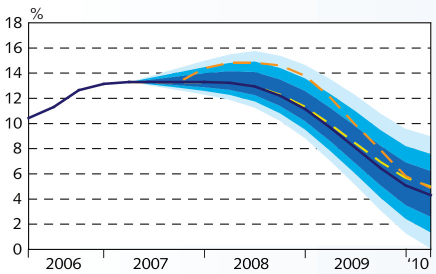
Box IX-2

Alternative scenarios

Unforeseen shocks or significant errors of judgement concerning important underlying assumptions in the forecast and their interaction can cause economic developments to deviate substantially from forecasts. It is useful to analyse how sensitive the forecast results are to probable deviations in the development of various key economic aggregates. The number of potential sources of deviations from the baseline forecast is of course unlimited, but an attempt is made to assess the main sources of error at any time. As in the previous forecast, the exchange rate of the króna and possible new investments in the aluminium and power sectors are considered to be the main sources of uncertainty.

Alternative scenarios highlight the impact that major uncertainties in the baseline forecast could have on inflation and potential monetary policy responses to shocks. The need for responses to unexpected shocks depends upon the credibility of monetary policy. If the Central Bank lacks credibility – i.e. if the Central Bank is not regarded as capable of keeping inflation close to target – it will need to make a stronger response than otherwise. The more credible the monetary policy, the better an anchor it provides for inflation expectations. If inflation expectations are anchored the response can be facilitated more efficiently through market forces and expectations, reducing the need for direct action by the Central Bank itself.

Chart 1
Policy rate – alternative scenarios



Baseline forecast
Alternative scenario with exchange rate depreciation
Alternative scenario with further aluminium investment
50% confidence interval
75% confidence interval
90% confidence interval

Source: Central Bank of Iceland.

In the current climate, a higher policy rate is needed if the króna depreciates sharply

The real exchange rate is currently at a record high and the króna is under pressure from the funding requirement of Iceland's enormous current account deficit and foreign debt, even though part of the deficit will unwind within the forecast horizon when investments for the aluminium industry come to an end and exports from them enter full swing. Nonetheless, the króna has remained strong and has appreciated since the last forecast in March. The wide interest rate differential and the Central Bank's clear message that the tight monetary stance will continue have supported the króna.

Arguably, the risk of a sharp depreciation of the króna has increased since the last forecast. The baseline forecast therefore projects a faster depreciation of the exchange rate than was expected in March. In the current economic climate, however, there is a considerable risk that imbalances will unwind even faster. As in *Monetary Bulletin* in March, an alternative scenario is presented in which a substantial depreciation of the króna takes place. However, it occurs roughly one quarter later, in Q4/2007 and Q1/2008. It assumes a total depreciation of 20% and an increase in the spread on Icelandic residents' foreign liabilities of 1½ percentage points, as in the last *Monetary Bulletin*. The timing is not a forecast but is merely chosen to allow the impact of the shock and the response to it to be captured within the forecast horizon. Such a sequence of events could conceivably be sparked off by rising international investor risk aversion and global interest rates.

Chart 1 shows the Central Bank's possible response to such a shock. The policy rate is raised immediately by almost one percentage point in Q4/2007 and eventually by a total of 1½ percentage points, to prevent the inflation spike from taking root in expectations. Accordingly, the policy rate rises to just above 14¾% in mid-2008, when it begins to move down again. The policy rate remains higher than in the baseline forecast throughout the horizon. Nonetheless, it does not need to be raised by as much as in the alternative scenario in *Monetary Bulletin* in March, because of the smaller output gap when the shock is felt. This is because the output gap estimate has been revised downwards and the depreciation occurs at a more mature stage of the cycle, when it is smaller than in the previous scenario.

However, this sharp rise in the policy rate does not suffice to prevent a temporary surge in inflation in the wake of the depreciation (Chart 2). Inflation peaks in mid-2008 at 5½% instead of just over 3% in the baseline forecast. It gradually wanes and reaches target at the end of the forecast horizon, roughly a year later than in the baseline forecast.

The purpose of responding to the depreciation with a policy rate hike is not to bolster the exchange rate as such, but to prevent higher inflation from severely eroding the real policy rate and to create a credible anchor for inflation expectations in spite of this spike. Thus the timing of a possible depreciation of the króna is crucial. If it occurs in the current climate of overheating, there is more risk that it will have a lasting effect on inflation than when the factors of production are not fully utilised.

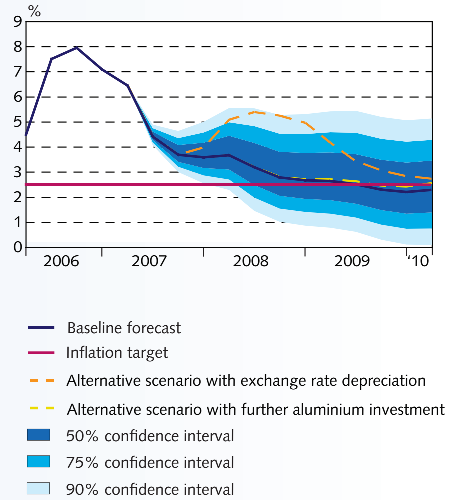
Another major consideration is the source of the depreciation. If it is caused by a negative supply shock (e.g. a negative terms of trade shock), a milder response is called for than if it is driven by a portofolio shock. A negative supply shock dampens general demand, which counteracts the inflationary effects of the depreciation and thereby creates less need for a policy rate hike – and increasingly so, the more firmly that inflation expectations are anchored.

The Helguvík aluminium smelter project delays policy rate cuts

The baseline forecast does not assume any further investment in the aluminium and power sectors within the forecast horizon. The Central Bank's policy has always been not to take such investments into account until there is a high probability that they will be realised, but to estimate their impact in alternative scenarios. If plans for large-scale investments materialise, demand for domestic factors of production will increase by more than in the baseline forecast. Inflation pressures will be correspondingly greater, although possibly tempered by the stronger króna, at least initially.

Since *Monetary Bulletin* in March, Alcan's plans to expand its smelter at Straumsvík have been rejected in a local referendum. Century Aluminium's plans to construct an aluminium smelter in Helguvík, on the other hand, appear to have gained momentum. Other options being discussed are at such an early stage that they would probably fall partly or entirely outside the current baseline forecast horizon. The following alternative scenario is therefore confined to

Chart 2
Inflation – alternative scenarios



Sources: Statistics Iceland, Central Bank of Iceland.

the impact of the proposed Helguvík smelter and possible monetary policy responses to its construction.

Investment plans for the Helguvík smelter and power supply for it are broadly unchanged from the alternative scenario in *Monetary Bulletin* in March. This assumes the construction of a 240 thousand-tonne smelter in Helguvík in two equal phases. The Central Bank estimates the total cost at 120 b.kr. (roughly 10% of GDP in 2006). Construction is expected to begin in 2008, with the first phase completed in 2011 and the second in 2013. Activity will mainly be concentrated into the period 2009-2011, when it accounts for 70% of the total cost. Aluminium production is assumed to go on stream in 2011 and reach full capacity in 2014. Increased labour use required by these investments is assumed to be just over 1,300 man-years within the forecast horizon, and 3,200 man-years in total over the period 2007-2014. Domestic cost is expected to be marginally more than foreign cost, with a similar distribution between domestic and foreign labour. The scenario is largely based on plans announced by prospective developers.

Although the króna is not expected to appreciate significantly when the go-ahead for construction is announced – unlike the alternative scenario in March – the króna remains stronger across the remainder of the forecast horizon. The policy rate is reduced rather more slowly than in the baseline forecast, but because the economic impact of the investments would not be felt until 2008-9, the impact on monetary policy would be limited until well into 2008 (see Chart 1). The policy rate is roughly one-quarter of a percentage point higher than in the baseline forecast in Q4/2008 and three-quarters of a percentage point higher at the end of the forecast horizon. This policy rate path prevents inflation from rising again later in 2010 and into 2011, unlike the path in the baseline forecast (Chart 2). The policy rate path has changed from the alternative scenario in *Monetary Bulletin* in March, because the investments would be on a much smaller scale and peak later than assumed then. Also, the economy has more scope for absorbing the investments without a strong crowding-out effect on other sectors. Thus there would be less need to tighten the monetary stance compared with the baseline forecast than in the alternative scenario presented in March.

Appendix 1

Baseline macroeconomic and inflation forecast 2007/2

Table 1 Macroeconomic forecast

	B.kr.	Volume change on previous year (%) unless otherwise stated[1]	Forecast		
GDP and its main components[1]	*2006*	*2006*	*2007*	*2008*	*2009*
Private consumption	686.5	4.6 (4.6)	1.0 (0.2)	-3.2 (-4.1)	-5.3 (-5.7)
Public consumption	280.7	2.9 (2.9)	3.0 (3.0)	3.0 (3.0)	3.0 (3.0)
Gross fixed capital formation	365.6	13.0 (13.0)	-25.6 (-22.4)	-15.8 (-22.7)	-8.9 (-5.8)
Business sector investment	255.6	13.8 (13.8)	-37.7 (-30.8)	-30.2 (-38.9)	-14.1 (-10.8)
Residential construction	74.8	17.2 (17.2)	1.2 (-4.6)	-9.2 (-8.9)	-9.9 (-8.7)
Public works and buildings	35.2	0.8 (0.8)	5.9 (-2.1)	37.7 (39.7)	4.5 (9.6)
National expenditure	1,346.1	7.4 (7.4)	-6.2 (-5.6)	-4.6 (-6.9)	-4.3 (-3.8)
Exports of goods and services	372.2	-5.6 (-5.6)	12.0 (9.6)	9.5 (16.7)	5.5 (4.5)
Imports of goods and services	576.5	8.8 (8.8)	-9.0 (-10.4)	-4.9 (-5.1)	-2.1 (-2.3)
Gross domestic product	1,141.7	2.6 (2.6)	0.2 (0.8)	0.8 (0.7)	-1.4 (-1.0)
Other key aggregates					
Current account balance (% of GDP)		-26.9 (-26.7)	-15.4 (-15.7)	-11.5 (-11.4)	-8.8 (-11.3)
Current account balance (% of GDP)		3.3 (3.2)	0.4 (1.0)	-0.7 (0.3)	-3.4 (-2.0)
Unit labour cost (change between annual averages in %)		8.9 (8.9)	7.8 (6.8)	3.4 (3.9)	3.5 (3.8)
Real earnings (change between annual averages in %)		6.5 (6.5)	5.0 (4.7)	-2.2 (-2.8)	-1.5 (-3.1)
Unemployment (% of labour force)		1.3 (1.3)	1.5 (2.0)	3.0 (3.5)	4.3 (4.8)
Policy rate and exchange rate					
Central Bank policy interest rate (%)		11.9 (11.9)	13.3 (13.2)	12.4 (11.3)	7.3 (6.8)
Foreign exchange index (Dec. 31. 1991 = 100)		121.4 (121.4)	117.4 (121.0)	119.5 (120.8)	127.9 (125.4)

1. Figures in parentheses show forecast in *Monetary Bulletin* 2007/1.

Table 2 Inflation forecast

	Change on same period of previous year (%)		Annualised quarterly change (%)
	Forecast MB 2007/2	*Forecast MB 2007/1*	*Forecast MB 2007/2*
Quarter	*Measured value*		
2006:1	4.5	4.5	4.5
2006:2	7.5	7.5	14.3
2006:3	8.0	8.0	7.5
2006:4	7.1	7.1	2.3
2007:1	6.5	6.4	2.0
	Forecast value		
2007:2	4.4	3.5	5.9
2007:3	3.7	2.0	4.6
2007:4	3.6	1.7	1.9
2008:1	3.7	2.0	2.4
2008:2	3.2	2.4	3.9
2008:3	2.8	2.3	3.0
2008:4	2.7	2.4	1.5
2009:1	2.6	2.6	2.2
2009:2	2.5	2.7	3.4
2009:3	2.3	2.6	2.1
2009:4	2.2	2.5	1.1
2010:1	2.3	.	2.6

Change year-on-year	*Forecast MB 2007/2*	*Forecast MB 2007/1*
2006	6.8	6.8
2007	4.5	3.4
2008	3.1	2.3
2009	2.4	2.6

Appendix 2

New inflation-targeting countries[1]

The number of countries formally committed to an inflation target as the anchor of their monetary policy has increased rapidly since New Zealand pioneered inflation targeting in March 1990. Inflation-targeting countries are now found in all parts of the world. Inflation targeting stipulates price stability as the formal objective of monetary policy and subordinates other objectives to it. Price stability is defined as a numerical target. Macroeconomic and inflation forecasts tend to play a key role in the conduct of monetary policy with an inflation target, and transparency is an increasingly important feature in communication of policy objectives and implementation. The reason for the growing appeal of formal inflation targeting lies in its success in creating a credible and transparent anchor for monetary policy. At the same time, it leaves monetary policy flexible enough to respond to short-term cyclical fluctuations in the economy without jeopardising credibility.

To date, a total of 28 countries have adopted inflation targeting. Some 26 still target inflation, after Finland and Spain abandoned the regime on joining the European Economic and Monetary Union (EMU) in January 1999. The first inflation target was adopted in 1990; by the end of 1993, five countries formally targeted inflation and five years later their number had grown to ten. In 2004 there were 21, and another five have since joined the group: the developing and emerging market economies of Slovakia, Indonesia, Romania, Turkey and Ghana. This Appendix discusses these five new inflation-targeting countries.

Slovakia

Slovakia acceded to the European Union in 2004. Membership also involved a commitment to join the monetary union and adopt the euro in the future. Countries in the euro area must first fulfil the Maastricht convergence criteria on inflation, interest rates, annual government deficit and government debt. The National Bank of Slovakia formally moved onto an inflation target at the beginning of 2005, viewing this framework as most suitable for fulfilling the Maastricht inflation criterion. The National Bank of Slovakia's current target is to achieve a rate of inflation below 2%, the same as the European Central Bank (ECB). This is consistent with the Maastricht criterion for a rate of inflation no more than 1.5 percentage points higher than in the three EU best-performing countries. In May 2007, inflation in Slovakia measured 2.7%. Slovakia aims to introduce the euro on January 1, 2009.

1. Information on new inflation-targeting countries is sourced from the respective central bank websites. Background information on the evolution of inflation targeting and minimum conditions for adopting it draw on Pétursson, Thórarinn G. (2004), Formulation of inflation targeting around the world, *Monetary Bulletin* 2004/1, 57-84 and Stone, Mark R. (2003), Inflation Targeting Lite, *IMF Working Paper* WP/03/12.

Indonesia

After the Asian financial crisis in the latter part of the 1990s, the Indonesian authorities restructured their banking system and institutional framework. The policy interest rate (BI rate) became a more effective tool against inflation as a result, and Bank Indonesia decided to adopt a formal inflation target in July 2005. It had previously targeted base money, but that proved difficult to control, given that the dominant component is currency outside banks. Bank Indonesia's target is set at 6% for 2007 and 5% for 2008, with a band of ±1% for both years. In May 2007, inflation in Indonesia measured 6%. BI aims to achieve a medium- to long-term inflation rate of 3% so that Indonesia can remain competitive with other countries in Asia.

Romania

After an adjustment phase including institutional reforms to meet the requirements entailed by inflation targeting, the National Bank of Romania formally switched to an inflation target in August 2005. The primary aim of targeting was to drive down inflation and maintain price stability after the target was achieved. A target of 4% was set for 2007 and will be lowered to 3.8% in 2008, with a deviation band of ±1% for both years. Inflation has declined after the adjustment began, which has contributed towards anchoring inflation expectations at a lower rate. In April 2007, inflation in Romania measured 3.8%.

Turkey

The Central Bank of the Republic of Turkey (CBRT) aims to emulate the achievement of developed economies in bringing persistent inflation down to a low and stable level. In order to do so, the CBRT formally moved onto an inflation target at the beginning of 2006. It has set a medium-term target of 4% with a ±2% deviation band. In the first year under the new framework, inflation overshot the target. The CBRT has responded by raising its policy rate, which is higher than Iceland's, and by increasing transparency in order to have more effect on inflation expectations. One step towards transparency is that "the Central Bank shares its forecast about monetary policy verbally with the public." Nonetheless, inflation in Turkey is still well above target, at 9.2% in May 2007.

Ghana

The Bank of Ghana formally adopted an inflation target in May 2007, becoming the second African country to do so (after South Africa). For several years previously, the Bank of Ghana had targeted inflation informally. It has been increasing its transparency and now aims to publish inflation reports. The Bank's target is for a rate of inflation below 10%. Inflation in May 2007 was 11%.

Foreseeable changes in the number of inflation-targeting countries

The number of inflation-targeting countries is bound to change in the next few years. Slovakia will leave the group after some years when it adopts the euro, together with Poland, the Czech Republic and Hungary. Others will possibly follow suit later.

Inflation-targeting countries

Country	*Numerical target*	*Date of adoption*	*Previous anchor*
Australia	2-3%	1993	None
Brazil	4½%(±2%)	1999	Exchange rate
Canada	1-3% (2% central value)	1991	None
Chile	2-4%	1990	Exchange rate
Columbia	2-4%	1999	Exchange rate
Czech Republic	3%(±1%)	1998	Exchange rate & money supply
Ghana	0-10%	2007	Money supply
Hungary	3%(±1%)	2001	Exchange rate
Iceland	2½%(±1½%)	2001	Exchange rate
Indonesia	6%(±1%)	2005	Money supply
Israel	1-3%	1992	Exchange rate
Mexico	3%	1999	Money supply
New Zealand	1-3%	1990	None
Norway	2½%	2001	Exchange rate
Peru	2%(±1%)	2002	Money supply
Philippines	4-5%	2002	Exchange rate & money supply
Poland	2½%(±1%)	1998	Exchange rate
Romania	4%(±1%)	2005	Money supply
Slovakia	0-2%	2005	Exchange rate
South Africa	3-6%	2000	Money supply
South Korea	3%(±1%)	1998	Money supply
Sweden	2%(±1%)	1993	Exchange rate
Switzerland	0-2%	2000	Money supply
Thailand	0-3½%	2000	Money supply
Turkey	4%(±2%)	2006	Exchange rate
UK	2%	1992	Exchange rate

Sources: Pétursson, Thórarinn G. (2004), Formulation of inflation targeting around the world, *Monetary Bulletin* 2004/1, 57-84. Stone, Mark R. (2003), Inflation Targeting Lite, *IMF Working Paper* WP/03/12. Central bank websites.

Likewise, other countries may move onto an inflation target. A growing number are currently examining the introduction of targets and several have already launched preparations for formally adopting them. These include the developing and emerging market economies of Albania, Armenia, Guatemala and Kazakhstan, which already have price stability as a stated objective but have yet to adopt a formal inflation target.[2] Fairly lengthy preparations are required before moving onto an inflation target, because central banks must first adapt their own activities to the new policy. Preferably, minimum institutional requirements should be in place before an inflation target is formally adopted. An important consideration is that a central bank should have full independence for attaining its objectives. Also, the domestic financial sector needs to be efficient and developed enough for the central bank's monetary policy measures to be transmitted effectively. Other important fundamentals are financial stability and general economic stability. Although Albania, Armenia, Guatemala and Kazakhstan are at different stages in the adaptation process, they share the aim of for-

2. Stone (2003) discusses 19 emerging market economies with flexible exchange rate regimes and a publicly announced inflation target, but which have higher-ranked objectives than price stability, and terms them "inflation targeting lite".

mally adopting an inflation target in the near future. Thus these four countries are likely candidates to join the inflation-targeting fraternity within a very few years, and others could join them.