

Inflation outlook still unacceptable

Imbalances in the economy have increased substantially since the Central Bank published its macroeconomic and inflation forecast in June. Growth of domestic demand, especially private consumption, has been faster, asset prices and the króna have moved even further beyond their long-term equilibrium levels, and the current account deficit is heading for the highest figure in the history of the national accounts. In spite of a substantial rise in the Central Bank's policy rate over the past year, its transmission has been largely confined to the shorter end of the yield curve and the exchange rate. Inflation has been gaining pace in recent months and will probably have a negative effect on inflation expectations, which could undermine the monetary stance if no further action is taken. As described below, the inflation outlook has deteriorated since June, assuming that the policy rate remains unchanged. Rising house price inflation, which will drive general inflation over the coming months, and a wider output gap will outweigh the impact of the stronger króna. Judging from market expectations for the policy rate path, the long-term outlook is even poorer. It therefore seems unlikely that the inflation target will be attained unless the policy rate is raised by more and stays high for a longer period than the markets have expected until now.

I Overview of macroeconomic and inflation forecast

Assumptions of the current forecast

As usual, the baseline inflation forecast is based on the technical assumption of an unchanged policy interest rate (currently 9.5%) over the forecast horizon and an unchanged effective exchange rate from the day of the forecast, September 12, when the index was close to 108. The exchange rate of the króna in the forecast is therefore 7½% stronger than in the June forecast, but close to the rate assumed in the March forecast. An alternative scenario is provided which is based on an interest-rate path derived from implied forward rates and an exchange-rate path based on the forward interest-rate differential.² The forecast horizon is until Q3/2007 and a macroeconomic forecast for they year 2007 is now published for the first time.

Even faster domestic demand growth is forecast

According to preliminary national accounts data recently published by Statistics Iceland, output growth in 2004 was significantly faster than previously estimated, led by an increase in gross fixed capital formation. Robust growth is still forecast over the next three years, although slowing down in 2007. However, the Central Bank's forecast for output growth in the current year has been revised downwards, even though domestic demand remains virtually unchanged. This is

1. This article uses data available on September 21, 2005, but the forecast is based on data until September 12.

2. Forward interest rates indicate market expectations for the development of the policy interest rate in the coming years. Comparable foreign forward interest rates can be used to calculate the expected interest-rate differential with abroad, which produces an expected exchange-rate path based on uncovered interest rate parity. These paths are explained in more detail in Section VIII.

Table I-1 Central Bank macroeconomic forecast

	Policy rate and exchange rate assumptions ¹							
	2004	Current forecast			Change from previous forecast (percentage points) ²			
		2005	2006	2007	2004	2005	2006	2007
Central Bank policy interest rate (%)	6.14	9.16	9.50	9.50	-	0.31	0.50	.
Foreign exchange index (Dec. 31, 1991 = 100) ³	121.0	109.8	108.0	108.0	-	-4.2	-6.9	.
	Current macroeconomic forecast							
	2004	Volume change on previous year (%)			Change from previous forecast (percentage points) ²			
		Current forecast			2004	2005	2006	2007
<i>GDP and its main components</i>								
Private consumption	6.9	10.3	8.2	4.3	-0.6	2.3	1.2	.
Public consumption	2.8	3.5	3.0	2.7	-0.8	1.0	0.4	.
Gross fixed capital formation	21.0	31.1	-4.0	-16.0	8.2	-3.1	4.0	.
Business sector investment	23.3	54.7	-6.7	-26.9	10.4	1.9	7.2	.
Excl. power-intensive projects, ships and aircraft	17.3	5.4	-5.4	5.4	10.6	3.7	-3.8	.
Residential construction	5.7	12.0	10.0	0.2	2.7	-9.9	0.1	.
Public works and buildings	26.9	-7.3	-9.1	22.9	-0.4	4.3	-4.4	.
National expenditure	8.4	13.1	4.0	-1.0	0.7	0.7	1.6	.
Exports of goods and services	8.3	4.4	6.1	14.5	-	0.4	-1.5	.
Imports of goods and services	14.2	23.0	0.1	-1.0	-0.1	4.5	1.3	.
Gross domestic product	6.2	5.5	6.7	4.8	1.0	-1.1	0.5	.
<i>Other key aggregates</i>								
Gross domestic product at current prices (b.kr.)	885	998	1,115	1,212	26	12	34	.
Current account balance (% of gross domestic product)	-8.4	-14.2	-11.3	-6.1	-0.3	-2.2	-1.2	.
Output gap (% of production capacity in the economy)	1.5	3.6	4.8	2.7	0.4	0.3	0.4	.
Private sector wages (change between annual averages in %)	4.7	6.1	6.4	5.5	0.2	0.1	0.3	.
Labour productivity (change between annual averages in %)	4.0	2.0	1.9	1.8	0.9	-0.5	-0.6	.
Unemployment (% of labour force)	3.1	2.0	1.9	2.4	-	-0.1	-	.

1. Annual averages, assuming unchanged interest rates and exchange rate from the day of forecast. 2. Change since *Monetary Bulletin* 2005/2. 3. Percentage change in index from previous forecast.

due to the effect of the appreciation of the króna, which stimulates imports and thereby channels demand out of the economy.

Domestic demand is expected to soar this year and in 2006, driven by a surge in private consumption in both years and investment this year. In 2006, however, investment is forecast to contract, but exports to increase. Exports will contribute even more to output growth in 2007 with a boost in aluminium exports, while domestic demand will shrink. One factor at work then will be a tight monetary stance reflected in rising long-term real interest rates and a high real exchange rate. Nonetheless, due to increased exports the outlook is for strong output growth that year.

As before, growth is driven by favourable external conditions, easy access to relatively inexpensive domestic and foreign credit, rising asset prices and strong consumer confidence. Since growth far outstrips the increase in potential output, it contributes to substantial and mounting pressures in the domestic goods and labour markets. The positive output gap will peak next year and begin to ease in 2007, when domestic demand declines, coupled with a sharp increase in production capacity when the aluminium smelter construction projects are completed.

Short-term inflation prospects have deteriorated in spite of strong króna

In spite of the higher policy rate and appreciation of the króna, the outlook for inflation one year ahead has deteriorated considerably since June. According to the baseline forecast, inflation will exceed 4% one year ahead, compared with just over 3% in the same quarter in the June forecast. This is explained by more intense pressures in the domestic product market and labour markets. Higher housing prices also weigh heavily, while the strong króna will constrain rises in goods prices. Further along the forecast horizon, the impact of both these factors is gradually expected to wane, but the wide output gap will keep inflation at a high level. Assuming an unchanged policy rate and exchange rate, inflation two years ahead is also forecast at around 4%, broadly in line with the June forecast. If the króna maintains its current strength and the monetary stance stays unchanged, the outlook is that inflation will return to the target of 2.5% around mid-2008.

Chart I-1
 Central Bank inflation forecast
 Forecasting period: Q3/2005 - Q3/2007

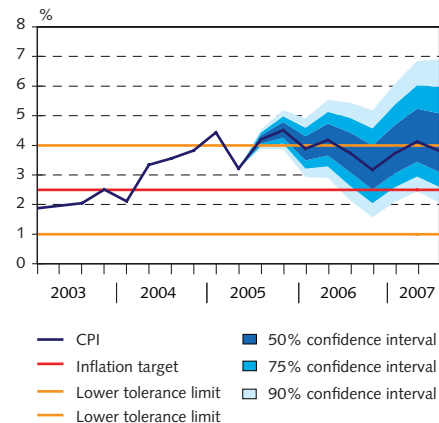


Table I-2 Central Bank inflation forecast

Change in the CPI between periods

Measured inflation (%)	Change on previous quarter	Annualised quarterly change	Change on same quarter of previous year
2004:1	0.3	1.3	2.1
2004:2	1.7	7.0	3.3
2004:3	0.5	1.9	3.6
2004:4	1.3	5.2	3.8
2005:1	0.9	3.7	4.4
2005:2	0.5	2.0	3.2
<i>Inflation forecast (%)</i>			
2005:3	1.4	5.8	4.2
2005:4	1.6	6.5	4.5
2006:1	0.3	1.3	3.9
2006:2	0.8	3.2	4.2
2006:3	1.0	4.1	3.7
2006:4	1.0	4.1	3.2
2007:1	0.9	3.5	3.7
2007:2	1.2	4.8	4.1
2007:3	0.7	2.8	3.8
<i>Measured inflation (%)</i>			
	Change year-on-year	Change within year	
2003	2.1	2.4	
2004	3.2	4.0	
<i>Inflation forecast (%)</i>			
2005	4.1	4.5	
2006	3.7	3.3	
2007	3.7	3.0	

In interpreting the baseline forecast, it must be remembered that it assumes an unchanged policy rate and exchange rate over the forecast period, moderate wage drift and no sudden downturn in asset prices. Housing price inflation is expected to slow gradually,

so that housing prices in real terms will remain relatively stable in the second half of the forecast period. All these factors are fraught with uncertainties and some are unusually ambiguous at present.

In the Central Bank's view, the above uncertainties, combined with uncertainties about the fiscal stance, have tilted the inflation risk profile to the upside from the June forecast. The Bank's assessment is that the inflation target is less likely to be attained over the forecast horizon if no action is taken.

An alternative scenario based on variable interest rates and exchange rate reinforces this view. This forecast assumes that interest rates develop roughly in line with market expectations about the path of the policy rate over the next two years, and that exchange rate movements are determined by uncovered interest rate parity. It reveals that market agents and analysts appear very optimistic about when it will be possible to begin lowering the policy rate. This scenario implies a fall in real interest rates because the policy rate will not be raised sufficiently to contain the inflation generated when the króna begins to depreciate. In effect, the monetary stance is weaker here than in the baseline forecast, while domestic demand growth and inflationary pressures are stronger. The obvious conclusion is that the monetary stance needs to be tightened well in excess of what the market seems to expect.

II External conditions

Fairly positive world growth outlook despite rising oil prices

Economic growth appears to have peaked in most countries in 2004 and global growth is expected to slow down this year. High oil prices have dampened growth in major industrial countries in Q2/2005. Nonetheless, the outlook is more upbeat in many respects than when the previous inflation and macroeconomic forecasts were published in *Monetary Bulletin* in June.

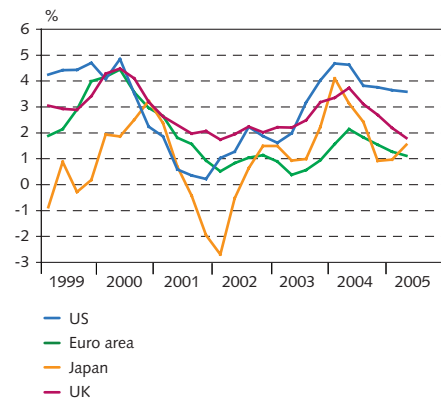
Growth still appears quite robust in North America and Asia, which have largely led the global expansion so far. Like most other industrial countries, the US experienced slower growth in Q2, although above the 3% long-term average for the ninth consecutive quarter. In China, second-quarter growth was much greater than expected and forecasts for the year have been revised upwards. Japan's growth outlook has also perked up. Higher commodity prices have furthermore fuelled growth in various developing countries. The outlook in the euro area has also improved since *Monetary Bulletin* was published in June: despite a slowdown in Q2, output growth still exceeded expectations. The euro area forecast for the second half of the year has been revised marginally upwards, which has been corroborated by recent economic indicators. On the other hand, the UK outlook has deteriorated sharply, with quarterly growth in Q2/2005 the lowest for twelve years.

A rise in crude oil prices in the second half of this year could produce a significantly weaker outcome, however. Crude oil prices reached an all-time record in nominal terms after Hurricane Katrina, and despite a slight reduction since then they are still 60% higher than the 2004 average. Instability in the Middle East and fears that production could not be increased to match demand led to the rises in August. These fears were amplified after Hurricane Katrina brought oil production in the Gulf of Mexico to a halt. Although production is only temporarily halted, its impact on oil prices will presumably persist for some while. Prices fell from the record levels reached just after the hurricane struck, however, when some countries began to draw on reserves, thereby increasing supply. Demand next year will probably outstrip earlier forecasts when those countries begin rebuilding their reserves. High oil prices therefore seem likely to be sustained for some time. Futures prices imply slight rises from the current level until the end of the year and into the beginning of 2006 (see Table II-1). Petrol prices have tracked the rise in oil prices, but had not settled back by quite as much in September. They are currently 65% higher than the average over 2004.

Germany is still holding back euro area growth

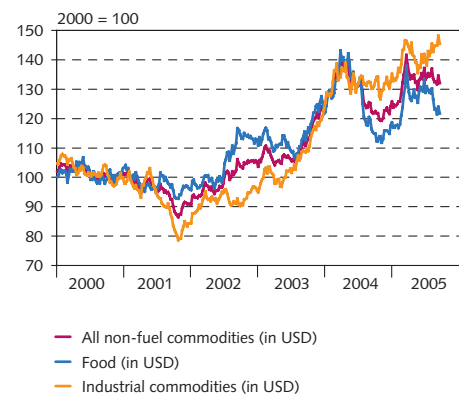
The reasons for poor economic growth in the euro area in the first half of this year are broadly the same as in the second half of 2004: high oil prices, the strong euro (despite some depreciation since the end of 2004), lower growth in the global economy and ongoing subdued domestic demand in most of the euro countries. Growth picked up in Q2 in Italy and the Netherlands after a contraction

Chart II-1
Economic growth in the US, UK, euro area and Japan Q1/1999 - Q2/2005
Change on same quarter in previous year (%)



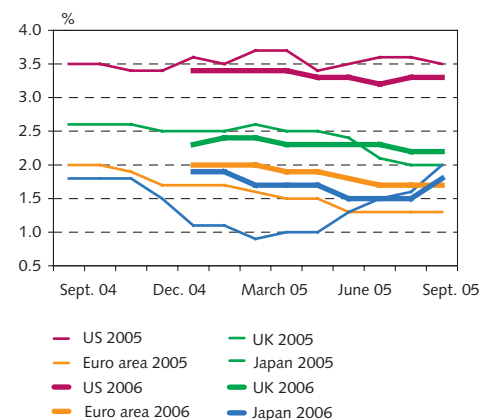
Source: EcoWin.

Chart II-2
Dollar index of commodity prices in international markets 2000-2005



Sources: The Economist, EcoWin.

Chart II-3
Forecasts for economic growth in the US, UK, euro area and Japan September 2004 - September 2005
Horizontal axis indicates the date of forecasting



Source: Consensus Forecasts.

in the preceding quarter, but stagnation in Germany counteracted its effect. Demand growth in Germany was sluggish. Private consumption shrank, investment increased only marginally and net exports proved insufficient to sustain growth. Similarly, Q2 growth in France was down from Q1. In Spain, increased investment and private consumption – to some extent driven by buoyant house prices – sustained growth in the first half of this year. The downturn in UK growth in Q2 can be ascribed not only to higher oil prices, but also to the easing of real estate market pressures and an increase in unemployment, which have impacted private consumption. UK growth forecasts have been revised downwards as a result.

In spite of subdued euro area growth in the first half of the year, various indicators point to an upturn in the second half. The euro has weakened against the US dollar and global growth has not contracted on the scale that had been expected. Retail sales have increased and unemployment has fallen. Business confidence in the euro area has soared and orders have increased. The manufacturing sector therefore appears to be rallying. Exports should be spurred by the depreciation of the euro. Nonetheless, the euro area is strained to squeeze out more growth. Consequently, the forecast is still fairly sluggish for this year and growth could even prove lower if oil prices remain high.

Whether growth in Germany will make a proper recovery largely depends on domestic demand. Indicators suggest that the German economy will remain entrenched over the coming months. Increased household expenditures as a result of higher oil prices, coupled with rampant unemployment, will hamper Germany in achieving a turnaround and stimulating demand.

Outlook still bright in the US and improving in Japan

Economic prospects in the US are bright in many respects, but high oil prices will constrain growth this year and into 2006. Business investment is still growing quite briskly and private consumption remains the main driver of growth, although its rate of increase has slowed down. Consumer confidence has stayed upbeat, partly due to the robust labour market. Unemployment in the US is at its lowest level for four years. However, the aftermath of Hurricane Katrina will probably leave its mark over the next few months. Private consumption is likely to slow further, for reasons including rising interest rates and oil prices. Less growth is forecast for the US in 2006, as the increase in private consumption slows down and the housing market cools.

After last year's contraction, growth in Japan appears to be recovering. GDP has increased in the first half of this year, largely due to an increase in private consumption and to a lesser extent in investment. Growth has been driven by favourable developments in fundamentals: steady increases in income, falling unemployment and strong business profitability. The outlook is for ongoing higher private consumption for the rest of the year. Since business investment will increase at the same time, the Japanese economy ought to continue to grow in the second half of this year. Only modest growth is expected in 2005, although forecasts have been revised upwards.

Earlier this year, China was expected to undergo a gradual slowdown in growth. Now the outlook is for a milder adjustment which will not take place until next year. Inflationary pressures have eased in recent months, alleviating some of the Chinese authorities' concerns about overheating of the economy. Public sector investment growth has slowed down but remains very high.

Higher marine export prices

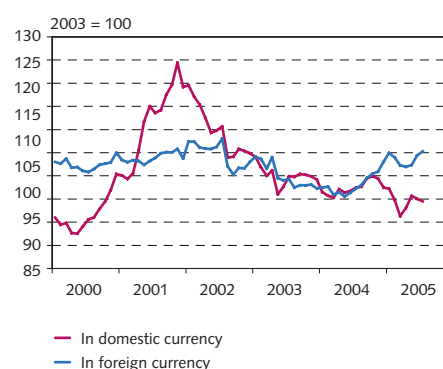
Subdued growth in continental Europe and the deteriorating outlook in the UK have had little effect on market conditions for marine exports from Iceland, which appear favourable for most products. Substantial excess demand characterises the market for demersal fish products with a very positive impact on prices, which have risen significantly for most products in recent months. Markets in central Europe, in particular Germany, are now picking up after several subdued years. Eastern Europe has been strengthening and has re-established itself as one of the main market regions for marine exports from Iceland, with steadily increasing demand for higher-value products. Prospects in the fish meal and fish oil markets are also bright as supply of meal from other northern European countries is dropping and demand for meal is increasing from fish farms in the Far East. Demand for fresh fish products, which as a rule yield more profit than frozen products, has continued to increase. The position on saltfish markets in southern Europe is also positive. Iceland's competitive position in saltfish is exceptionally strong at present as quality products from main rival countries remain in short supply.

Favourable market conditions have driven prices of virtually all marine products quite high in foreign currency terms – in fact to their highest level since 2001. Total marine prices rose by 7.4% year-on-year over the first eight months of 2005. Frozen and fresh demersal products have been the main driver of prices. In particular, frozen-at-sea products have surged by nearly 27% over the twelve months to the end of August. Land-frozen demersals are up by 5%. Prices of fish meal and fish oil are also exceptionally high at present. The outlook until the end of the year is fairly upbeat. Prices of frozen demersal products are expected to increase by 6-8% over 2005 as a whole and fish meal and fish oil by a significantly greater 16%. All told, marine product prices are expected to gain as much as 8% on average year-on-year. In domestic currency terms, marine prices are likely to be only 2% lower on average this year compared with 2004, in spite of a substantial appreciation of the króna.

Catch value down from last year

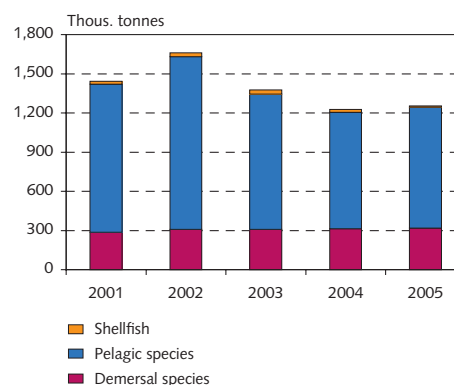
The total fish catch for the first eight months of 2005 was up 2% compared with the corresponding period the year before. The demersal harvest was up by 2%, while shellfish volume plunged by 62%, spearheaded by a contraction in the shrimp catch to the tune of 15 thousand tonnes. Catch composition has changed markedly since last year. The most valuable demersal species (cod and Greenland halibut) have diminished but haddock, saithe and redfish have increased. Oceanic redfish is down by 20 thousand tonnes. Over

Chart II-4
Estimated marine product prices
January 2000 - July 2005



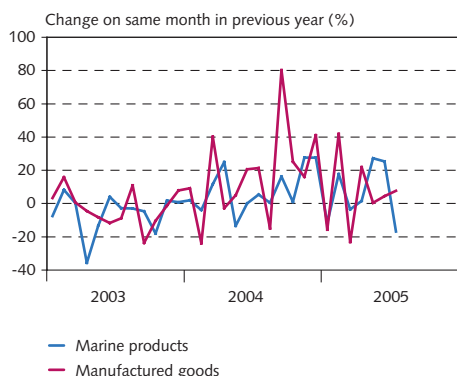
Source: Statistics Iceland.

Chart II-5
Fish catch in January - July



Source: Directorate of Fisheries.

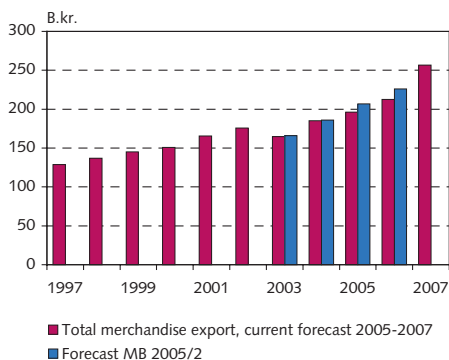
Chart II-6
Merchandise export growth
January 2003-July 2005¹



1. At constant exchange rates based on the export-weighted currency basket.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-7
Merchandise export real growth 1997-2007

Comparison of current forecast and of previous forecast in *Monetary Bulletin* 2005/2



Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-8
Exported goods and services in the first half of the year and in total 1997-2005



Sources: Statistics Iceland, Central Bank of Iceland.

this period, total catch value at constant prices has dropped by 1.7% year-on-year, largely due to less favourable composition of demersal catches and the slumps in oceanic redfish and shrimp.

The total allowable catch (TAC) for demersal species during the current fishing year, which began on September 1, is 18 thousand tonnes more than during the previous fishing year. Most of the increase is accounted for by haddock and saithe, while the TAC for cod has been lowered. The TAC for herring from the Icelandic-Norwegian stock was boosted squarely by 43 thousand tonnes to 158 thousand tonnes. This year's blue whiting TAC was cut, but this will have no impact since quotas have not been filled in recent years. The TAC for shrimp has also been halved. Shrimping has been exceptionally slack and the harvest is likely to fall short of the TAC. No TAC has yet been announced for capelin, after complications with stock measurements. TACs for other species are broadly unchanged from the last fishing year.

It is clear that the forecast in *Monetary Bulletin* in June over-estimated the actual catch of cod as well as the TAC for the fishing year that has just begun. Also, the 2005 oceanic redfish catch will be around 20 thousand tonnes less than the previous year and far below the forecast. Only a small part of the blue whiting quota will be fished and the capelin catch will fall short of expectations. All these factors, coupled with the collapse of the shrimp catch, have led to a sizeable downward revision of the forecast for marine export production. Zero growth is now forecast for this year, compared with the 3% forecast in June. The forecast increase in 2006 is 3%, mainly boosted by greater demersal catches, and 2% in 2007.

Export growth forecast broadly unchanged despite a drop in merchandise exports

The outlook is for marginally higher export growth in 2005 than was forecast in June, after growth of merchandise exports has been revised slightly downwards and service exports upwards. One of the main reasons for the lower merchandise exports forecast is the downward revision of marine exports, as mentioned above. The forecast for aluminium exports is broadly unchanged, but for other manufactured exports it is much lower. In June, exports of general manufactured goods were forecast to rise substantially this year. It transpires that they have decreased over the first seven months by almost 13%, largely reflecting a sharp dip in pharmaceuticals and electronic weighing equipment. Exports of sundry manufactured goods also declined, contrary to forecasts. To some extent temporary factors appear to have caused this contraction, for example delays in the production of new pharmaceuticals. The increase in the real exchange rate is also likely to have had a substantial impact. This year's poorer outlook for merchandise exports has been offset by a surge in exports of services. Over the first half of the year, services exports rose by 6½% in real terms year-on-year, spurred by increased income from transportation. Total exports of goods and services are forecast to increase by almost 4½% this year and by 6% in 2006, when aluminium exports will begin climbing during the second half

of the year. In 2007, exports are forecast to increase by more than 6%, with a surge in aluminium exports.

The real exchange rate increases again

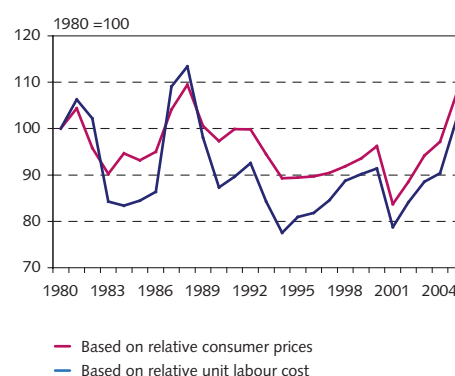
The króna has appreciated again in recent months, after reaching a low for this year in mid-May. It hit a new high in mid-September. The current forecast assumes an unchanged exchange rate from September 12, implying that the króna will be 7½% stronger on average this year than was assumed in the June forecast, and 9.2% stronger than in 2004.

After peaking in Q1 the real exchange rate depreciated in Q2 when the króna slid a little and the rate of inflation slowed down slightly. So far during the third quarter the real exchange rate has risen again, driven by both a higher nominal exchange rate and higher inflation. Assuming an unchanged nominal exchange rate from September 12, the average real exchange rate defined in terms of relative consumer prices will rise by just over 10% this year and by 6½% in 2006.

Exports increased over the first seven months of 2005, in spite of the strong króna. However, exports have been weakest during the months when the króna has been strongest. This may be due to deferrals of exports when the currency appreciation is perceived to be temporary, but it is also conceivable that a threshold forms at some level of the real exchange rate. Export sectors are therefore likely to face challenges in the near future if the króna remains strong. The rise in the real exchange rate may even be greater than the indices calculated at the Central Bank in recent years. New exchange rate indices described in Appendix 2 show larger increases, mostly because of the heavier weight assigned to the euro and a few other currencies.

Chart II-9

Real effective exchange rate of the króna
1980-2005



Source: Central Bank of Iceland.

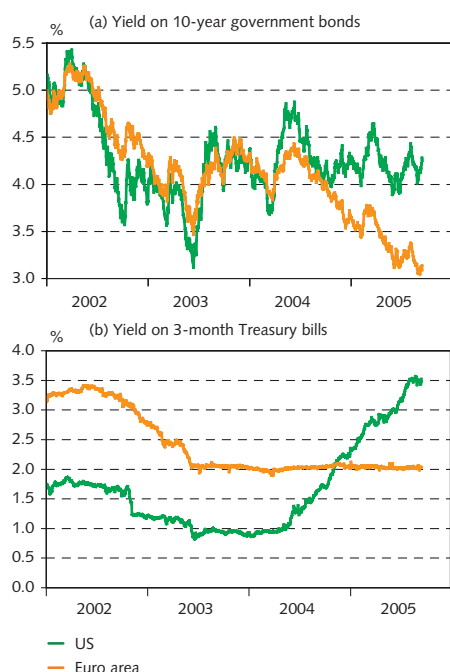
Table II-1 Main assumptions for developments in external conditions

	Current forecast (%) ¹			Change from previous forecast (percentage points) ²		
	2005	2006	2007	2005	2006	2007
Marine production for export	0.0	3.0	2.0	-3.0	1.0	.
Export prices of marine products	8.0	5.0	3.0	2.0	2.0	.
Aluminium export prices	6.6	2.0	-0.6	3.7	5.4	.
Prices of exported goods and services	7.9	4.5	0.3	0.2	3.9	.
General import prices in foreign currency	2.5	2.3	2.0	.	.	.
Fuel prices in foreign currency	38.5	13.8	-4.9	10.6	4.2	.
Terms of trade for goods and services	1.3	1.6	0.9	-2.1	3.7	.
Foreign short-term interest rates	2.5	2.8	2.9	-0.1	-0.2	.

1. Percentage change year-on-year, except for interest rates. 2. Change since *Monetary Bulletin* 2005/2.

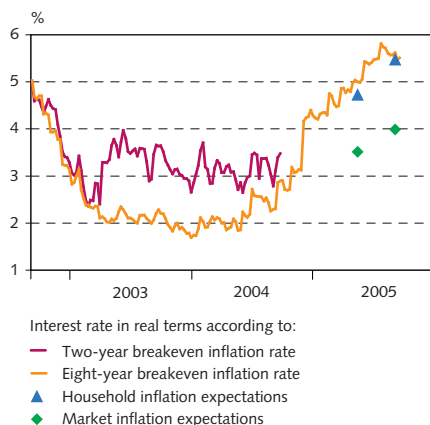
Source: Central Bank of Iceland.

Chart III-1
Foreign interest rate developments
January 1, 2002 - September 19, 2005
(daily data)



Source: EcoWin.

Chart III-2
Central Bank policy interest rate in real terms
Daily data September 17, 2002 - September 19, 2005



Household inflation expectations are based on expectations over the next twelve months and market inflation expectations for the twelve months until end-2006.

Source: Central Bank of Iceland.

III Financial conditions

Financial conditions have tightened slightly since the spring. Domestic short-term interest rates have gone up and non-indexed bank lending rates have risen by more than the Central Bank's policy rate hike in the beginning of June. The recent strength of the króna can be expected to have made foreign borrowing marginally less attractive compared with the spring, given the greater probability that the króna will depreciate over the lifetime of loans with a maturity of several years. Offsetting this, the strong króna reduces debt service on the existing stock of foreign borrowing. The tightening represented by the strong króna is mainly felt by businesses, which have tended to tap foreign credit markets quite heavily, and less so by households. However, this year households have increasingly taken exchange rate-indexed loans. It is uncertain whether they are completely aware of the risks entailed by such borrowing.

The appreciation of the króna since the spring has squeezed conditions for foreign borrowing, which is offset by more favourable foreign interest rates

Foreign financial conditions are still highly favourable. In the euro area, they have even eased marginally since *Monetary Bulletin* was published in June. Short-term interest rates have hardly changed; the European Central Bank has not changed its key interest rates for 2½ years. Long-term interest rates have inched down recently compared with the spring, and are considerably lower than at the beginning of the year. Apart from the currency risk, conditions for long-term borrowing in euros remain favourable. US long-term rates have not changed much since the spring either, and are still low even though short-term rates have climbed by roughly half a percentage point since May.

The exchange rate of the króna assumed in the current forecasts is 7.4% stronger than in the updated macroeconomic and inflation forecasts published in June. This implies that conditions for new borrowing have deteriorated, assuming that the exchange rate trends back to a more sustainable level.

The Central Bank's policy interest rate has risen in real terms

The Central Bank raised its policy interest rate by 0.5 percentage points at the beginning of June, to the present 9.5%. One measure of the Central Bank's monetary stance is to assess the real policy rate relative to inflation expectations (see the discussion of inflation expectations in section VIII). The breakeven inflation rate, measured as the yield spread between price-indexed and non-indexed Treasury instruments of similar lifetimes, has been one of Central Bank's main indicators of inflation expectations. Although a suitable class of price-indexed T-bonds that can be used as a benchmark for inflation expectations over the next 2-5 years is no longer available, a series of comparable bonds with a maturity of roughly 10 years can provide an indication of fairly long-term expectations. Based on this measure, the policy rate in real terms is around 5½%. Broadly the same real rate was

shown when measured against household inflation expectations from a confidence survey conducted at the end of August and beginning of September. When the last *Monetary Bulletin* was published in June, the policy rate was 5% in real terms, so it can be assumed to have risen in step with the nominal policy rate hike announced at the beginning of that month.

A marginally higher policy rate is produced when past inflation is used as the measure, although it has decreased since May. It is also 5½% measured against the new Central Bank baseline forecast, both one year and two years ahead. Using inflation rates from the Central Bank's alternative forecast based on variable interest rates and exchange rate, the real policy rate is somewhat lower at 4.8% one year ahead and only 4.3% two years ahead. If the inflation target were considered perfectly credible two years ahead, the policy rate in real terms would be close to 7%.

Judging from market and household expectations, the overall monetary stance seems to have tightened since May. However, the sharp rise in inflation in recent months may fuel inflation expectations. The stance is still far from as tight as during the last upswing.

The latest policy rate hike had a clearer impact on non-indexed bank loans than on the nominal T-note yield curve

Average interest rates on non-indexed bank lending went up immediately in June by roughly the equivalent of the Central Bank's policy rate hike at the beginning of that month. In August they have risen by a further 0.2 percentage points. This might reflect a higher embedded risk premium for expected inflation.

The June rise in the policy rate impacted the shorter end of the nominal yield curve in particular. Yields on T-notes with a maturity of two and five years showed some rise, while virtually no change was noted for eight-year bonds. After the June policy rate hike, average yields on two-year T-notes rose 0.2 percentage points to just under 9.2%, and on five-year notes by the same figure to 7.7%. Yields on eight-year bonds held steady at just above 7.5%. Thus the bond market apparently expected a smaller rise in the policy rate than was actually announced at the beginning of June (see below). It may be inferred from the rise in yields on instruments with a five-year lifetime that, after the policy rate hike, investors did not expect interest rates to come down as quickly as they had earlier in the year.

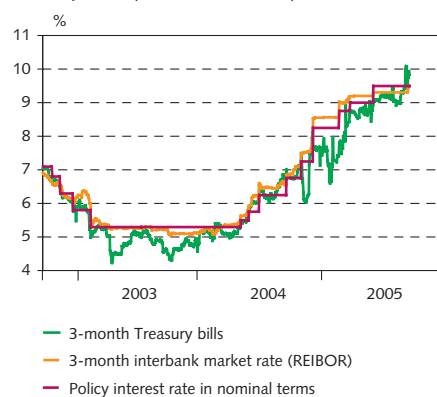
In the first half of September, yields on two- and five-year T-notes fell quite sharply, reaching 8.9% and 7.2% respectively on September 16. The reduction probably largely reflects foreign position-taking connected with issues of bonds denominated in Icelandic currency (see p. 68). This development has run counter to the Central Bank's efforts to drive up long-term interest rates and thereby weakens the monetary stance.

Further policy rate hikes already priced in to market rates

The policy rate hike of 0.5 percentage points in June appears to have been higher than market agents expected, based on implied forward rates derived from the nominal yield curve. It would seem

Chart III-3
Policy interest rate and other short-term market rates: Treasury notes and REIBOR

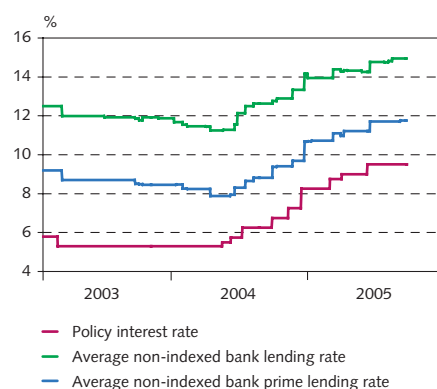
Daily data September 19, 2002 - September 19, 2005



Source: Central Bank of Iceland.

Chart III-4
The policy interest rate and non-indexed bank lending rates

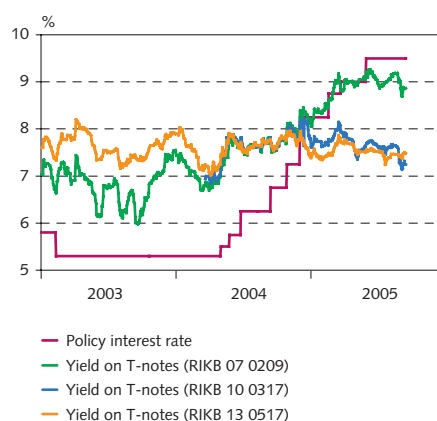
On the 1st, 11th and 21st of each month
January 1, 2003 - September 11, 2005



Source: Central Bank of Iceland.

Chart III-5
The Central Bank policy interest rate and yield on Treasury notes

Daily data January 1, 2003 - September 19, 2005



Source: Central Bank of Iceland.

Chart III-6
Central Bank policy interest rate 2002-2007

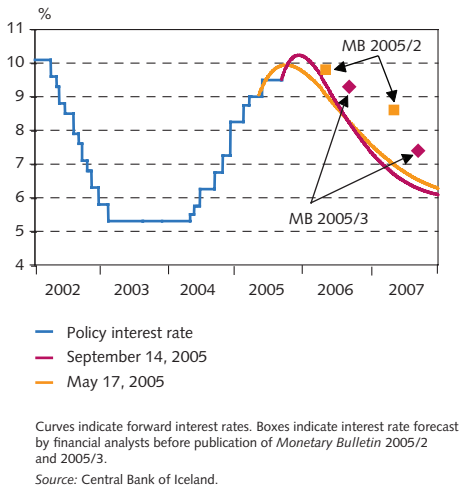


Chart III-7
Credit growth January 2001- July 2005

Quarterly credit system lending and monthly lending by DMBs, Housing Financing Fund (HFF) and pension funds

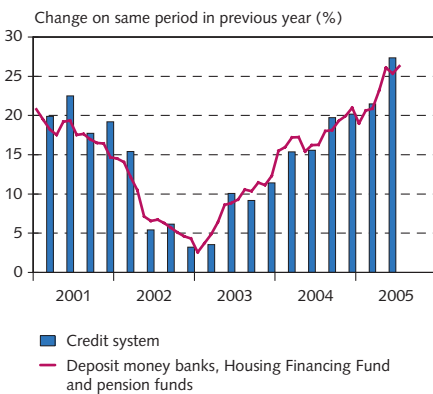
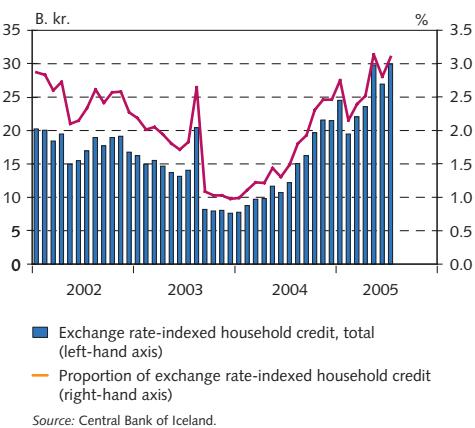


Chart III-8
Exchange rate-indexed household credit and its proportion of total credit January 2002- July 2005

Proportion of exchange rate-indexed household credit from DMBs, Housing Financing Fund (HFF) and pension funds at the end of each month



that the market expected the current policy rate level to be attained in two steps, the first when *Monetary Bulletin* was published at the beginning of June and the second at the end of June. A further policy rate increase of 0.25-0.5 percentage points was also priced in to the yield curve until the autumn.

A policy rate rise of 0.75 percentage points until the end of the year was priced in to the yield curve as measured on September 13, including 0.25 percentage points coinciding with the publication of this edition of *Monetary Bulletin*. The market therefore appears to expect the policy rate to peak at the end of this year at 10.25%, and then to start falling soon afterwards towards 8% one year from now and just over 6% two years from now. As in previous editions of *Monetary Bulletin*, these cuts are rather more rapid than implied in survey responses by financial market analysts (see Box 3), who forecast a policy rate of 9.25% one year ahead and 7.5% two years ahead. Thus the market still appears more optimistic than analysts about how quickly the Central Bank will ease its monetary stance.

Even faster rate of lending growth

Although financial conditions appear marginally tighter than in the spring, this is not reflected in credit growth. On the contrary, lending has been racing ahead. Domestic lending and portfolio holdings of the credit system had increased by 27% year-on-year at the end of June. Corporate borrowing has soared, by 37%, but household borrowing has also grown apace. The commercial banks have captured significant market share this year, especially at the expense of the Housing Finance Fund (HFF). At the end of August, lending by deposit money banks (DMBs) was up by more than 50% year-on-year, and by 53% after adjustment for exchange rate movements and price indexation. DMB lending to households had swelled by almost 128% over the same period, the bulk of which is accounted for by new mortgage lending. Household mortgage lending by the HFF and pension funds has shrunk by the same token. Year-on-year growth in total lending to households by DMBs, pension funds and investment credit funds (including the HFF) measured almost 18% at the end of July.

Like other credit forms, foreign currency-denominated lending by DMBs has been surging recently, with twelve-month growth until the end of August in excess of 60%. There is no sign that the strength of the króna has constrained borrowing in foreign currencies. However, it should be remembered that many corporate borrowers have income in foreign currencies or deploy these funds on foreign investment. Soaring growth in foreign currency-denominated lending to domestic businesses therefore does not necessarily reflect heavy domestic investment, so it is uncertain how far the surge in borrowing may be seen as an indication of growing domestic demand. A sizeable portion of the additional lending may be connected with the overseas expansion of Icelandic companies. Foreign currency-denominated lending by DMBs accounted for just over 53% of their total lending at the end of August, which is broadly the same share as earlier this year.

Development of money

The twelve-month growth rate of broad money (M3) has risen sharply since the spring and measured more than 24% at the end of July. In the short run there is little correlation between growth of broad money and inflation. Nonetheless, persistent growth of money in excess of nominal growth of GDP may indicate long-term pressures on prices. That said, growth of M3 and other monetary indicators should be interpreted with caution, because under certain conditions M3 may swell because of, for example, investor flight from high-risk to lower-risk assets – as was noted on a global scale in the wake of the equity price slump around the turn of millennium. Deposits in money market accounts, which are one component of M3, increased sharply for a while at that time. However, this explanation is hardly appropriate in the present climate, since equity prices have soared in recent years and financial market sentiment is strong.

Financial conditions of businesses have tightened since the spring

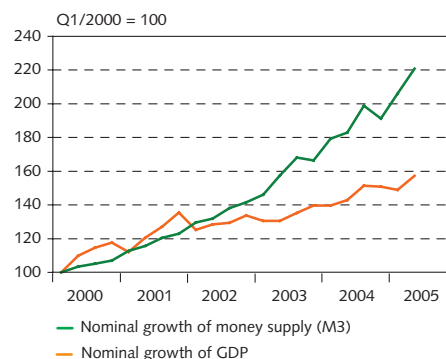
A large share of corporate debt and borrowing is denominated in foreign currencies. Movements in the exchange rate of the króna and foreign interest rates therefore primarily affect the financial conditions of businesses. Roughly 56% of business debt with DMBs, for example, was denominated in foreign currencies at the end of July. Foreign interest rates are still extremely low. Long-term T-bond rates in the euro area have gone down since the spring. On the other hand, the strengthening of the króna ought to deter new foreign borrowing, as pointed out above, even though this eases debt service on existing loans for as long as it lasts. An appreciation of the króna squeezes export companies in particular, for example in the fisheries and tourism and travel sectors, and also hits domestic companies operating in the traded goods sector in the home market. These businesses' costs rise in excess of their income, either because income is denominated in foreign currencies, or because competition from foreign rivals prevents them from raising prices to meet the additional costs.

Corporate borrowing which is not denominated in foreign currencies is divided fairly evenly between indexed and non-indexed loans. While interest rates on indexed loans have generally gone down, rates on non-indexed loans, such as overdrafts, have broadly speaking risen in pace with policy rate hikes, as noted above. The higher interest rates on non-indexed loans have weighed much more heavily. Thus the combined effect of exchange rate movements and interest rate movements can be expected to have left financial conditions rather less favourable this autumn compared with the spring.

Financial conditions of households have taken a slight turn for the worse since the spring

Financial conditions of households are likely to be slightly tighter at present than they were in the spring. The main determinant of households' financial conditions is interest rates on long-term indexed borrowing, especially mortgage loans. These rates have not changed this summer. Higher interest rates on non-indexed lending, including

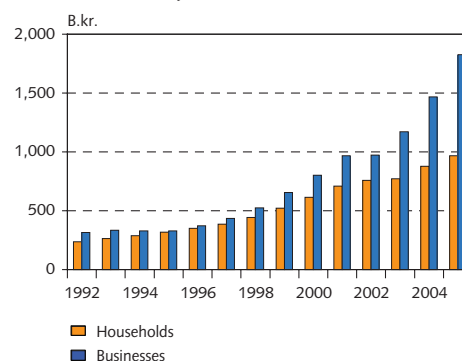
Chart III-9
Nominal growth of money supply and GDP
Q1/2000 - Q2/2005



Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-10
Credit by sector 1992-2005

Outstanding credit system lending to households and businesses at end of year, data for 2005 are from the end of June¹



1. Lending was reclassified in 2003.
Source: Central Bank of Iceland.

overdrafts, are not as crucial a factor. Households do not appear to have taken advantage of scope for refinancing their mortgages in order to pay off their overdrafts, which for the first eight months of this year were 7% higher on average year-on-year and had increased by 5% over the twelve months to the end of August.

Until recently, exchange rate-indexed loans accounted for only a minor share of household debt. This situation began to change last year. Of the total stock of DMB lending to households, which amounted to almost 460 b.kr. at the end of August, nearly 30 b.kr. was denominated in foreign currencies. Their exchange rate-indexed debt with DMBs ran at just over 21 b.kr. at the beginning of the year, so it has grown by more than 40% so far this year. Presumably, borrowers do not see the strong króna as posing a higher currency risk than the interest-rate differential with abroad. A sharp slide in the króna could force households into a sudden rethink. Exchange rate-indexed loans are increasingly being used in car financing and mortgages. Since these loans also carry variable rates of interest, they may appear more attractive at present than they perhaps will in the future.

IV Domestic demand and output

Outlook for a wider positive output gap than previously forecast

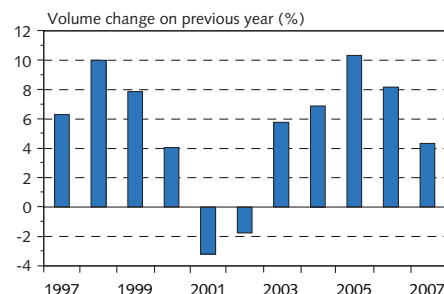
The outlook is for rather slower GDP growth in 2005 than was forecast in June, but faster in the following two years. Last year's GDP growth estimate has been revised upwards, however. This year's downward revision is mostly explained by less investment and a more rapid expansion of imports than previously projected. These two factors outweigh the upward revision of the June forecast for private consumption growth. All told, the outlook is for a wider positive output gap next year than was forecast in June.

Estimated GDP growth revised upwards for 2004 but downwards for 2003

Revisions of GDP growth forecasts are not the only source of changes in estimates of the output gap. Revisions of earlier data can also affect them to quite a large degree. In September, Statistics Iceland published preliminary national accounts for 2004 which show a considerably faster rate of GDP growth than had been estimated earlier. The most important change is that gross fixed capital formation is estimated to have increased by 21% year-on-year in 2004, instead of 12.8%. However, estimates for growth of both private consumption and public consumption have been revised downwards. These revisions have raised estimated GDP growth in 2004 to 6.2%, up by one percentage point from earlier estimates.

Statistics Iceland also published revised national accounts statistics for 1990-2004. It has changed some of its methodologies in line with international developments in national accounting. Estimates of volume and price changes are now based on chain-linking, i.e. year-on-year volume changes are estimated on the basis of relative prices in the preceding year. The use of recent relative price data ought to improve the quality of estimates of volume changes. This revision resulted in some changes in measurements of aggregates in the national accounts. Private consumption growth in 2003 was revised down to 5.8% (from 6.6%) and GDP growth to 3.6% (from

Chart IV-1
Private consumption growth 1997-2007¹



1. Central Bank forecast for 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

Statistics Iceland released new data on main national accounts aggregates on September 13. Data for the period 1990-2003 have been revised and annual chain-linking introduced. Year-on-year volume and price changes are now estimated on the basis of relative prices in the former year. These changes are then chain-linked to calculate volume indices and time series that show the development of individual aggregates at constant prices.

Previously, Statistics Iceland used relative prices for a given year (the base year) over a period of several years. It used 1990 as the base year for volume changes in national accounts for the period 1990-1997, and 1997 as the base year for the period after 1997. Now, in effect, the former of each two contiguous years constitutes the base year.

Distinguishing between price and volume changes is vital to all economic analysis. If a single homogeneous good is sold at a

Box 1

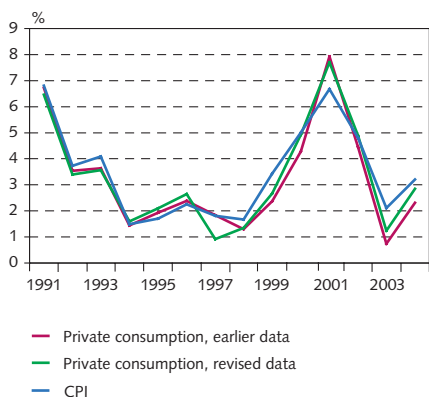
National accounts – chain-linking and revision for 1990-2003

specific price over each period, the distinction between price and volume changes is easy to make. Attempts to distinguish between price and volume changes for a group of goods – for example all the goods consumed by households (private consumption) or all capital goods used in investment – complicate the picture enormously because both relative price and the volume of different goods change continuously. Ten years ago the price of mobile phones and mobile phone calls made little difference to estimates of private consumption price changes, but now it is quite significant. Thus a sizeable error may be introduced by using a distant base year. The main advantage of chain-linking, as now used by Statistics Iceland in its estimates of volume changes in the national accounts aggregates from 1990 inclusive, is that the base year is always very recent.

Changes in the volume and price of goods between periods

Period:	1	2	3
<i>Price</i>			
Price of good 1	150	160	170
Price of good 2	100	90	105
Relative price	1.50	1.78	1.62
<i>Volume</i>			
Volume of good 1	10	12	14
Volume of good 2	30	31	32
Total value	4,500	4,710	5,740
<i>At period 1 prices</i>			
Good 1	1,500	1,800	2,100
Good 2	3,000	3,100	3,200
All goods	4,500	4,900	5,300
Total value	4,500	4,900	5,300
Change		8.89%	8.16%
<i>At period 2 prices</i>			
Good 1	1,600	1,920	2,240
Good 2	2,700	2,790	2,880
All goods	4,300	4,710	5,120
Total value	4,300	4,710	5,120
Change		9.53%	8.70%
<i>Chain-linking (period 1 prices)</i>			
Good 1	1,500	1,800	2,100
Good 2	3,000	3,100	3,200
All goods	4,500	4,900	5,327
Change		8.89%	8.70%
Total value	4,500	4,900	5,300
Change		8.89%	8.16%

Chart 1
Private consumption prices and
the CPI 1991-2004



Source: Statistics Iceland.

In order to produce time series over a longer period, volume and price changes which are calculated using different base years need to be linked. The usual method is to produce a series where relative changes are the same as in the series from which the linked series is produced. When this is done it should be remembered that the total of linked items almost never equals the linked totals. An example is given below, using the price and volume of two goods over three periods given in the table.

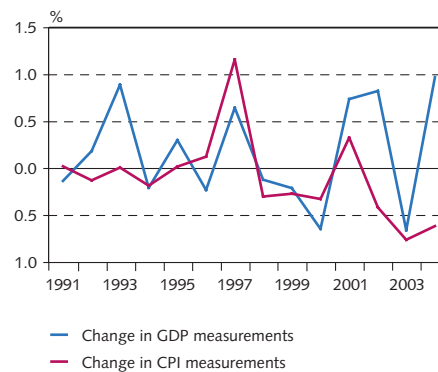
The table shows that if the volume changes are estimated using the prices in period 1, the volume changes in the aggregate

are 8.89 and 8.16% while if the prices in period 2 are used the changes are 9.53% and 8.70%. In both cases, the estimated volume of the two goods equals the total of the items at constant prices. This alters when different base years are used and the changes are chain-linked. The lower section of the table shows that in this case there is a 0.5% difference between the estimated changes in the volume of the aggregate good between period 2 and period 3 and the change in the sum of the value of each good at constant prices.

These new methodologies produce new measurements for price and volume changes in Iceland's national accounts. Thus year-on-year GDP growth measures 0.8 percentage points more in 2002, but 0.7 percentage points less in 2003 using the new methodology. The year-on-year change in GDP prices is the same in 2002, but in 2003 it measures 0.3 percentage points more.

Private consumption is by far the largest component of GDP. The revision of aggregates narrows the discrepancy that has existed between changes in private consumption prices and changes in the consumer price index (CPI). As a result of Statistics Iceland's new methodology, the year-on-year change in private consumption measures 0.4 percentage points less than previously estimated in 2002 and 0.8 percentage points less in 2003. However, the year-on-year price change is 0.5 percentage points higher for both years. Although the discrepancy has been reduced, Statistics Iceland's new data still show less change in private consumption prices than in the CPI in recent years (see Chart 2).

Chart 2
Discrepancy between revised and earlier measurements of GDP volume and the CPI 1991-2004



Source: Statistics Iceland.

4.2%). Estimates for GDP growth in 2001 and 2002 were raised by 0.7 and 0.8 percentage points respectively (the new methodologies are discussed in Box 1).

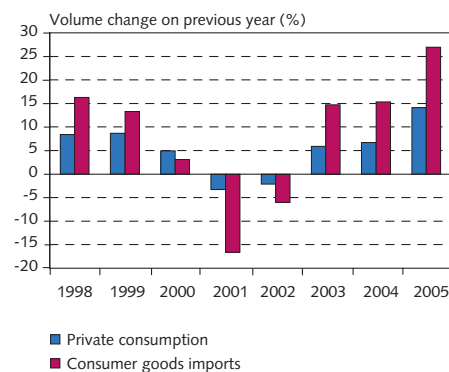
First-half estimates indicate a higher rate of private consumption growth and less GDP growth in 2005 than was forecast in June

In September, Statistics Iceland also published figures for Q2/2005 together with revised data for previous quarters. These show an 11.6% year-on-year increase in private consumption in the first half of 2005. In June, the Central Bank had forecast 8% growth in private consumption this year. For that forecast to hold would require annual growth in private consumption of only 4.5% in the second half of this year, which must be considered unlikely in light of current indicators, as discussed below. However, first-half GDP growth measured just under 5%, somewhat below the Bank's forecast over the whole year, which was 6.5%. GDP growth is therefore likely to be lower than previously forecast. Table IV-1 shows main aggregates over the first half of 2005 and the growth required in the second half if the Bank's June forecast is to hold.

Private consumption

The forecast for private consumption in 2005 has been revised upwards, to more than 10% from 8%. Private consumption growth is likely to remain robust next year, but will slow down in 2007.

Chart IV-2
Consumer goods imports and private consumption, first-half figures for 1998-2005



Source: Statistics Iceland.

Table IV-1 National accounts aggregates in the first half and second half of 2005

	First half of 2005	Second half of 2005 based on Central Bank forecast in June 2005
Private consumption	11.6	4.5
Public consumption	3.7	1.3
Gross fixed capital formation	21.9	47.7
National expenditure	11.2	13.6
Exports of goods and services	4.7	3.3
Imports of goods and services	21.1	15.9
Gross domestic product	4.9	8.3

Outlook for faster growth in private consumption this year than previously forecast

As mentioned above, private consumption growth in the first half of 2005 ran higher than the June forecast for the whole year. Main indicators of private consumption suggest that the rate of increase has not let up in Q3 – if anything, it has gained pace. Total payment card turnover increased by almost 12.4% in real terms over the first eight months of 2005, domestic payment card turnover by 10.7% and grocery turnover by 9.4%. Imports of consumer goods increased by 26% in real terms over the same period (including private motor vehicles by 61% and consumer durables by 39%). The buoyant króna has clearly fuelled demand for imported goods and services, especially private cars and other consumer durables.

A surge in net wealth feeds private consumption growth

If the Central Bank's forecast holds, private consumption growth this year will far outstrip the expected 3.5% increase in real disposable income. This implies a reduction in household saving. According to Central Bank estimates, household debt increased by 153 b.kr., or 15% in real terms, over the twelve months to the end of June 2005. Over the same period, household assets such as housing and equities have appreciated by even more. The Land Registry's housing price index shows that the value of housing, deflated with the CPI, increased by 35% over the twelve months to June 2005. Share prices rose by 41% in real terms over the same period. Households' assets have therefore clearly increased by more than their debts.

According to tax returns, the value of real estate owned by households increased by 192 b.kr. over 2004 and stood at 1,364 b.kr. at the end of the year. Over the same period, the asset tax base of households increased by 143 b.kr., or 12.5% in real terms. On their tax returns they reported also a 100 b.kr. increase in debts, which is just under 11% in real terms, to a total of 757 b.kr. at the end of the year. This figure is somewhat lower than the Central Bank's estimate of household debt in its June forecast, which was 877 b.kr. at the end of 2004.

The forecast for private consumption growth this year reflects an increase in net household wealth. Lower interest rates in real terms and easier access to credit last year have also stimulated private consumption. The effect is expected to persist until 2006, when the

increase in private consumption will slow down from the plateau reached after four years of growth in the region of 6% or more.

Households very upbeat about the economic outlook

These conditions are reflected in households' very upbeat view of the state of the economy and fairly optimistic assessment of the outlook. Gallup's consumer confidence index is running high at present and the assessment of the current economic situation has never been more positive. Over the first eight months of 2004 the index stood 6% higher than the average for last year, and in August it was 13% higher. Gallup also surveys planned major purchases, i.e. cars, housing and foreign travel. The index for major purchases was at its second-highest level ever in June, after slipping by almost five percentage points since March. This optimistic view of employment and income prospects, which implies a strong capacity to service new debt, encourages households to finance private consumption with borrowing.

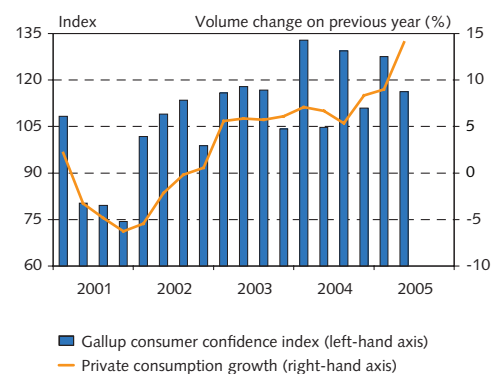
Public consumption

Outlook for faster public consumption growth in 2005 and 2006 than was forecast in June

According to recent figures from Statistics Iceland, public consumption grew more slowly in 2004 than according to estimates used in the Central Bank's June forecast, at 2.8% instead of 3.6%. Of this growth, over 4% was accounted for by health institutions, which are classified with the social security accounts, while central and local government figures were correspondingly lower.

Chart IV-3

Private consumption and consumer confidence¹ Q1/2001 - Q2/2005



1. Confidence index at end of each quarter.
Sources: Statistics Iceland and IMG Gallup.

Table IV-2 Indicators of private consumption in 2004 and in the first eight months of 2005

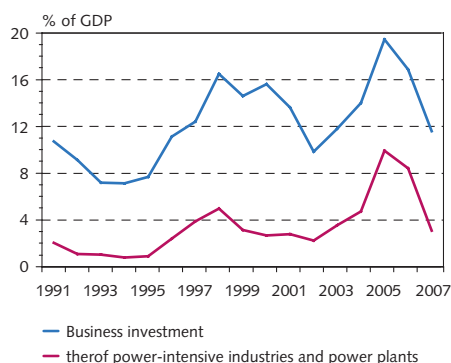
% year-on-year change unless otherwise stated	Quarterly figures					Most recent period		
	Q2/2004	Q3/2004	Q4/2004	Q1/2005	Q2/2005	Change based on		
						Month	same period in prev. year ³	year-to-date figures
Grocery turnover (in real terms)	3.4	4.3	3.5	7.2	10.5	August 2005	10.4	9.3
Payment card turnover (in real terms) ¹	9.7	4.9	11.3	11.2	14.4	August 2005	11.2	12.4
of which domestic	8.6	4.0	9.8	9.8	12.8	August 2005	13.5	10.3
of which abroad	29.1	18.4	34.0	35.6	33.7	August 2005	42.4	35.9
Car registrations (increase in number)	28.4	19.5	44.3	61.4	64.4	August 2005	60.5	62.6
General imports (volume change) ²	18.7	13.6	16.0	15.1	17.5	July 2005	.	19.5
Imports of consumer goods (volume change) ²	15.3	14.5	15.7	22.1	26.9	July 2005	.	26.0
Private motor vehicles ²	24.2	24.6	35.0	56.7	66.0	July 2005	.	61.3
Consumer durables, e.g. household appliances ²	19.4	16.3	17.1	36.3	38.5	July 2005	.	38.7
Consumer semi-durables, e.g. clothing ²	9.9	8.8	7.5	16.9	17.4	July 2005	.	17.5
Food and beverages ²	11.8	10.5	10.2	6.8	9.0	July 2005	.	8.5
Imports of investment goods excluding ships and aircraft (volume change) ²	38.3	23.8	19.3	36.9	26.6	July 2005	.	28.4
Gallup confidence index	-11.7	5.5	-3.2	-1.7	9.4	August 2005	8.4	5.6
Current situation	13.8	23.1	19.8	21.2	34.6	August 2005	32.9	30.7
Expectations six months ahead	-22.3	-3.5	-14.7	-13.7	-5.9	August 2005	7.8	-9.0

1. Payment card turnover for both households and businesses; the bulk of payment card turnover comes from households. 2. Quarterly figures are year-to-date figures. 3. July to August.

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

Chart IV-4

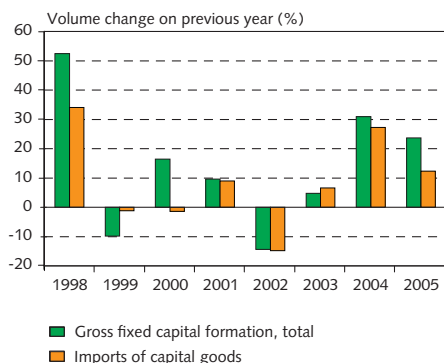
Gross fixed capital formation: businesses, power-intensive industries and power plants 1991-2007¹



1. Central Bank forecast for 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

Chart IV-5

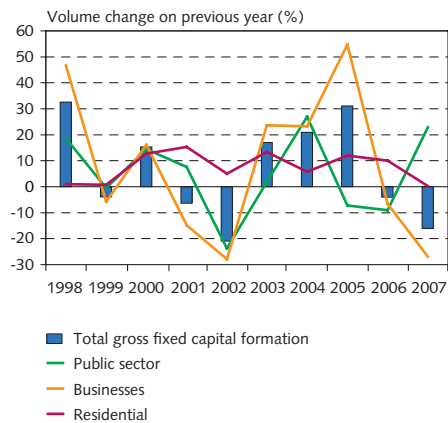
Gross fixed capital formation and imports of capital goods, first-half figures for 1998-2005



Source: Statistics Iceland.

Chart IV-6

Gross fixed capital formation growth and its main segments 1998-2007¹



1. Central Bank forecast 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

The June forecast for 2.5% growth in public consumption in 2005 has been revised upwards to 3.5%. Public consumption increased by 3.7% in the first half of this year, while over the first seven months, central government expenditure in areas classified as public consumption rose by 5% more than wages year-on-year. Thus public consumption by central government and its agencies that are bracketed in the social security accounts is unlikely to increase by less than 3% in 2005, although the budget assumes 2% growth.

Municipalities' budgets entail 1.5% growth in public consumption. This is well below the 4.2% average growth rate recorded in 1998-2004, not to mention the tendency for expenditures to overshoot budget targets when local elections are in the offing. The current Central Bank forecast therefore adopts the 4.5% figure for growth in public consumption by local government which was forecast by the Ministry of Finance in May.

Developments so far this year indicate that public consumption will grow by half a percentage point more this year than was forecast in June, or 3%. The June forecast incorporated available long-term projections with a rough assessment of their credibility. The Central Bank forecasts that public consumption will increase by 2.7% in 2007, with a lower figure central than for local government.

Gross fixed capital formation

Estimated investment in 2004 revised upwards

According to Statistics Iceland's preliminary national accounts, gross fixed capital formation in 2004 was considerably greater than earlier estimates had indicated, with year-on-year growth revised upwards to 21% from just under 13%. Much heftier business investment than previously estimated largely accounts for the difference. Estimates of residential investment in 2004 have also been revised upwards, while the public investment estimate is virtually unchanged.

Investment projected to grow at a slower pace this year than forecast in June, but decline less in 2006

Investment seems to be heading for slower growth this year and a smaller contraction in 2006 than the Central Bank had forecast in June. The main source of change in the forecast for this year is slower forecast growth of residential investment, after taking into account available data for the first half. On the other hand, the forecast for business investment growth in 2006 has been revised upwards. An ongoing contraction in investment is forecast for 2007, largely as a result of less investment in the aluminium and power sectors.

It should be borne in mind that the downturn in investment in 2006-2007 follows a massive increase in 2003-2005. If the forecast holds, gross fixed capital formation in 2007 will be almost 28% higher than the annual figure for 2003, and 5.5% more than for 2004. As a proportion of GDP, gross fixed capital formation then will be 20.5%, which is 3 percentage points down from 2004 but broadly comparable with the average for the period 1980-2004.

Smaller drop in business investment than previously forecast

Business investment in 2004 increased by 23.3% according to preliminary figures from Statistics Iceland, instead of the earlier estimate of 13%. The main factor at work is a higher estimate now for investment in the aluminium and power sectors. Other business investment was also revised upwards.

Massive growth in business investment is on the cards again this year and it will largely be deployed on aluminium smelters and power plants. The expected increase in business investment in 2005 is now almost 55%, up from the Central Bank's June forecast of 53%. Since the change is calculated relative to a much higher level of investment in 2004, it involves a substantial increase in activity from the June forecast. The forecast for other business investment growth this year (i.e. excluding the aluminium and power sectors, as well as ships and aircraft) has been revised to 5½% from 1½%.

Business investment will contract in 2006. However, a smaller decrease is forecast now than in June. Rather than contracting by almost 14% next year, as forecast in June, business investment is currently expected to decrease by 6.5%. Larger investment in the aluminium and power sectors than previously forecast accounts for the difference. Work is now expected to enter full swing in 2006 on a 40 thousand-tonne expansion to the Nordurál smelter at Grundartangi and related power supply, while the June forecast assumed that their impact would not be felt until 2007. Cost estimates for other projects have also been revised to incorporate new estimates, including the exchange rate of the króna. In the opposite direction, other investment in 2006 is expected to contract rather more sharply than was forecast in June. It will pick up again in 2007, but there will be a drop in the aluminium and power sectors that year, and in total business investment.

Strong business profitability in 2004-2005

Iceland's largest companies have witnessed strong profitability recently. Table IV-3 shows first-half profit ratios for 36 companies in 2004 and 2005. Most of these companies were listed on Iceland Stock Exchange (ICEX) for the whole period, although two fisheries companies are included which were not. Two manufacturing companies are included as well which are owned by holding companies listed on ICEX. Despite the strong króna, return on equity appears to be high for the whole period. It should be underlined that exports weigh relatively heavily for the manufacturing and fisheries companies in the sample, so the exchange rate exerts an impact on their profitability. Also, many of these companies have some activities located abroad. This is a longstanding feature of their operations and exchange rate developments in recent years only explain it to a very small extent.

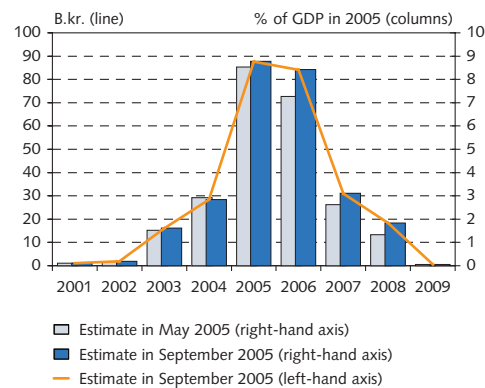
Public sector investment will increase by almost one-quarter in 2007, after two years of contraction

Public sector investment increased by almost 27% in 2004, according to Statistics Iceland. In June, the Central Bank forecast a decrease of almost 12% this year and a further 5% in 2006. Both central and

Chart IV-7

Aluminium and power sector investments:
total investment cost 2001-2009

Construction of Fjarðaál smelter, expansion of
Norðurál smelter and related power facilities

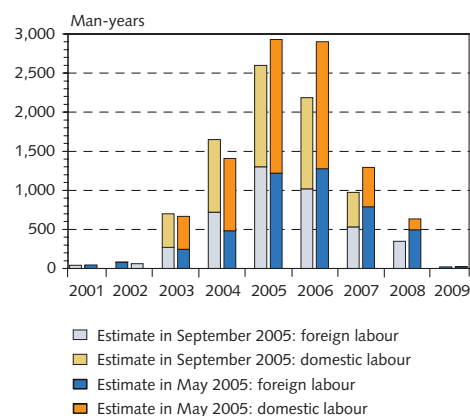


Based on data available at time of forecasting. Subsequently, some activities have been rescheduled from 2005 to 2006.
Source: Central Bank of Iceland.

Chart IV-8

Aluminium and power sector investments:
labour use 2001-2009

Construction of Fjarðaál smelter, expansion of
Norðurál and related power facilities



Source: Central Bank of Iceland.

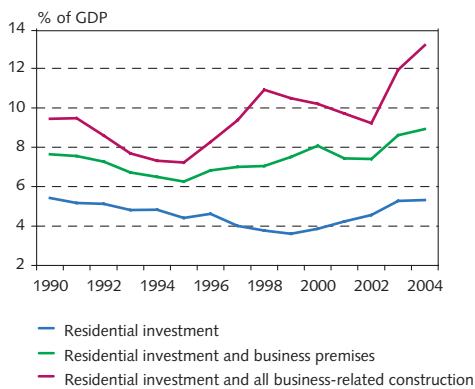
Table IV-3 Profitability of listed companies in the first half of 2004 and 2005
January-June figures only

% of turnover	EBITDA		Net earnings		Return on assets		Return on equity		Equity ratio	
	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
Fisheries	21.0	24.0	10.4	10.3	12.4	11.2	17.9	13.9	34.6	35.2
Manufacturing	19.6	16.0	8.0	9.5	10.0	10.6	13.0	16.2	31.0	39.4
Marine exports	1.4	3.5	0.0	1.0	2.6	6.3	-	19.7	19.0	9.4
Transport	5.4	4.3	2.6	2.8	6.6	5.0	9.8	9.5	31.6	33.3
ITC	10.3	15.3	8.7	10.2	9.2	9.8	19.5	14.7	39.7	44.0
Other	32.8	28.2	19.3	9.5	9.4	6.0	20.2	7.0	27.4	29.3
Total	12.7	13.2	6.0	7.2	9.4	9.6	14.2	14.7	31.6	35.6

Source: Central Bank of Iceland.

Chart IV-9

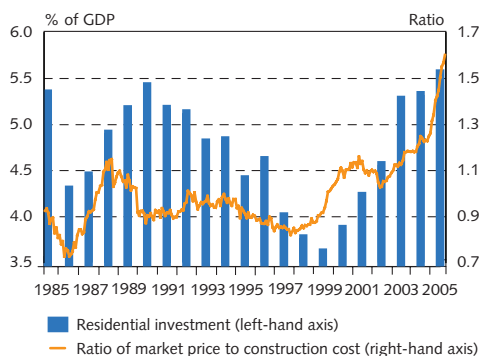
Investment in residential housing, business premises and other business-related construction 1990-2004



Sources: Statistics Iceland and Central Bank of Iceland.

Chart IV-10

Housing market prices, construction cost and residential investment 1985-2005¹



1. The yellow line indicates the ratio of market prices of apartments in the Greater Reykjavik Area to construction cost. Both indices are normalised to the average for 1985-2004. Central Bank forecast for residential investment 2005.

Sources: Land Registry of Iceland and Central Bank of Iceland.

local government have budgeted to cut their investment in 2005 by roughly 7% in real terms. Treasury payment figures for the year appear to be in line with that assessment.

Public sector investment plans for 2006 had not been announced at the time of writing, but the government's medium-term programme assumes that investment will be kept to a minimum and that investments in the aluminium and power sectors will hold back investment by municipalities in spite of the local elections that year. Public sector investment is therefore assumed to shrink by just over 9% in 2006. However, a higher level of investment by municipalities is quite probable as the elections approach.

In 2007, the first phase of investment of the proceeds from the privatisation of Iceland Telecom will be launched. Some reduction is foreseen in local government investment, but the forecast does not assume that other central government investment will be shelved in favour of discretionary projects for which the privatisation proceeds have been earmarked. Total public sector investment is expected to expand by almost 23% in 2007.

Residential investment forecast revised downwards

Statistics Iceland's preliminary estimates show that residential investment was 5.7% higher in 2004 than in 2003. This is a relatively small increase compared with more than 16% in 2003 and a similar rate of growth in 2000 and 2001. Brisk, sustained growth has resulted in substantial activity in the residential segment of the construction industry at the same time as many other large-scale construction projects are under way. Chart IV-9 shows investment in residential housing, business premises and other business-related construction, as a proportion of GDP.

The chart shows that this investment has easily outpaced GDP growth, so that investment in new housing has risen as a proportion of GDP from just under 4% over the period 1998-2000 to 5.3% in 2004, and will grow to 5.8% in 2007 if the forecast holds.

In June, the Central Bank forecast that residential investment would increase by almost 22% this year. Indicators of residential investment developments are ambiguous, however. For example, on the basis of issued building permits, the increase in volume can be estimated at 16% in 2004 and 21% this year. Soaring housing prices recently also suggests strong profitability in the sector, although

skilled labour is in short supply. In light of all these factors, the Central Bank now forecasts a 12% increase in residential investment this year, which is a considerably slower rate of growth than in the June forecast for this year, and 10% in 2006, which is the same as forecast then. On the other hand, the rate of residential investment growth is forecast to slump to zero in 2007.

Imports

Outlook for more import growth than forecast in June

The June forecast for import growth this year has now been upped, even though the forecast increase in national expenditure is virtually unchanged. Imports are forecast to increase by 23%, which is 4.5 percentage points in excess of the June forecast. Import growth will slow down sharply next year, however, when the rate of increase in national expenditure, especially investment, slows down.

In the first seven months of this year, merchandise imports rose by 27.5% year-on-year, measured at constant exchange rates. The sharpest growth was in imports of transportation equipment, both private cars and business-related vehicles. The high real exchange rate and soaring private consumption have also contributed to record growth in imports of consumer durables so far this year. Ongoing brisk import growth is forecast until end-2005, since imports of capital goods will probably increase in the second half.

Sharp slowdown in import growth over the next two years

Imports in 2006 are forecast to remain virtually unchanged year-on-year, as against the 1% contraction forecast in June. A slightly larger increase in national expenditure and the stronger króna explain this revision.

In 2007, imports are forecast to decline by 1%, as total national expenditure drops. Imports of capital goods will contract sharply and consumer durables and private cars will witness slower growth, matching the smaller increase in private consumption than in previous years. However, a sharp rise in aluminium production will call for more alumina imports.

GDP growth and the output gap³

As described above, according to the preliminary national accounts GDP growth in 2004 was 6.2%, up from an earlier estimate of 5.2%. Growth has gained momentum this year, from 3% in Q1/2005 to 6.8% in Q2/2005. First-half growth therefore measured just under 5%, while in June the Central Bank forecast 6½% growth for the whole year. In light of the first-half figures, growth in 2005 appears to be heading lower than was forecast in June, to 5½%. On the other hand, the GDP growth forecast for 2006 has been revised upwards, to more than 6½%. The Central Bank is presenting its first forecast for 2007. Fairly robust growth is expected to continue, at just under 5%. It should be underlined that it is assumed in the baseline forecast

Chart IV-11

New housing: turnover and number of transactions¹ June 2001 - July 2005

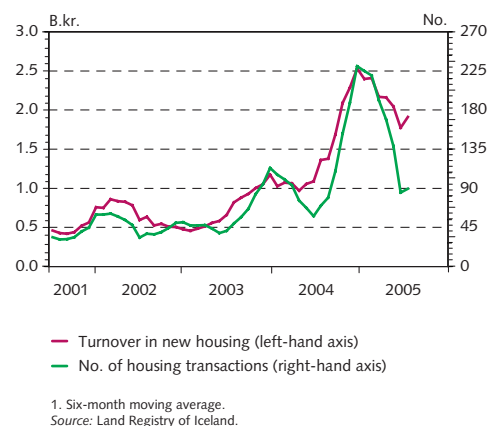


Chart IV-12

Import growth 1997-2007¹

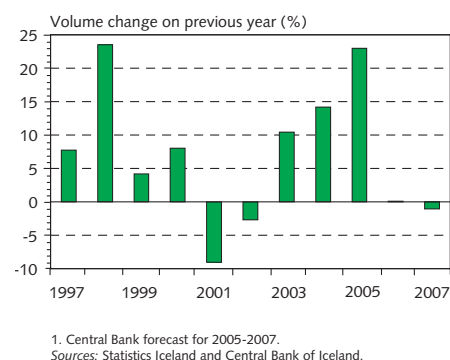
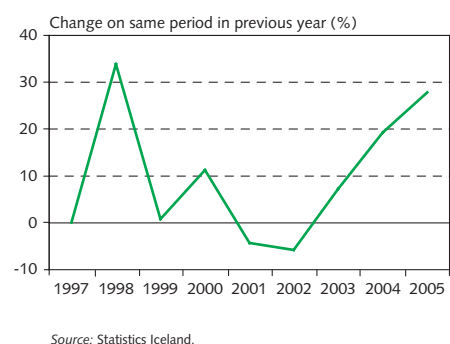


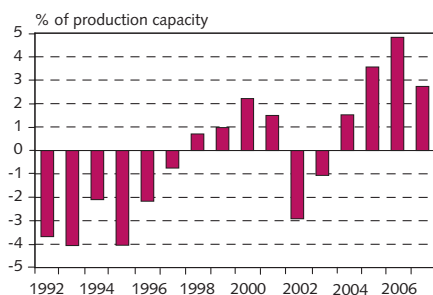
Chart IV-13

Goods imports in the first seven months of the year 1997-2005



3. The output gap is defined as the difference between actual and potential GDP as a percent of potential GDP.

Chart IV-14
The output gap 1992-2007¹



1. Central Bank forecast for 2005-2007.
Source: Central Bank of Iceland.

that the exchange rate and policy interest rate remain unchanged over the forecast horizon.

Output gap at a historical high

The output gap is an important concept in the preparation of inflation forecasts and assessments of the economic outlook.⁴ First, it measures excess or underutilised capacity in the economy, and thereby underlying inflationary pressures. Second, measuring the output gap indicates the source of growth, i.e. whether it originates in increased production capacity or in excessive demand growth. This is important, because there is no reason to respond to increased production capacity, while overheating needs to be tackled. The problem is that the output gap cannot be measured directly, but must be estimated from other aggregates.

The output gap estimate in the current forecast indicates severe overheating in the Icelandic economy. The estimate for 2004-2006 has been revised upwards from the June forecast and is expected to peak next year at just under 5% of production capacity, then shrink back in 2007. Revised figures for GDP growth in recent years and the outlook two years ahead largely explain the revised estimate. If the forecast holds, this output gap will be the most pronounced since the end of the 1980s, and next year's output gap the largest annual figure since 1980. Nonetheless, a historical comparison is complicated by structural changes in the economy over the past two decades. And it should be reiterated yet again that the forecast is based on the assumption of an unchanged exchange rate and policy interest rate over the forecast horizon.

In short, GDP growth has been soaring since the economy recovered from the downswing in 2002 and the outlook is that the output gap will peak next year. If the monetary stance is not tightened further, the outlook is therefore that inflation will increase.

4. The Central Bank of Iceland's methodology for calculating the output gap was described in *Monetary Bulletin* 2005/1, Appendix 2, pp. 56-59.

V Public sector finances

Treasury revenues have increased far in excess of budget targets so far this year, driven by robust demand and intense economic activity. Over the whole of 2005, tax receipts from goods and services are heading well beyond estimates. Expenditures are likely to overshoot by much less, so the fiscal surplus could end up at nearly 30 b.kr., equivalent to 2-3% of GDP. Central government debt will decrease as a result of this surplus and the retirement of foreign debt using proceeds from the privatisation of Iceland Telecom. This will leave gross Treasury debt at the end of this year at around 200 b.kr., or 20% of GDP, compared with 255 b.kr. at the beginning of the year. Based on the Central Bank's macroeconomic forecast, the public sector surplus might reach 3% of GDP in 2006, but is likely to fall to 2% in 2007. However, most of the surplus seems due to the boom, as the structural (cyclically adjusted) surplus remains well below the measured surplus.

Outlook for a sizeable increase in tax revenues over and above the budget estimate

So far this year, tax receipts from goods and services have increased by 16.5% in real terms, while the budget target is 5%. This additional revenue growth will represent a 17 b.kr. windfall for the Treasury if it lasts for the whole year.

By the end of July, personal income tax had generated 7.5% higher real revenues year-on-year. The tax rate cut at the beginning of the year was originally expected to reduce revenues by 2% in real terms over the year as a whole. The present discrepancy would yield the Treasury 6 b.kr. if sustained until the end of the year. National insurance contributions, which were expected to rise by 3.5% in real terms, are currently up by 12%, yielding an extra 3 b.kr. over the year if this trend is sustained. Finally, capital income taxes and stamp duty have boosted revenues by 6 b.kr. so far this year compared with the corresponding period in 2004. The total tax receipts windfall for the Treasury could therefore approach 30 b.kr. over the whole year.

Expenditures will probably overshoot the budget targets in 2005, but by nowhere near as much as the extra revenues. Excluding interest, payments have increased by just over 3% in real terms, against a budget target of 1%. The difference over the whole year is equivalent to roughly 6 b.kr.

Accordingly, the fiscal surplus is heading for 30 b.kr., which is 20 b.kr. more than budgeted. Such a possible outcome was already identified in *Monetary Bulletin* in December 2004. As pointed out then, it is primarily the effect of a cyclical upswing rather than a fundamental strengthening of central government finances, although paying down of debt does represent such a consolidation. The combined effect of additional prepayments using earmarked privatisation proceeds from Iceland Telecom and the extra surplus for the year will enable of 60 b.kr. in debt to be retired during the year. Gross Treasury debt will decrease correspondingly. Based on the

interest rate terms on the Treasury's borrowing, this reduction will represent an annual saving on debt service amounting to around 3 b.kr.

Handsome fiscal surplus likely over the next two years

The fiscal position in 2006 is difficult to assess while the budget for the year is still taking shape. However, it is known that the net wealth tax will be abolished, and the personal income tax rate reduced by 1 percentage point to 23.75% and the high-income tax surcharge from 4% to 2%. These measures will cost the Treasury 9-10 b.kr. annually. The Central Bank forecasts that real disposable income will increase by almost 7%, due to three main factors: higher wages, increased economic activity and tax cuts. The resulting demand impulse may be expected to yield substantial additional revenues from taxes on goods and services in 2006, which will offset some of the lost revenue from the lower income tax rate.

Expenditure plans for 2006 are not so clear-cut. The Central Bank assumes a 5% contraction in central government investment and a 3% increase in public consumption. The government's medium-term fiscal programme assumes 3.5% growth in transfers in real terms, partly due to a rise in child allowance amounting to more than 1 b.kr. over the year. These plans would leave expenditure growth at a fairly modest level considering the circumstances, and a sizeable fiscal surplus would continue.

In 2007 the final phase of the personal income tax cuts will go into effect, whereby the rate will be reduced by 2 percentage points and the tax-free limit for personal income raised by 8%. These cuts are likely to cost the Treasury roughly 11-12 b.kr., compared to a continuation of recent policy whereby the tax-free limit has tracked changes in negotiated wage settlements.

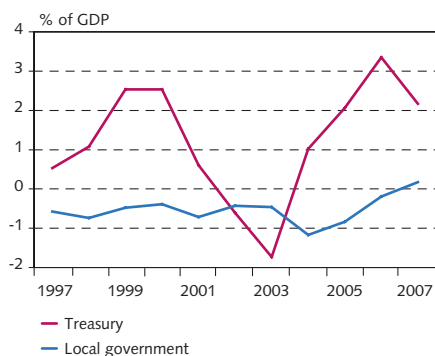
Expenditure plans for 2007 are still unknown and will be for some time, although a new three-year fiscal programme will presumably be published with the new budget. The medium-term programme from 2004 assumes a 2-2½% increase in general outlays in real terms, but a hefty rise in investments, which will exceed 50% if investments for which privatisation proceeds have been earmarked are added to existing plans.

According to the medium-term programme from 2004, the fiscal deficit in 2007 would be equivalent to 1% of GDP as a result of tax cuts, a turndown in economic activity and stepped-up investments. The new Central Bank forecast shows considerably more activity and GDP growth in 2007 than was assumed when the programme was drawn up in autumn 2004, boosted by sizeable interest income on the undeployed proceeds from the privatisation of Iceland Telecom and lower-than-expected Treasury debt service. Thus a handsome fiscal surplus is still likely in 2007 in spite of heavy investment.

Local government finances improve after a poor result in 2004

The municipalities' result in 2004 was much worse than expected, with a deficit of roughly 10 b.kr. according to new figures from Statistics Iceland compared with a 3-5 b.kr. deficit in 2001-2003. The

Chart V-1
Treasury and local government balances
1997-2007¹



1. Central Bank estimate for 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

main contributing factor was increased investment, from what was admittedly a very low level in 2003. Estimates by the Association of Local Authorities for this year show some improvement in results. Municipal tax revenues are budgeted to rise by 8% in real terms and expenditures by 1.5%, while net capital outlays will contract by 6.5%. By way of comparison, the Central Bank forecasts GDP growth of 5½%. If these estimates hold, the local government deficit will shrink this year. Expenditure targets for this year may prove difficult to achieve, however, due to local elections in 2006 and the labour market situation.

Little is known about the municipalities' plans for 2006-7 except for loose long-term plans passed in 2004. Based on these plans, in May the Ministry of Finance expected municipal revenues and expenditures to increase in pace with GDP, showing a small and diminishing deficit. High real estate prices will probably continue to boost local government revenues next year and a supplementary state contribution of almost 1 b.kr. is likely to be made to the Municipal Equalisation Fund. This will reduce the deficit still further and a surplus may even be shown in 2007. On the other hand, the elections in 2006 still pose a risk. In 2007 they will be over and there will be more scope for cost restraint.

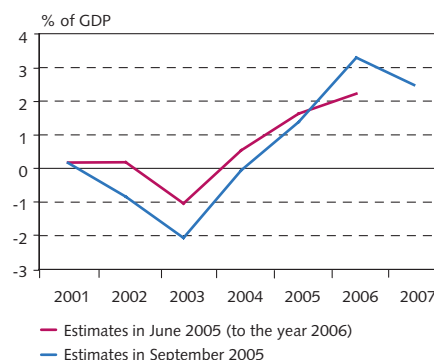
General government surplus largely cyclical in nature

As mentioned elsewhere, the Central Bank forecasts a 3% increase in total public consumption in 2006 and more than 2½% in 2007, which in both cases is below GDP growth. Public sector investment is expected to contract by more than 9% next year but surge in 2007, according to plans that have already been announced. In the June *Monetary Bulletin* it was argued that robust GDP growth and demand could produce a general government surplus of 1½% of GDP this year and more than 2% in 2006. However, the cyclically adjusted surplus would be only marginally above zero for both years.

Two developments since then have altered that picture. First, the measured general government result for 2004 has turned worse by just over half a percentage point of GDP, while the estimated positive output gap for the year has been revised only slightly upwards. The larger measured deficit is incorporated directly into the cyclically adjusted data, so that the general government result for 2004 is now estimated at a ½% cyclically adjusted deficit instead of the broad balance that was estimated in June. Since other revenue and expenditure forecasts are based on 2004, an underlying deficit of almost ½% is also included for 2005, even though the actual surplus is estimated at the equivalent of 1½% of GDP. Accordingly, this year's entire general government surplus, and in fact slightly more than it, will be solely the product of cyclical factors.

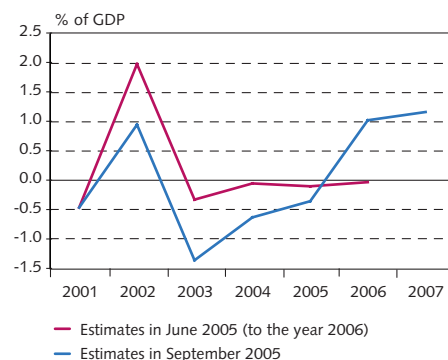
Second, the GDP growth forecast for 2006 has been revised upwards since June, while the estimated output gap increases relatively little. Faster growth raises revenues from earlier estimates, but the current analysis still follows last year's Treasury estimates for a modest rise in expenditure, since the budget for 2006 has not been announced at the time of writing. Assuming little change in the

Chart V-2
General government balance 2001-2007¹



1. Central Bank estimate for 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

Chart V-3
General government cyclically adjusted balance 2001-2007¹



1. Central Bank estimates for 2005-2007.
Sources: Statistics Iceland and Central Bank of Iceland.

output gap in 2006, the extra revenues boost both the measured balance, which could exceed 3% of GDP, and the cyclically adjusted balance, which appears to be heading for a 1% surplus. This implies that two-thirds of the probable general government surplus in 2006 will apparently be cyclical in origin. Slower GDP growth is forecast for 2007. Public sector investment is also expected to surge, partly funded by privatisation proceeds. The measured general government surplus is expected to shrink in that year, although it will remain close to 2½% of GDP notwithstanding hefty tax cuts, while the cyclically adjusted balance will remain positive, at just over 1%.

It should be underlined that these projections are based on very conservative assumptions for public sector consumption and transfer expenditures of central and local government. As has been the case for some time, the general position of public finances is strong, especially the Treasury. However, the question remains whether a 1% cyclically adjusted surplus, amounting to around 10 b.kr., is an adequate fiscal contribution towards cooling the economy.

VI Labour market and wage developments

Pressures broadly in line with the June forecast

Seasonally adjusted unemployment has changed little since March, but the figure for August was 1.2 percentage points lower year-on-year. Given the buoyant labour demand, wage drift is still moderate in historical terms. This could alter, however. A review of private sector wage agreements this autumn could also conceivably push up wage costs. Statistics Iceland's labour market survey for the second quarter shows a substantial jump in labour use, with increases in both the number of employed and average hours worked. The participation rate and average hours worked are still below the peak reached during the last upswing, so there could be scope for further increases.

Substantial growth in labour use

Labour use in Q2/2005 grew considerably year-on-year according to Statistics Iceland's labour market survey, measured in terms of both the number of employed and total hours worked.⁵ Labour market participation increased by 4,300 year-on-year in Q2/2005. Due to a drop in unemployment, the increase in the number of employed outstripped the rise in the participation rate, at 5,800 (3.7%). The increase was more pronounced in regional Iceland (5.9%) than in the Greater Reykjavík Area (2.6%).

Average hours worked increased by 0.9 hours per week, with a much sharper rise among the oldest age group (55-74 years) where it measured 3.4 hours. Total hours worked during the quarter were up by 4.3%, the product of longer hours worked and an increase in the number of employed. This is the first rise in both hours worked and the number of employed since Statistics Iceland moved its labour market surveys onto a year-round basis in 2003. Almost the entire increase in total hours is the result of greater labour use in the youngest (16-24) and oldest (55-69) age groups.

Labour market participation measured 83½% in Q2/2005, up half a percentage point year-on-year, which is a broadly the same year-on-year change as in the first quarter. However, the participation rate so far this year still lies below the peak reached in 1999-2001, so domestic labour use could increase still further.⁶

The number of vacancies registered at employment agencies indicates sizeable excess demand, and the increase in work permit issuance this year suggests that it will only be met domestically to a small extent. So far this year, vacancies have been running at double last year's total⁷ and almost 20% more new work permits have been issued than in the whole of 2004.

Chart VI-1
Changes in labour market 2003-2005

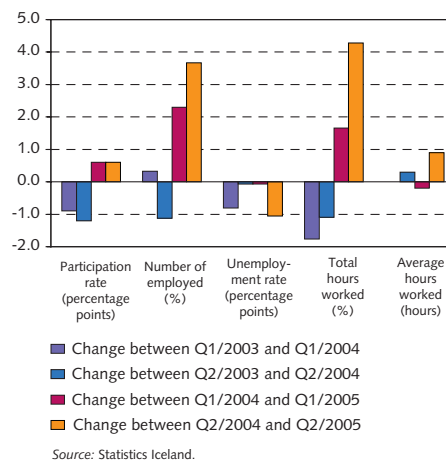


Chart VI-2
Changes in average hours worked and the number of employed, relative to changes in total hours worked Q1/2004 - Q2/2005

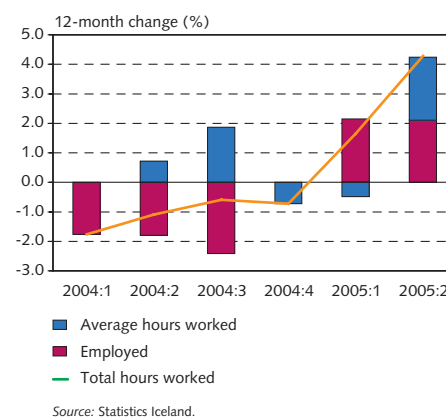
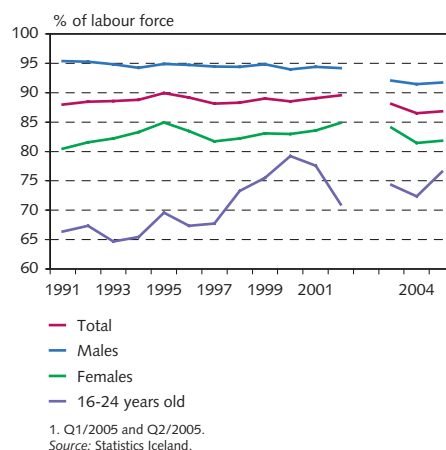


Chart VI-3
Labour force participation 1991-2005¹



5. Total hours worked are defined as the number of persons at work during the reference week multiplied by average actual hours worked.

6. The findings of labour market surveys for 1991-2002 are not fully comparable with those after 2003, however, due to changes in measurement methodologies.

7. See, however, the discussion of vacancies in Rannveig Sigurdardóttir: The enigma of the Icelandic labour market, *Monetary Bulletin* 2005/1, pp. 93-103.

Chart VI-4
Average working hours per week 1991-2005¹

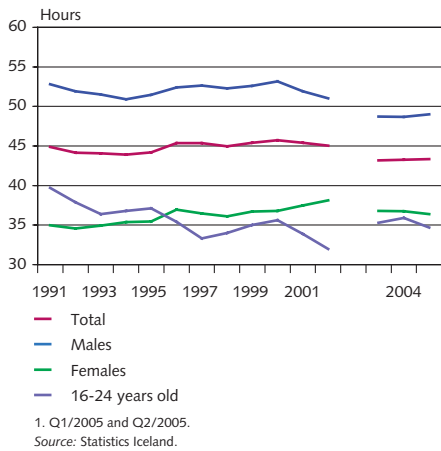


Chart VI-5
Unemployment rate
January 1991 - August 2005

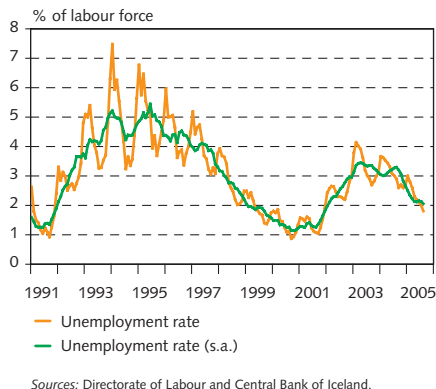
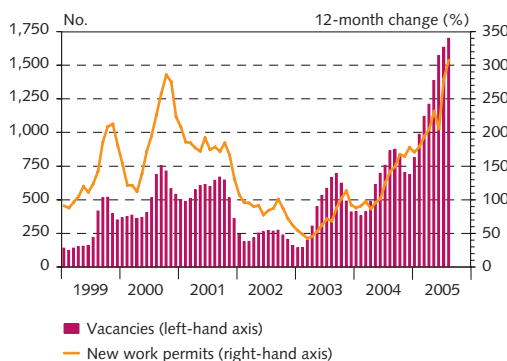


Chart VI-6
Vacancies registered at employment agencies
and issuance of new work permits 1999-2005
3-month moving average



Unemployment rate unchanged since March

Seasonally adjusted unemployment has been broadly unchanged since March, fluctuating in the range 2.1-2.2%.⁸ Unemployment has risen in regional Iceland over this period, but declined in the Greater Reykjavík Area. So far this year, the registered unemployment rate has been 2.4%, in line with the Central Bank's June forecast. The forecast remains unchanged at just below 2% unemployment for next year, with a slight upward revision for 2007 to just under 2½%.

Wage drift still in line with the forecast assumptions

Wage drift so far this year has remained in line with the Central Bank's forecast assumptions, according to Statistics Iceland's wage index. The twelve-month rise in the index measured 6.7% in August. Over the same period the CPI rose by 3.7%, producing a 2.9% increase in real wages. Negligible wage changes have been noted apart from contractual increments under wage agreements, even in sectors experiencing considerable excess demand over the past year, such as construction and contracting. The main explanation is that excess demand has been met with imported labour. However, substantial excess demand for labour appears to be developing in services, in both the private and public sectors. Wage pressures could therefore begin to build up there in the coming months unless demand can be met with labour imports where possible. Also, the pending review of private sector wage agreements now appears more likely to drive up wage costs. Accordingly, the Central Bank has revised its forecast for wage cost increases upwards to 6.1% this year, just under 6½% next year and roughly 5½% in 2007. Given the forecast for labour productivity developments, this implies that unit labour costs will rise by just over 4% this year and next year, and just over 3½% in 2007. Increases on such a scale are some way above being compatible with the Bank's inflation target of 2.5%, and represent mounting underlying inflationary pressure from the domestic labour market.

8. In the corresponding quarter last year, seasonally adjusted unemployment increased again after a drop in autumn 2003. Conceivably, the higher unemployment rate in spring and summer 2004 and the unchanged situation over those periods this year could partly be the result of anomalies in seasonal adjustments.

VII External balance

The outlook is for an even greater external deficit in 2005 than was forecast in June. So far this year the external balance has worsened markedly. A record current account deficit was shown in the first half of 2005 and broadly the same figure looks likely to be added in the second half of the year. The higher-than-forecast deficit is explained by soaring forecast imports at the same time as the export estimate increases only slightly. Furthermore, the deficit forecast for 2006 has been revised upwards and a substantial deficit is still expected in 2007.

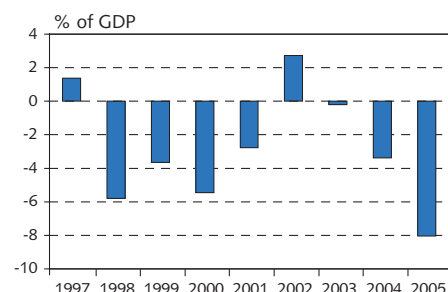
Record first-half merchandise deficit

A record deficit was shown on the merchandise account over the first seven months of the year. At 44.4 b.kr., it surpassed the deficit for the whole of 2004. Merchandise imports were up by 27.6% and exports by 5.6%, both measured at constant exchange rates. The monthly deficit in July was the largest ever recorded, when a surge in imports combined with a contraction in exports to produce a deficit of 10.2 b.kr. As a proportion of GDP, a higher first-half merchandise deficit has never been recorded since quarterly GDP measurements began. The merchandise deficit relative to GDP over the first seven months of the year is roughly one-third greater in 2005 than when the previous record deficit was set in 2000 (see Chart VII-1).

Current account deficit goes on widening

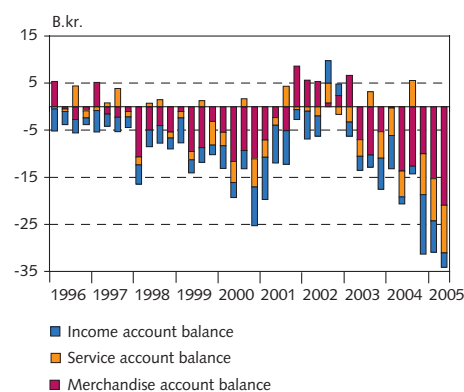
The first-half current account deficit was 65 b.kr., equivalent to just over 14% of GDP – also a record figure. While the bulk of the deficit originated in the merchandise account, the service account deficit also widened sharply. Underlying imbalances may even be more pronounced than these figures imply. The deficit on the balance on income was smaller than might have been expected given the rapid growth of net external debt. This was because of swings in reinvested income from outward investments, which narrowed the deficit

Chart VII-1
Merchandise account balance
first-half figures 1997-2005



Source: Statistics Iceland.

Chart VII-2
Current account balance components
Q1/1996 - Q2/2005
Net current transfer is included in balance on income



Sources: Statistics Iceland and Central Bank of Iceland.

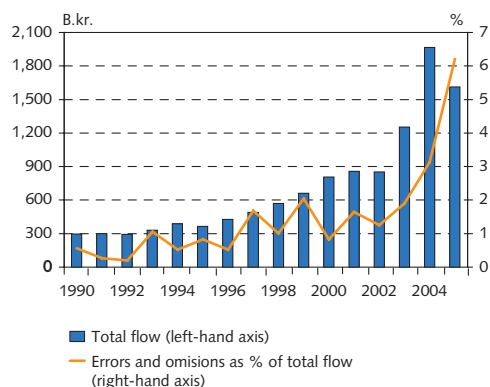
The balance of payments is a double-entry account of foreign trade. It comprises the current account and the capital and financial account. The current account covers all trade in goods and services together with the balance on income (compensation of employees, dividends and reinvested earnings, and interest payments) and current transfers. While the current account shows current external receipts and expenditures, the capital and financial account shows capital flows, i.e. in- and outflows of capital in connection with transactions between residents and non-residents. The main items in the capital and financial account are capital transfers¹ and the financial account. The financial account is classified into direct investment, portfolio and other investment, and changes in the Central Bank's foreign reserves. Investment in Iceland by non-residents and residents' sales of foreign assets cause capital inflows,

1. Which do not involve changes in the stock of the external position.

Box 2

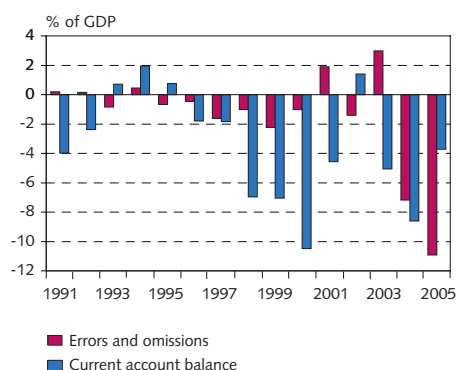
Errors and omissions in the balance of payments

Chart 1
Errors and omissions and total current
account and capital and financial
account flows 1990-2005¹



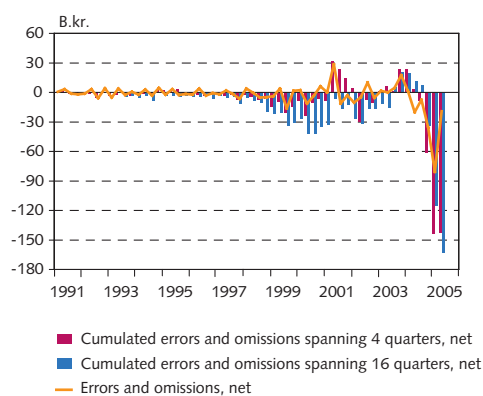
1. Values for 2005 apply only to the first-half of the year.
Source: Central Bank of Iceland.

Chart 2
Errors and omissions and the current
account balance as % of GDP 1991-2005¹



1. Values for 2005 apply only to the first-half of the year.
Source: Central Bank of Iceland.

Chart 3
Errors and omissions
Q1/1991 - Q2/2005



Source: Central Bank of Iceland.

while debt service, amortisation and residents' investments abroad cause capital outflows.

In theory, the current account and the capital and financial account should balance, whereby a current account surplus is deployed on external investment and/or reduction of foreign debt, while a current account deficit is funded by foreign borrowing or depletion of assets. In practice, however, this is not the case, because all balance of payments items are measured independently, irrespective of actual payment flows. Errors and omissions are a balancing item, i.e. a net figure, so that errors in individual items may cancel each other out if they have opposite numerical signs. Thus the errors and omissions item is not necessarily a measure of the quality of the balance of payments accounts, and a low figure need not imply more accurate accounting.

There are three main explanations for imperfect balance of payments measurements. First, a lag may occur because of individual transactions, for example investment in transportation hardware, borrowing, securities purchases, etc., are not recorded at the "correct" time relative to the actual payments flow. At constant prices and exchange rate, a lag will be levelled out over time. Second, valuation errors may creep in when the price of individual items is not "correctly" measured, neither in foreign nor domestic currency. In Iceland, exchange rate volatility has compounded this problem, especially when accompanied by lags in recording. Third, a balance of payments error may stem from an error in recorded volume. Individual items may be overestimated or underestimated due to documentation errors, or because transactions or capital movements between residents and non-residents are estimated rather than absolute.

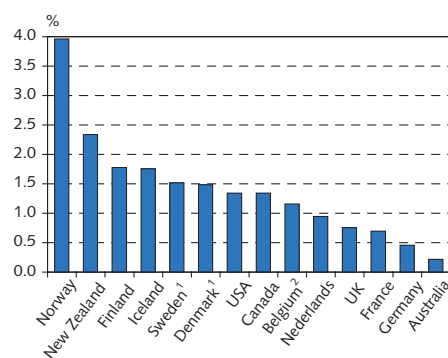
Chart 1 shows that, as a ratio of total current account and capital and financial account flows, errors and omissions have increased in pace with rapidly growing total flows. The persistent negative error can probably be attributed to underestimated investments abroad by Icelanders. The abolition of currency controls and new investment opportunities, compounded by large changes in the financial sector, have not made data collection any easier in recent years and explain part of the growing error. Over the period 1995 to 2000, the errors and omissions figure was persistently negative, implying that it was systemic. The main explanation could lie in liberalisation of capital movements, in particular because data collection methods were not updated in good time to reflect new foreign currency regulations. When restrictions on foreign exchange transactions were lifted, data were lost which had previously been acquired by the Central Bank's foreign exchange supervision department, e.g. on the surrender of foreign currency receipts from exports. Seasonal errors have also become more volatile, but broadly cancelled each other out over the calendar year until 1996. Quarterly balance of payments figures are initially stated as provisional and generally need to be revised due to late data returns. At the end of the year, quarterly figures are adjusted to incorporate data from surveys in areas such as software exports, direct foreign investment and private sector foreign loan movements. Since 1997, the errors and omissions figure has grown quite markedly in króna terms, in line with increased external trade and capital movements. Chart 3 shows the quarterly errors and omissions figure in b.kr., and as a cumulative error spanning four and sixteen quarters.

Other Nordic countries also experienced an increase in errors and omissions when they abolished currency controls and restrictions

on cross-border investment. They are therefore generally considered to originate in the capital and financial account. However, this view is not universal, because in Sweden an underestimated services item was eventually traced to intercompany transactions between multinational parent companies and subsidiaries.

Chart 4 presents errors and omissions figures for selected countries as a ratio of total transactions and average currency flows over the period 2000-2004. Norway's figure is by far the largest, followed by Finland and New Zealand. Iceland comes close behind Finland with an average of 2.5%. Naturally such a comparison is limited: for example, individual balance of payments items can have different weights in different countries, especially cross-border capital movements. Likewise, certain countries could be disadvantaged by the choice of this period as a sample due to economic and regulatory changes which could temporarily affect their data acquisition.

Chart 4
Errors and omissions as a ratio of total transactions and currency flows, on average over the period 2000-2004



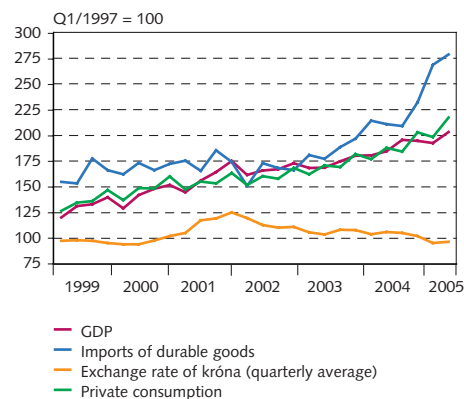
1. Data for 2000-2003 only.
2. Data for 2001-2004 only.
Sources: IMF, Central Bank of Iceland.

significantly in Q2. However, the debt service balance deteriorated, after foreign debt grew by almost 37% in the first half of 2005 on the back of a 40% increase in 2004. Were foreign interest rates not close to their lowest level for decades, the debt service deficit would have been even larger. Interest-bearing assets have also grown, but not on the same scale.

The import growth forecast has been revised upwards from June and the ratio of imports to GDP is expected to peak this year. Growth is driven by massive imports of consumer durables and capital goods for aluminium plants and power plants. Surging private consumption and the strong króna have stimulated imports of consumer durables. Chart VII-3 shows the development of imports of consumer durables, GDP, private consumption and the exchange rate trend over the past seven years. When the króna has appreciated, private consumption growth has outpaced GDP growth and imports of consumer durables have risen by even more. During depreciations, private consumption growth is slower than GDP growth and imports of consumer durables shrink or remain unchanged. Over the past year, the króna has appreciated significantly and both private consumption and imports of consumer durables have increased at record rates.

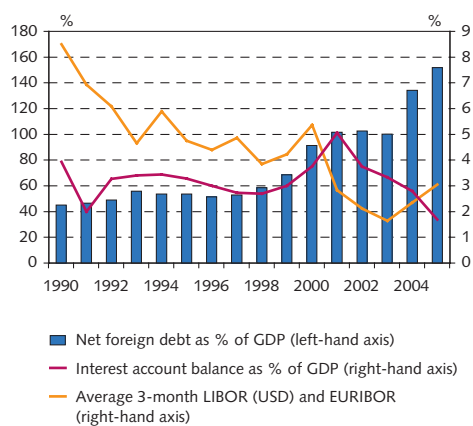
Since the Central Bank's forecast assumes an unchanged exchange rate from September 12, the average effective exchange rate index will be lower in the second half of the year. Consequently, rapid growth in imports of consumer durables is expected to continue for the rest of 2005. Imports in connection with investments in the aluminium and power sectors have surged so far this year, and will probably increase further in the second half and peak next year. Increased merchandise imports accompanied by a slowdown in merchandise export growth will force the current account deficit even wider this year. Compounding this trend, the buildup in external debt will add to debt service. Thus the deficit will be equivalent to more than 14% of GDP if the forecast holds. This would be the greatest

Chart VII-3
Developments of GDP, private consumption, imports of durable goods¹ and the exchange rate Q1/1999 - Q2/2005



1. Seasonally adjusted.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VII-4
Net foreign debt, interest account balance
and foreign short-term interest rates
1990-2005¹



1. For 2005, net foreign debt and interest account balance are for the first half of the year only.
Source: Central Bank of Iceland.

deficit in Iceland's statistical history. Previous peaks were 12.8% in 1947 in the immediate postwar boom, 8.8% in 1968 when the herring stock collapsed, 10.7% in 1974 when heavy investments combined with a soaring real exchange rate and a deterioration in the terms of trade, and 10.4% in 2000 when driven by a surge in investment and private consumption.

The forecast for the current account deficit in 2006 has been revised upwards since June, to the equivalent of over 11% of GDP, which is nonetheless considerably less than this year's figure. Imports are forecast to remain broadly unchanged year-on-year, while exports will grow by more than 6%, largely due to a 20% increase in aluminium exports over the year. This will still fail to cut back the current account deficit significantly after recent years of import growth. In 2007, exports are forecast to increase by 14½%, led by a surge in the aluminium sector. Imports are forecast to shrink by 1% at the same time. Nonetheless, the deficit on the balance on income will still amount to roughly 6% of GDP. It is estimated that around half of the deficit this year and in 2006 will be directly and indirectly attributable to imports connected with investments in the aluminium and power sectors, but only one-third of the deficit in 2007, which implies that the external balance for that year will fall well short of being sustainable. If foreign interest rates rise by more than assumed in the forecast, the outcome could be significantly more negative. All things being equal, a rise of 1 percentage point in average foreign interest rates increases the current account deficit by just under 1½% of GDP.

VIII Price developments and inflation forecast

Price developments

After slowing down in the spring, the rate of inflation has increased again in recent months. In September the twelve-month rise in the CPI measured 4.8%, thereby breaching the upper tolerance limit of the inflation target for the second time this year. Inflation over the past year has been broadly demand-driven, although higher fuel prices in foreign markets have also been a contributing factor. The demand impulse is most evident in housing price inflation, which is the main driver of CPI inflation, but is also reflected in higher prices of domestic services. Other components of the CPI apart from housing, services and fuel remained stable or showed a decrease over the same period. The appreciation of the króna is the main factor at work there, while a supermarket price war has also contributed to lower goods prices, but now appears to be petering out. Excluding groceries, prices of imported goods have fallen by much less than the króna has strengthened. Robust demand is the probable explanation.

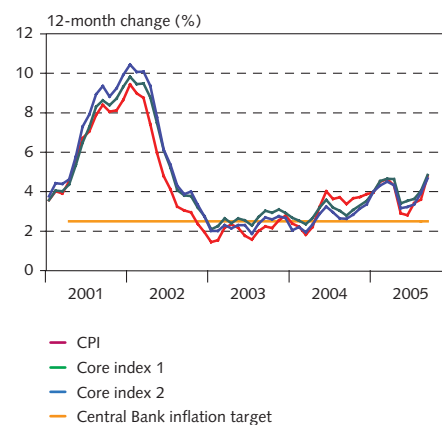
Outlook for higher inflation in Q3 than was forecast in June

Inflation in Q2/2005 measured 3.2%, which is 0.1 percentage point lower than was forecast in June. The difference is negligible; the June forecast was made towards the end of the quarter. Inflation in Q3 was forecast at 3.6% in June but now appears to be heading considerably higher, to over 4%. Statistics Iceland's core indices show broadly the same rate of inflation as the CPI. At the beginning of September, the twelve-month rise in Core index 1 was 4.8% and Core index 2 showed 4.6%.

Housing price inflation is probably peaking

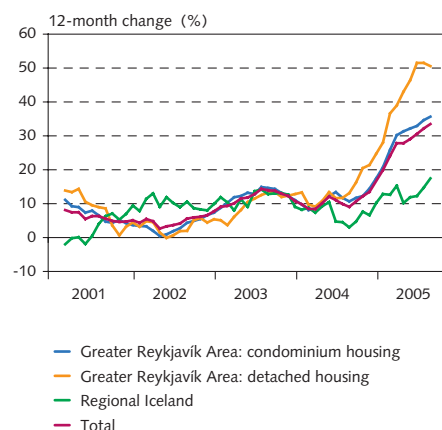
The strongest impact of domestic demand on the CPI has been in the form of higher housing prices, which have been by far the most powerful driver of inflation in Iceland over the past year. However, the housing component of the CPI has risen by less than market prices of housing, due to lower interest rates and a new methodology for evaluating them in the index.⁹ In September, the housing component had increased by 18% year-on-year, leaving inflation roughly 4 percentage points higher than if housing prices had remained stable. Market prices have risen most in the Greater Reykjavík Area, especially for detached housing, which soared by more than 50% over the twelve months until September. Prices of condominium housing went up by just over 35% over the same period. Regional housing prices have risen much more slowly until recent months, when they firmed to notch up a twelve-month increase of over 17% in September. Overall housing prices rose by just over 33% over the same period. Prices surged most in Q2, with monthly increases of 4-5% for both detached and condominium housing in the Greater Reykjavík Area. The rate of increase appears to have slowed down in Q3. In August

Chart VIII-1
Inflation January 2001 - September 2005¹



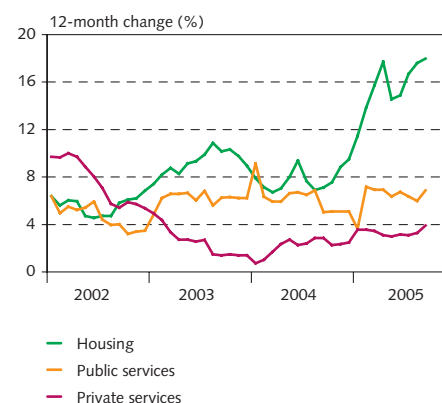
1. The core indices are compiled on the same basis as the CPI, with Core index 1 excluding prices of vegetables, fruit, agricultural products and petrol, and Core index 2 also excluding prices of public services. Source: Statistics Iceland.

Chart VIII-2
Market prices of housing
March 2001 - September 2005



Source: Statistics Iceland.

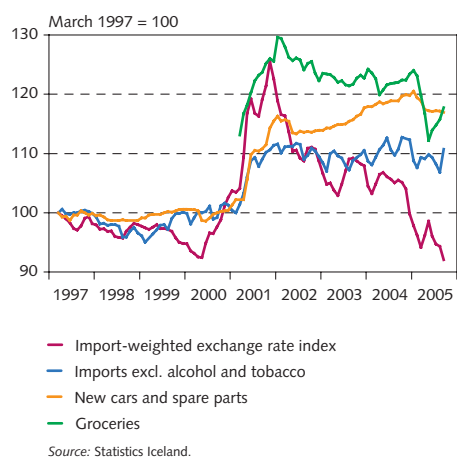
Chart VIII-3
Prices of housing and services
January 2002 - September 2005



Source: Statistics Iceland.

9. See *Monetary Bulletin* 2005/2, Box 3, p. 31.

Chart VIII-4
Import-weighted exchange rate and import prices March 1997 - September 2005



and September the monthly rise was 1-2% in and around the capital, although it should be noted that housing prices are prone to seasonal fluctuations. The trend for regional housing prices is less conclusive, since fewer and less homogeneous properties are involved, causing sharper monthly fluctuations.

Slower decrease in prices of CPI items that are sensitive to exchange rate movements

Offsetting the impact of higher prices of housing, services and fuel on the CPI, prices of other goods have decreased over the past twelve months. Goods with a high turnover rate and elastic prices are most sensitive to exchange rate movements. Many grocery items are a case in point. Groceries, which largely consist of food, fell by almost 10% from the beginning of the year to May (and by 7% over twelve months). Following a month-on-month rise of 1.7% in September, roughly half of this decrease had been reversed. Nonetheless, grocery prices are still 3.5% lower year-on-year.

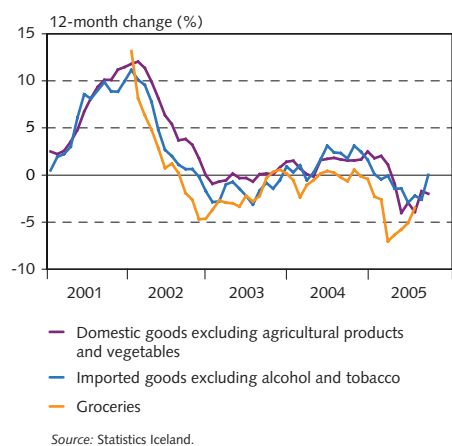
Food prices showed a marked drop in the spring, like other groceries. Some of this reduction has now unwound. Imported food rose by 4.4% month-on-month in September and domestic food excluding agricultural products by 1%. In spite of the increase in September, prices of imported food were still 7.4% lower year-on-year and domestic food 1.4% lower. At the beginning of July, the year-on-year decrease measured 12.5% and 2.6% respectively. At that time, the year-on-year decrease in imported food more than matched the appreciation of the króna, but in September the development of the exchange rate and imported food prices diverged again.

Robust domestic demand deflects the impact of the exchange rate on goods prices ...

The reduction in prices of imported goods has not kept pace with the appreciation of the króna in recent months. While part of the explanation lies in higher fuel prices, this trend can largely be seen as the consequence of robust domestic demand, which gives sellers the chance to increase their margins.

Prices of cars and other consumer durables, for example, have come down very little relative to the appreciation of the króna. From September 2004 to September 12 this year, the króna appreciated by 12%, while prices of new cars went down by only 1.6%. Reductions in prices of other imports than cars, food and fuel have also been comparatively small, at 2.2%. Only a relatively small part of the appreciation of the króna over the past year appears to be transmitted to lower prices of imported goods, apart from groceries. The most likely explanation is surging demand growth. As discussed in previous editions of *Monetary Bulletin*, the experience of countries with floating exchange rates (including Iceland in recent years) could also indicate a fundamental change in the impact that exchange rate movements have on domestic price determination, whereby short-term fluctuations in the exchange rate affect the development of domestic inflation much less than when fixed exchange-rate regimes were in place.

Chart VIII-5
Goods prices January 2001 - September 2005



The accompanying table shows the economic forecasts of financial market analysts at the beginning of September. Participants in the survey were the research departments of Íslandsbanki, Kaupthing Bank, Landsbanki, and Economic Consulting and Forecasting.

Analysts are now forecasting as far ahead as 2007, and disagree quite significantly about how developments will unfold that year.

The forecasters' assessment of inflation over 2005 and 2006 has hardly changed since May. They expect inflation over the year to peak in 2006 at just over 5%, then to slow in 2007 to just over 3½%. However, they foresee year-on-year rises until 2007, to almost 4½%. Inflation will therefore be some way above the Central Bank's 2.5% target over the forecast horizon, and either beyond or close to the 4% upper tolerance limit, in the analysts' view. The Central Bank's baseline forecast over 2005 is higher, but it expects inflation to decrease as soon as next year. For year-on-year inflation, there is little divergence between the Central Bank's baseline forecast and the analysts' projections this year, while the Bank forecasts a lower rate for the next two years. It should be underlined that the Central Bank assumes an unchanged policy interest rate and exchange rate over the forecast horizon. The Central Bank's alternative scenario with variable interest rates and exchange rate is very close to the market analysts' forecasts, at 4½% on average next year and just under 5% in 2007.

Analysts have revised their forecasts for output growth downwards since May, but with more divergence between the highest and lowest forecast values. On average they expect 6% growth in 2005 and 4.8% next year, falling to 1.2% in 2007. The Central Bank's output growth forecast is overall rather more upbeat: 5.5% in the current year, rising to 6.7% next year, and slipping back to 4.8% in 2007, when it diverges the most from the analysts' views.

Respondents have hardly changed their assessments of exchange rate developments since their May forecasts, nor in fact since February either. They foresee an exchange rate index around 122 twelve months ahead, with a further slide to around 130 after two years.

The Central Bank raised its policy interest rate by 0.5 percentage points to 9.5% on June 7. Analysts apparently expect that an end is in sight to the cycle of policy rate rises and forecasts

Box 3

Financial market analysts' assessments of the economic outlook

Overview of forecasts by financial market analysts¹

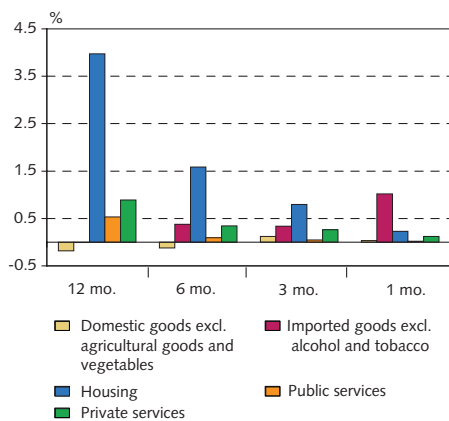
	2005			2006			2007		
	Average	Lowest	Highest	Average	Lowest	Highest	Average	Lowest	Highest
Inflation (within year)	3.7	3.4	4.2	5.3	3.8	7.1	3.7	2.0	5.5
Inflation (year-on-year)	3.8	3.6	4.2	4.4	3.7	4.9	4.9	3.5	6.8
GDP growth	6.0	5.5	6.5	4.8	4.2	5.5	1.2	-1.0	2.5
	One year ahead			Two years ahead					
Effective exchange rate index of foreign currencies vis-à-vis the króna (Dec. 31, 1991=100)	118.8	115.0	123.0	130.5	127.0	135.0			
Central Bank policy interest rate	9.3	8.5	10.0	7.4	6.0	9.3			
Nominal long-term interest rate ²	7.4	6.7	7.8	6.6	6.0	7.2			
Real long-term interest rate ³	3.6	3.5	3.8	3.4	3.0	3.6			
ICEX-15 share price index (12-month change)	5.3	-10.0	16.0	13.4	-14.5	30.0			
Housing prices (12-month change)	8.8	5.0	15.0	11.9	7.0	20.8			

1. The table shows percentage changes between periods, except for interest rates (percentages) and the exchange rate index for foreign currencies (index points). Participants in the survey were the research departments of Íslandsbanki, KB banki and Landsbanki, and Economic Consulting and Forecasting. 2. Based on yield in market makers' bids on non-indexed T-notes (RIKB 13 0517). 3. Based on yield in market makers' bids on indexed HFF bonds (HFF 150644).

Source: Central Bank of Iceland.

Chart VIII-6
Components of the CPI in September 2005

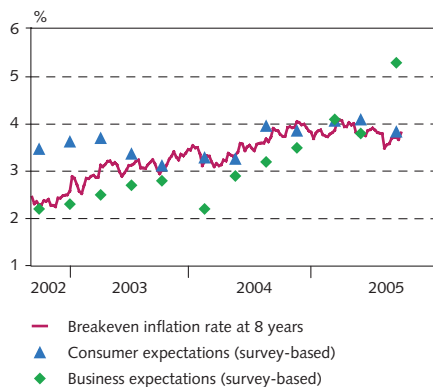
Contribution to CPI inflation
in past 1, 3, 6 and 12 months



Source: Statistics Iceland.

Chart VIII-7
Inflation expectations

Weekly data on the breakeven inflation rate
September 17, 2002 - September 13, 2005



Consumer expectations are based on expectations over the next twelve months. Business expectations are based on expectations for 12-month inflation for the current year in surveys in the first-half of the year and for 12-month inflation to the end of next year in surveys in the second-half of the year.
Source: Central Bank of Iceland.

a rate of 9.3% one year ahead and 7.4% after two years. Both forecasts are lower than those made in May. It is interesting to note how upbeat the analysts are about the timing of the start of reductions in the policy rate, given the inflation outlook that they forecast. It would appear that they expect the Central Bank to begin lowering interest rates relatively soon in spite of inflation which is not only rising but also well above the target.

Regarding equity price developments, forecasts diverge quite sharply – as they have since the beginning of this year. One analyst forecasts a drop in 2006, but the rest expect ongoing rises.

Finally, forecasters are unanimous that house price inflation will ease after the surge that has been witnessed in the recent term. However, they by no means expect real estate prices to drop over the next two years.

... and services prices head upwards

Over the twelve months until September, prices of public services rose by 6.9% and private sector services by 3.9%. The twelve-month increase in prices of private sector services has been gaining momentum in recent months. Higher prices of public sector services contributed just over 0.5 percentage points to the CPI, while private sector services, which weigh heavily in the index, added 0.9 percentage points. Hikes seem to be particularly common in labour-intensive service industries. Cost pressures coupled with strong demand probably account for the rise in services prices.

Medium-term inflation expectations appear to be 4% or more

Market expectations of inflation, measured as the yield spread between indexed and non-indexed Treasury instruments with a maturity of almost ten years, have gradually been creeping upwards. By this measure, market agents expect inflation to average just under 4% over the next decade.

These expectations accord closely with the findings of IMG Gallup's surveys of household inflation expectations. So far this year IMG has conducted three such surveys: at the end of February/beginning of March, in May and at the end of August/beginning of September. Households forecast average inflation of around 4.1% over the following twelve months in the first two surveys, and 3.8% in the most recent survey. The median of the three surveys was 4%, i.e. as many respondents expected inflation to exceed 4% as expected it to be lower. In the most recent survey, households perceived the inflation rate over the past twelve months as being 3.2%, so they appear to expect it to gain pace in the near future. The survey was conducted before inflation jumped to 4.8% at the beginning of September, which may be assumed to have driven inflation expectations higher, especially after the media debate that followed.

However, household inflation expectations appear somewhat lower than the financial market analysts' forecasts for inflation, which averaged just under 4½% one year ahead and just over 5% over the year (see Box 3).

All these yardsticks of inflation expectations indicate that a considerably higher rate may be expected over the coming years than is compatible with the 2.5% inflation target.

Inflation forecast

The inflation forecast published in this edition of *Monetary Bulletin* shows yet again a higher rate of inflation two years ahead than is compatible with the 2.5% target. In fact the overall inflation outlook has deteriorated, especially in the near term. The Central Bank has raised its policy interest rate by 0.5 percentage points since its last inflation forecast was published in June, and it stood at 9.5% on the day of the forecast. Over the same period, the króna has appreciated by 7½%. The forecast is based on the technical assumption of an unchanged policy rate and the exchange rate index remaining at 108 over the forecast horizon. In spite of these conservative assumptions, the inflation outlook has worsened since June. An alternative inflation forecast is also presented based on variable interest rates and exchange rate. Under this scenario, if interest rates broadly track market expectations, the króna will depreciate and inflation soon rise above the baseline forecast. While neither forecast is founded on completely realistic assumptions, both of them underline that the inflation target is unlikely to be attained unless the policy stance is tightened considerably in the coming months from what is implied in market expectations.

Mounting domestic inflation pressures ...

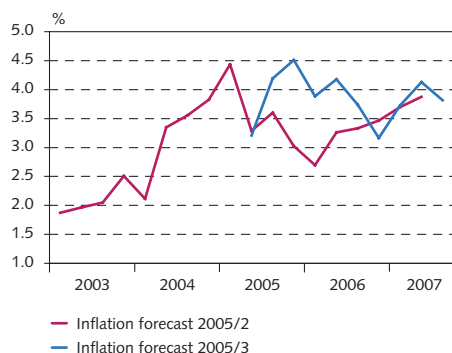
As in previous Central Bank forecasts, the main driver of inflation over the next two years is substantial and growing pressures in the domestic goods market, which can be traced to robust growth in domestic demand well beyond the capacity of the economy. According to revised data, the degree of excess capacity in 2002 was overestimated and production capacity became fully utilised during 2003. The forecast for the positive output gap has been revised upwards since June to as much as 5% next year, assuming an unchanged monetary stance and exchange rate. These pressures when the cycle peaks next year are stronger than was forecast in June, and much greater than at the last cyclical peak in 2000. In fact, macroeconomic imbalances on such a scale have not been seen since 1980.

Inflationary pressures have also been driven by rising wage costs. The outlook is that unemployment will remain low over the forecast horizon, and some way below a level compatible with price stability for most of the period. Labour market pressures typically break out in increased wage drift – unit labour costs are now forecast to rise by more than 4% this year and in 2006. A slightly smaller increase will be seen in 2007, although still over 3½%. Thus the rise in unit labour costs is well above the 2.5% inflation target over the entire forecast horizon, in spite of relatively strong productivity growth.

... but the strong króna will temporarily constrain inflation

Building domestic demand pressures are offset by the strong króna and relatively low foreign inflation, in spite of massive fuel price rises in international markets. The króna has appreciated since the last forecast and is strong in historical terms. However, it should be borne in mind that exchange rate movements have only a short-lived effect on domestic inflation, unless they also impact medium-term

Chart VIII-8
Revised Central Bank inflation forecast



inflation expectations. Thus the impact that lower import prices (in domestic currency) have on domestic inflation developments can be expected to peter out over the forecast horizon. Furthermore, there are indications that the short-term effect of exchange-rate fluctuations on domestic inflation has been weakening in recent years, as discussed in previous editions of *Monetary Bulletin*.

Inflation likely to be around the upper tolerance limit of the target over the forecast horizon

In spite of the higher policy rate and stronger króna, the inflation outlook one year ahead is considerably poorer than in the June forecast. In June, the Central Bank forecast a short-term drop in the inflation rate, caused by the currency appreciation. In the new forecast, upward revisions of the positive output gap and higher unit labour costs outweigh the impact of the stronger króna. Inflation expectations have also edged upwards, as pointed out above. Inflation is forecast at 4.2% one year ahead, compared with 3.3% in the same quarter in June (2.7% over the corresponding one-year horizon).

However, the two-year scenario has changed little since June. Inflation is now forecast at marginally above 4% two years ahead, while in June it was just under 4% in the same quarter (3.7% over the same two-year horizon).

The outlook is that inflation will remain well above the 2.5% target over the forecast horizon, and around the upper tolerance limit for virtually the entire period. If the exchange rate remains unchanged, inflation will probably slow in the course of 2007 and approach the target in mid-2008. However, it seems implausible to expect the exchange rate assumptions behind the forecast to hold for so long.

Forecast with variable interest rates and exchange rate

In the present climate it is extremely unrealistic to assume that the exchange rate will remain unchanged from its current value across the entire horizon. It is also obvious that the bottom line of such a forecast is that the monetary stance needs to be tightened from its present level. The baseline forecast is thus based on technical assumptions which are unlikely to hold except for a short time. Above all it describes the way that the Bank considers developments are most likely to unfold if it takes no further measures and keeps the monetary stance unchanged. It therefore represents a useful indicator of whether the interest-rate level at any given time is sufficient to ensure that the inflation target is attained. In a climate of reasonable macroeconomic balance, such a forecast can give a fairly realistic picture of the way economic developments are likely to unfold. On the other hand, under substantial imbalances – as in the present climate – the outcome of such a forecast may prove wide of the mark. The more pronounced the imbalances, the more implausible it is to assume that the Central Bank will take no further action to counter accumulated inflationary pressures. When the real exchange rate is

abnormally high, as it is at present, the assumption of an unchanged exchange rate for the long term also becomes increasingly less tenable.

For this reason, in its December 2004 *Monetary Bulletin* the Bank presented for the first time an alternative inflation forecast based on variable interest rates and exchange rate. It uses an interest-rate path based on market expectations for the development of the policy rate, which can be read from implied forward rates.¹⁰ This is shown in Chart III-6 on p. 18. The forecast presented here, however, assumes a somewhat slower reduction in the policy rate than can be read from this curve (which is shown on the same chart and based on the path forecast by financial market analysts in the survey in Box 3). Market expectations imply that the policy rate will soon peak at just over 10%, and soon enter a steady decline. Instead of following this path completely, the alternative forecast assumes that the policy rate will remain close to 10% until the middle of next year, and then begin falling. Based on this path, the average policy rate will be 9.4% this year instead of 9.2% in the baseline forecast and 9.7% next year (instead of 9.5%), then fall to 7.6% on average over 2007.

The exchange rate is also allowed to develop in line with uncovered interest parity, i.e. on the basis of market expectations of the future development of the interest-rate differential between the policy rate and foreign traded-weighted forward rates, but allowing an exchange rate risk premium. On the basis of this analysis, the interest-rate differential with abroad remains wide until the middle of next year, then gradually narrows to around 4% at the end of 2007. Consequently, the króna will gradually depreciate and the exchange rate index will be close to 120 at the end of 2007.

The monetary stance will not be as tight as in the baseline forecast ...

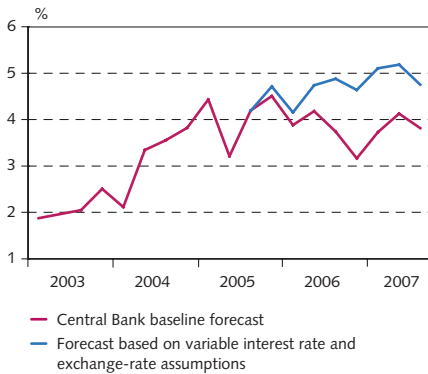
On the assumption that interest rates and the exchange rate will develop along the lines outlined above, output growth this year would be marginally less than in the baseline forecast, reflecting slightly higher real interest rates. However, real interest rates would be somewhat lower in 2006, notwithstanding a slightly higher policy rate, due to the increasing inflationary impact of the depreciation of the króna. In 2007, the policy rate would be lower than in the baseline forecast, and real interest rates significantly lower. Thus this forecast implies a sizeable easing of the monetary stance compared with the baseline forecast, and faster output growth over the next two years, at over 7% in 2006 and more than 6% in 2007. This would be reflected in an even more positive output gap, in excess of 5% for both years.

... and the inflation outlook will be darker

Higher output growth and the weaker króna produce a considerably darker inflation outlook in this forecast, compared with the baseline forecast. Inflation would be just over 4½% (instead of just over 4%)

10. See note 2, p. 7.

Chart VIII-9
Inflation forecast based on variable
interest-rate and exchange-rate assumptions



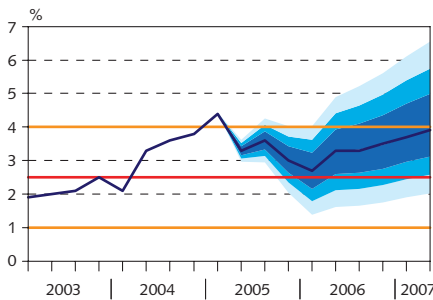
one year ahead and over 5% (instead of 4%) two years ahead. Likewise, inflation would be well beyond the 4% upper tolerance limit over the entire horizon. Chart VIII-9 compares the baseline forecast and the forecast based on variable interest rates and exchange rates.

Market expectations about the timing of monetary easing seem unrealistic

The policy interest-rate path based on market rates is clearly incompatible with the inflation target. Either this path is unrealistic, or the market doubts the Central Bank's commitment to the inflation target. The path could therefore signal that monetary policy lacks credibility. In order to contain inflation, real interest rates need to be forced up, instead of allowing them to decline as happens in this forecast. The interest-rate path used in the forecast, however, generates a slightly higher policy rate over the horizon than the market seems to expect, judging from the yield curve. Moreover, the exchange rate path that is used implies a relatively modest depreciation compared with recent forecasts from some commercial banks' analysts.

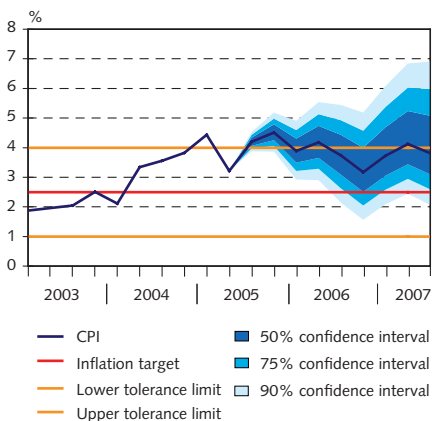
Chart VIII-10
Previous Central Bank inflation forecast
(in *Monetary Bulletin* 2005/2)

Forecasting period: Q2/2005 - Q2/2007



Current Central Bank inflation forecast

Forecasting period: Q3/2005 - Q3/2007



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

Risk profile

Risks have moved to the upside since the June forecast

The inflation forecast is always fraught with uncertainty. Since developments are unlikely to unfold exactly as forecast, it is vital to take into account the entire risk profile in assessing the inflation outlook two years ahead.

The risk profile of the forecast is broadly comparable with that of the Central Bank's recent forecasts. The main risk involves exchange rate developments, as the variable-rate forecast demonstrates. There is a risk of a depreciation over the forecast horizon which would amplify inflation, especially in the case of a sharp slide. Likewise, a review of private sector wage settlements in November could lead to higher wage claims than assumed in the forecast, which would push inflation up further, other things being equal. An easier fiscal stance than assumed is another risk to the upside. Conceivably, the impact that announced and promised tax cuts and rising asset prices will have on private consumption could be underestimated. In the opposite direction, soaring household debt could keep private consumption growth in check later on over the horizon. Foreign interest rates could rise more than forecast, dampening domestic demand growth in the second half of the horizon. Table VIII-1 summarises the main asymmetric uncertainties in the forecast.

All told, the forecast risk is considered to lie slightly to the upside one year ahead, and strongly upward two years ahead. The risk profile has therefore been revised upwards over the entire horizon. Chart VIII-10 presents the estimated confidence intervals for the current forecast compared with the June forecast.

Table VIII-1 Main asymmetric uncertainties in the inflation forecast

<i>Uncertainty</i>	<i>Explanation</i>	<i>Inflationary impact</i>
Private consumption	The impact of lower long-term interest rates and easier credit access, and the potential effect of rising wealth on consumption, could be underestimated Increased indebtedness could curtail private consumption growth beyond the baseline forecast	Risk of underestimated demand pressures and thereby of underestimating inflation Risk of overestimated medium-term demand pressures and thereby of overestimating inflation
Exchange rate developments	Wide current account deficit and increasing inflation exert downward pressure on the króna	Risk of the króna depreciating and thereby of underforecasting inflation
Wage developments	Inflation prospects and the outcome of specific wage agreements could lead to renegotiation of private sector wage agreements	Risk of underestimated wage rises and thereby of underforecasting inflation
Fiscal policy	The fiscal stance could be easier than assumed in the baseline forecast, especially with municipal elections scheduled for 2006 and a general election for 2007 The impact of planned tax cuts on future income expectations could be underestimated, so their demand impulse could be correspondingly greater	Risk of underestimated demand pressures and thereby of underforecasting inflation
Asset prices	Asset prices could fall, reducing private consumption later in the forecast period	Risk of overestimated demand pressures and thereby of overforecasting inflation
Global economy	Foreign interest rates could rise faster and by more than assumed, increasing external debt service beyond the base forecast	Short-term risk of the króna depreciating which would drive inflationary pressures
<i>Central Bank risk profile</i>	<i>One year ahead</i>	<i>Two years ahead</i>
<i>Monetary Bulletin 2004/3</i>	Symmetric	Upward
<i>Monetary Bulletin 2005/2</i>	Symmetric	Upward
<i>Monetary Bulletin 2005/3</i>	Upward	Upward

Significantly lower probability of attaining the target over the horizon if the policy rate remains unchanged

Table VIII-2 shows the Bank's assessments of the probability of inflation being in a given range, based on the confidence intervals. The probability that inflation will be within the tolerance limits of the target two years ahead has decreased significantly, with a probability of only one-third that it will be below 4% then if the monetary stance remains unchanged. The probability of inflation close to the 2.5% is very slight. For example, there is less than 10% probability that inflation will lie in the range 2-3% two years ahead even if the króna remains strong over the period, if no further monetary measures are taken.

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

Quarter	Inflation				
	Under 1%	In the range 1% - 2½%	Under 2½%	In the range 2½% - 4%	Over 4%
Q3/2005	< 1	< 1	< 1	15	85
Q2/2006	< 1	1	1	38	61
Q2/2007	< 1	4	4	30	66

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

It is important to remember that both the baseline forecast and the risk profile are based on an unchanged policy interest rate over the forecast horizon. Indeed, the main task of monetary policy is to ensure that the economic scenario implied by the forecast and the main risks does not materialise. In this respect, the confidence intervals of the forecast are likely to be overestimated.

IX Monetary policy

Growing macroeconomic imbalances call for a tighter stance

As the above analysis reveals, economic developments since the spring have been characterised by growing macroeconomic imbalances. Asset prices have surged, lending growth has increased, private consumption growth has hit a record level, the current account deficit is at its widest for a decade and inflation has picked up speed in recent months after slowing down in the spring, and has now moved beyond the tolerance limits. The message for both the monetary and fiscal authorities is clear. A tighter stance is necessary in order to ensure price stability and economic stability in general in the long run.

The causes of the current buoyant growth have been discussed in previous editions of *Monetary Bulletin*: the combined impact of massive industrial investments and significant changes in the Icelandic credit sector, not least the unforeseen structural changes in the mortgage market in the second half of 2004. While many characteristics of the present upswing resemble the boom at the end of the 1990s, many of them are stronger. For example, the housing market is at present even more overheated and housing prices are probably further above long-term equilibrium. Growth in private consumption is currently driven by heavy borrowing and debt accumulation rather than a surge in real disposable income, which took place in 1997-1999.

Longer lag in monetary policy transmission, which is more dependent on an exchange rate adjustment

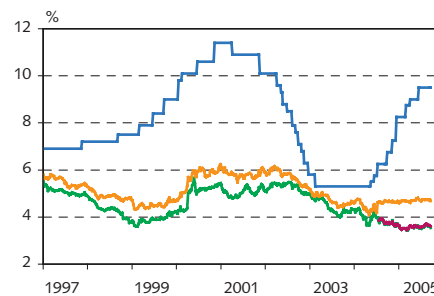
One of the characteristics of the present upswing is that the rise in the policy interest rate from 5.3% to 9.5% has so far had a negligible impact on real long-term interest rates. Monetary policy measures are always transmitted with a considerable lag, which was also the case in the last upswing. However, the lag appears to be longer now. There are two probable reasons: the changes in the Icelandic credit sector, which have outweighed the impact of the tighter monetary stance, and exceptionally low foreign interest rates, which have remained close to their historical low or even gone down, while domestic short-term rates have moved in the opposite direction. Long-term interest rates on German bonds in the summer were at their lowest for a whole century. Towards the end of the upswing in the 1990s, interest rates in Europe and the US were generally on an upward path, after a short-lived drop in 1998, and they moved in the same direction as the Central Bank's increasingly restrictive policy rate.

The outcome of these exceptional circumstances is that monetary policy measures have to a large extent been transmitted through an appreciation of the króna, but in other respects the transmission has been confined to the shorter end of the nominal yield curve. The interest-rate differential with abroad is currently wider than when the upswing of 1998-2000 peaked, and the króna is stronger. Low foreign interest rates have also contributed to surging asset prices, domestically as well as abroad.

Chart IX-1

Central Bank policy interest rate and yields on indexed long-term bonds

Weekly data, January 8, 1997 - September 13, 2005



— Policy interest rate
— Treasury bonds (RIKS 15 1001)
— Housing bonds (25-year¹)
— HFF bonds (HFF150434)

1. Combined series: IBH 21 0115, IBH 22 1215, IBH 26 0315.
Source: Central Bank of Iceland.

Ideas for “letting inflation through” are dubious

The present unique climate presents a challenge to monetary policy implementation and has certain undesirable impacts on its effectiveness. The tightened stance at the moment has very disparate effects on different sectors: it hits exporters hard but leaves households relatively unscathed. Should monetary policy take such conditions into account? Should the inflation target be temporarily relaxed to ease the strain on exporters? Is it advisable simply to “let inflation through” while the current phase of large-scale investments lasts?

Such misconceptions are highly dubious. Inflation has a tendency to be self-amplifying in the absence of a sufficiently tight monetary stance. The credibility of the inflation target has a major impact on inflation. Had the Central Bank not already tightened its stance, inflation and inflation expectations would be higher than their current rate. The labour market would probably be even tighter, and the combined effect of inflation and labour shortages would spur wage drift and higher wage claims under the pending pay settlement review. Inflation would gradually escalate, driven first by higher wage rises and a more positive output gap, and eventually by a depreciation of the króna when higher prices and labour costs pushed the real exchange rate of the króna to a level that would be unsustainable in the long run. Real interest rates would then plunge, unless the Central Bank raised interest rates even higher than it has already done. Since a failure to take action would probably send inflation expectations even higher, the Central Bank could be forced to resort to a sharp interest rate hike to rein inflation back in. “Evicting” inflation once it has been “let in” will invariably be more painful than pre-emptive measures to block its entrance, not to mention the direct damage caused by a high and volatile rate of inflation. The sectors now squeezed by the high real exchange rate would soon be no better placed if their competitive position were eroded – i.e. if the real exchange rate increased – by higher inflation and labour costs than in trading partner countries and they would be worse off when it came to driving inflation back down. Iceland has a long and painful experience of such stop-go scenarios.

Skewed composition of current inflation makes little difference in the long run

Another consequence of the current unique situation is an unusually skewed composition of inflation. In many ways it has unfolded along fairly traditional lines. It has emerged in fields shielded from foreign price competition – i.e. has initially largely been confined to services and housing costs – while the strong króna keeps the lid on goods prices. However, the recent picture has been exceptionally black-and-white. Excluding the housing component, CPI inflation was virtually zero in the summer, because lower goods prices roughly offset the rise in services prices. Even after a spike in goods prices in September, the twelve-month rise in the CPI excluding the housing component is only 1.5%.¹¹ Seen solely in terms of past inflation, such

11. The Harmonised Index of Consumer Prices (HICP) across the European Economic Agreement Area has shown broadly the same rate of inflation.

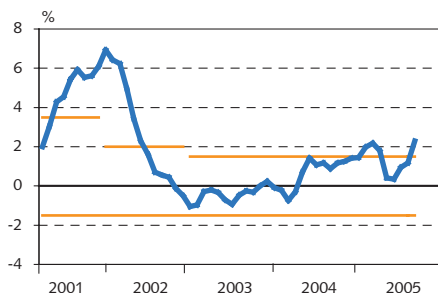
figures may hardly seem to warrant restrictive monetary measures. Monetary policy decision-making, however, seeks to be forward-looking, however uncertain the future might be. The surge in housing prices that has been the main root of inflation over the past twelve months is also one of the main drivers of private consumption growth and a reflection of strong excess demand in the economy. Current high asset prices give a major impulse to demand, which amplifies the output gap and thereby inflationary pressures in the years to come. Moreover, the present strength of the króna implies a greater probability of a subsequent depreciation, which monetary policy must also take into account. Over the medium term, the current composition of inflation is largely irrelevant; the crucial consideration is what overall economic developments imply for the inflation outlook two years ahead or beyond. Recently the Central Bank has simply not considered that outlook good enough. The medium-term inflation outlook rather than past inflation is the reason that the Central Bank has raised its policy rate by more than 4 percentage points since spring 2004, although the rate of inflation happens to have been above target all that time.

Strong króna and high asset prices heighten uncertainties about the turning-point

Over time, the fact that the present inflation is largely driven by higher asset prices may prove important. At some point, housing prices may fall. This turning-point is difficult to predict, but when it is reached it could have a substantial effect on demand. In fact, a mere stagnation in housing prices could have wide repercussions if households have to a large extent funded their private consumption growth by mortgage equity withdrawal from increasingly higher-valued housing. A situation may arise where the tight monetary stance, which hitherto has left households largely unscathed, does so with redoubled force.

A turning-point in asset markets is seldom predictable. Neither are exchange rate developments. Foreign issues of króna-denominated bonds, which are discussed in more detail in the Box on p. 68, fuel this uncertainty and could conceivably reinforce the swing. Given the unprecedented divergence of real estate prices, the exchange rate, demand and the external balance from long-term equilibrium at the moment, such an adjustment is arguably more likely than often before, even though its timing and scale remain uncertain. While the turning-point is likely to coincide with the end of the investment programme that is under way this year and next year, its exact timing and speed depend upon too many variables – e.g. the terms of trade, fish catches, foreign interest rates, the exchange rate, asset prices and government measures – to make an accurate forecast of the nature and scale of such an adjustment feasible. Also, the adjustment period which could begin within a couple of years will be the first one experienced under the current monetary policy framework.

Chart IX-2
Deviation of inflation from the
Central Bank inflation target
and tolerance limits



Source: Central Bank of Iceland.

Expecting the Central Bank to keep inflation close to target over the medium term is realistic, but it cannot prevent cyclical fluctuations

Monetary policy can therefore only be forward-looking to a limited extent over the next few years. It will to a large extent need to respond to unforeseen circumstances. Consequently, it is unrealistic to expect that inflation will never deviate by more than 1.5% from the target. Even more unrealistic is to insist that the Central Bank should prevent the fluctuations in private consumption which invariably accompany a readjustment towards a new equilibrium.

However, it is realistic to demand that over the medium term, inflation will, on average, be close to the target. This entails that inflation should not be more often or further above target than below it.

Unfavourable performance compared with other inflation-targeting central banks – but not as much as may appear on first impression

Different countries' success with inflation targeting is discussed in Appendix 1 below. The analysis reveals that Iceland's performance since it adopted an inflation target has been considerably poorer than that of most industrialised countries. Inflation has been above target by an average of 1.7% and the numerical value of target range misses has likewise been 1.7%.

Several qualifications need to be made, however. Iceland is disadvantaged in this comparison in certain respects. For example, some central banks did not adopt an explicit numerical inflation target until they had reined inflation in. Some have even changed their targets in line with the inflation outlook, which has reduced their target misses. Confining the comparison to the period after November 2003 – which to some extent is more natural, because the inflation target was supposed to be reached before that deadline under the joint declaration by the Central Bank and the Government of Iceland from March 2001¹² – Iceland's record is better, although still not acceptable. Another point to remember is that the average deviation from target since November 2003 is fully accounted for by rises in the housing component of the CPI. Excluding the housing component, average inflation has been only 1.6% over the period since November 2003, and 3.2% since Iceland moved onto the target in March 2001. If the target had been defined in terms of the Harmonised Index of Consumer Prices, inflation would have developed broadly in line with the target from the time when it was scheduled to be attained.

Given that very few central banks consider themselves able to exert any significant influence over asset bubbles or are willing to do so, it may be concluded that the Central Bank of Iceland's performance so far has not been as wide of the mark as first impressions may suggest. However, the Central Bank has only a short experience of inflation targeting and its resourcefulness will be firmly tested in the

12. In fact the inflation target was attained a year earlier, which must be considered a good performance, given the situation before then.

coming years. The Bank is determined to attain the target in spite of extremely difficult conditions, in order to safeguard its credibility and fend off higher long-term inflation expectations.

Transparency enhances the effectiveness of monetary policy ...

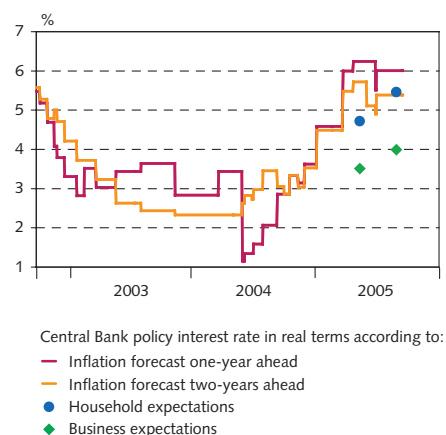
Part of the process of containing inflation expectations and building confidence in monetary policy is to implement it as transparently as possible. The Central Bank has promoted transparency with the publication of its quarterly *Monetary Bulletin*, in which it candidly airs its views. However, the market cannot insist that the Bank's measures should always be totally foreseeable, since they are not always foreseeable to the monetary policy decision-makers either. At any given time, the Central Bank must assess the need for a restrictive monetary policy on the basis of forecasts, other available data and deliberations of the policy-makers. Whether and when interest rates should be changed, on the other hand, is not a matter of making a simple calculation, despite the raft of forecasting models consulted in the decision-making process. Rather, the decision is based on insight, expert opinion by Bank staff and, ultimately, the appraisal of the Board of Governors. Decisions can never be entirely foreseeable, neither to those involved in making them nor to parties outside the Central Bank, and least of all when they are made by a board of governors, as is the case in Iceland, or by a monetary board or committee, as in many other central banks.

When the Central Bank announces its monetary policy decisions in *Monetary Bulletin* it likewise indicates its views at that time on the probable future development of the policy rate. Such indications can perform an important function in the transmission of monetary policy decisions across the interest rate spectrum and thereby contribute to the effectiveness of the policy. However, the Bank's baseline forecasts assume unchanged interest rates and exchange rate. There are two main reasons. First, short-term exchange-rate changes have proved impossible to forecast (even when there are strong arguments for certain long-term movements). This implies that the future path of the policy rate will also be hard to forecast, because the exchange-rate path has a strong impact on the inflation outlook which in turn affects the policy rate path, and vice versa. Second, such a forecast serves as a guide in interest-rate decisions, by indicating the inflation outlook two years ahead if the policy rate remains unchanged. The publication of such a forecast should therefore contribute to a more transparent monetary policy decision-making process.

... but an inflation forecast based on fixed interest rates and exchange rate can have side-effects

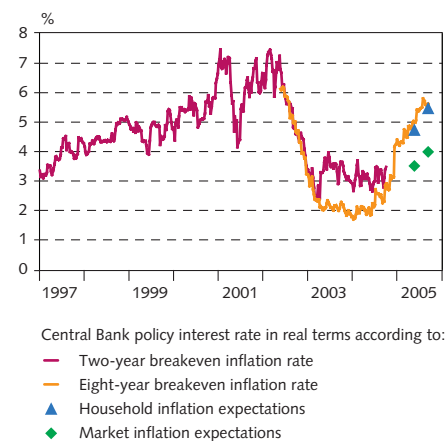
Nonetheless, this method of explaining the views underlying monetary policy decisions is not without its flaws. For some time these forecasts have shown a higher rate of inflation than is compatible with the inflation target, which makes the assumption of an unchanged policy rate over the forecast horizon increasingly unrealistic. Although the Central Bank has repeatedly underlined that its forecasts are conditional, and that its policy will aim to prevent such a scenario

Chart IX-3
Central Bank policy interest rate in real terms according to various measurements
Daily data September 19, 2002 - September 19, 2005



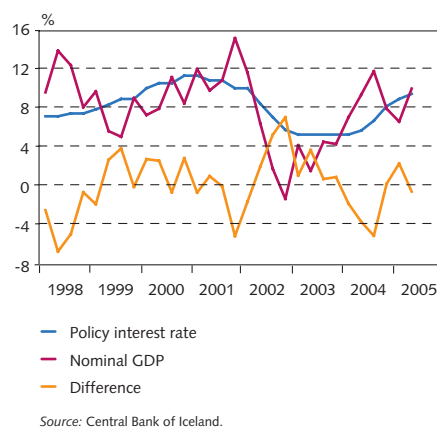
Household expectation surveys were made in May and at the end of August/beginning of Sept., business expectations are for twelve-month inflation to end-2006.
Source: Central Bank of Iceland.

Chart IX-4
Central Bank policy interest rate in real terms
Daily data January 8, 1997 - September 13, 2005



Household inflation expectations are based on expectations over the next twelve months and market inflation expectations on the twelve months until end-2006.
Source: Central Bank of Iceland.

Chart IX-5
Nominal GDP and Central Bank policy interest rate
Quarterly data Q1/1998 - Q2/2005



from materialising, this message does not appear to have come across completely. A succession of forecasts showing higher inflation than is compatible with the target could conceivably fuel inflation expectations and thus undermine the monetary stance. In fact, the Central Bank has also published alternative forecasts based on an interest rate path derived from the implied forward rate and an exchange rate path based on uncovered interest rate parity.¹³ Such variable-rate forecasts have recently shown less short-term inflation than the baseline forecast, but higher inflation two years ahead. The apparent implication is that the interest-rate path as perceived by the market is not sufficiently restrictive. Variable-rate forecasts also give an indication of where the preferable interest-rate level over the next few years may lie (presumably higher than expected by the market) but, like the baseline forecast, have the drawback of possibly driving up inflation expectations.

An interest-rate forecast could be published

The third option is to publish a forecast based on the optimum interest-rate path, i.e. the estimated path of policy rate needed to attain the inflation target. A number of central banks have been moving in this direction in recent years. By their very nature, such forecasts will always show inflation close to the target, and effectively constitute interest-rate forecasts rather than proper inflation forecasts. They are resource-demanding and hence could be difficult for a central bank as small as the Central Bank of Iceland to handle. These forecasts would display a high degree of uncertainty and it may be advisable to have a longer sample period to make it possible to evaluate the forecasting models based on data from the period after the inflation target was adopted. Thus the Central Bank might not consider it feasible to publish such a forecast in the near future, but the matter still deserves consideration.

The monetary stance is still not sufficiently tight

The inflation forecast published in this edition of *Monetary Bulletin* shows yet again that there are grounds for further tightening the monetary stance. The finding in Section III is that the marginally tighter financial conditions of businesses and households since the spring make little difference, because other forces have been counteracting the stance. Although inflation expectations are presently vaguer than often before, it can be concluded that they are still some way from being compatible with the inflation target. The policy interest rate has risen in real terms by various criteria, but still appears to fall some way short of being as restrictive as during the last upswing. Given that the stance then was apparently not tight enough – partly because the Central Bank operated under a fixed exchange-rate regime at that time – and that the current imbalances seem even more pronounced than at the end of the last century, it can be inferred that the policy

13. I.e. based on the forward interest-rate differential with abroad (using trade-weighted forward short-term rates).

rate needs to be at least as high as then in real terms, but probably considerably higher.

Another common gauge of the monetary stance is the difference between the policy rate and nominal GDP growth. A positive difference, i.e. a policy rate higher than nominal GDP growth, represents a tight stance. The negative figure for last year indicates that the monetary stance was far too accommodative then, and although it ceased to be lax roughly at the end of the year, the stance cannot be considered particularly tight. This development reflects the fact that GDP growth and inflation have in retrospect persistently proved higher than was expected, so the monetary stance was not as tight as had been aimed for.

The Central Bank is determined to enhance the credibility of its monetary policy

Inflation was more than 1½% above the target at the beginning of September. This does not entail any other direct obligation for the Central Bank than to write a report to the Government explaining the reasons for the deviation from target and the monetary policy measures needed to attain the target, which was done with the report published on September 19 and again in this edition of *Monetary Bulletin*. However, high inflation as in the past year can tarnish the credibility of monetary policy. Assuming an unchanged exchange rate, the inflation target seems unlikely to be attained before 2008. A sizeable depreciation of the króna could delay that process even longer. This is an unacceptable result, which underlines that expectations about monetary policy soon returning to a neutral stance – as can be read from the nominal yield curve – are unrealistic. It seems more likely that the policy rate needs to be kept high – and higher than its present level – for much longer than most market participants seem to think.

On average, inflation has been some way above the target ever since its introduction, inflation expectations have been running above target for a long while and so too have the Bank's forecasts based on an unchanged policy rate.¹⁴ Against such a background, the Central Bank faces a considerable challenge in building confidence in its monetary policy. The Bank will tackle this task in the coming months. Credibility has to be earned the hard way, but once it has been achieved, monetary policy ought to have a comparable effect at a lower interest-rate level than is required in the current climate. By supporting the Central Bank in its efforts, the public sector, the banks and other parts of the private sector can help to rein in inflation and reduce the side-effects in the process. Whether the Bank receives such support or not, it will not flinch from its goal to attain the inflation target over the medium run. In the long run, businesses and households alike will reap the benefits.

14. From November 2002 to March 2004, however, inflation was with one exception at or below the target.

Appendix 1

Inflation target misses: A comparison of countries on inflation targets

Just over four years have elapsed since the Central Bank of Iceland moved onto an inflation target as its new monetary policy regime. Iceland is one of just over 20 countries to do so since New Zealand became the first inflation targeter in 1990.¹

Under the new framework, price stability was made the main objective of monetary policy in Iceland. The target was specified in a joint declaration by the Central Bank and the Government of Iceland as a twelve-month rise in the consumer price index (CPI) of 2.5%.

Although the Central Bank aims to keep the rate of inflation on average as close to 2.5% as possible, temporary deviations from the target are sometimes unavoidable, e.g. when inflation increases or decreases due to unforeseen shocks beyond the Central Bank's control. Circumstances may also arise in which the Bank sees no reason to prevent deviations if they are short-lived and do not undermine the credibility of the target. In this context it should be borne in mind that the main purpose of the inflation target is to create a credible medium-term anchor for inflation expectations. Provided that the Bank's explanations for deviations are credible, they need not damage the credibility of its monetary policy.

Target misses

Even though temporary target misses are unavoidable and need not be harmful, very frequent and large misses can clearly undermine the credibility of monetary policy. In this light it is worth examining how successful central banks on an inflation target have been in keeping inflation close to the target.

The first column of the table shows the average deviation from the target (or midpoint of a target range) in the 21 countries defined as inflation targeters by Pétursson (2004).² It reveals that a number of central banks have managed to keep average inflation on target (Chile, Israel, Poland and the UK). However, average inflation has

1. A detailed description of these countries' inflation targeting regimes and their evolution is given by Pétursson (2004). An assessment of the macroeconomic impact of inflation targeting is provided by the same author (2005).

2. Data show quarterly year-on-year changes in the CPI, except for countries that target core inflation. These countries are Australia and New Zealand (CPI excluding mortgage interest costs until 1999 in Australia and 2000 in New Zealand, when the index was redefined and mortgage interest costs excluded from it); the UK (retail price index excluding mortgage interest costs until 2004, then the HICP); Norway (CPI adjusted for tax changes and excluding energy products); South Africa (retail price index excluding mortgage interest costs); South Korea (CPI excluding agricultural products and oil); Thailand (CPI excluding energy and unprocessed food items); and the Czech Republic (CPI excluding regulated prices and the direct impact of indirect taxes and subsidies until April 2001, then headline CPI). Data extend to Q2/2005. For further discussion of the data and development of inflation targets in the country sample, see Pétursson (2004, 2005).

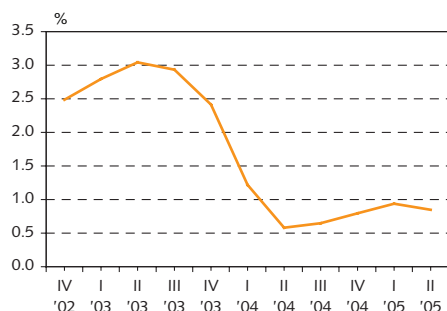
been some way above target over this period in Iceland, which ranks with Brazil, Mexico and South Africa among the highest overshooters. The second column shows the standard deviation of target misses (or from the midpoint of the target range). The standard deviation is around 2.3% in Iceland, while the average is 1.6% in the total sample and only 1% for the eight sampled industrialised countries.

Inflation target misses

Country	Average deviation from target (%)	Standard deviation of target misses (%)	Frequency of target range misses (%)	Average value of target range misses (%)	Duration of target range misses (quarters)
Australia	0.2	1.1	51.0	0.8	4.2
Brazil	3.3	4.1	64.0	3.3	5.3
Canada	-0.4	1.0	37.0	0.6	2.0
Chile	0.0	1.5	43.0	1.2	4.3
Columbia	-0.3	1.9	40.0	1.0	4.0
Czech Republic	-1.9	2.0	81.0	1.8	5.5
Hungary	1.0	1.5	33.0	2.0	5.0
Iceland	1.7	2.3	33.0	1.7	3.0
Israel	0.0	2.8	82.0	1.8	6.4
Mexico	2.3	1.6	73.0	0.5	4.0
New Zealand	0.2	0.8	19.0	0.3	3.0
Norway	-1.1	1.2	61.0	1.0	11.0
Peru	-0.5	1.4	43.0	1.0	3.0
Philippines	-0.4	2.4	86.0	1.9	6.0
Poland	0.0	2.6	74.0	1.6	5.0
South Africa	1.6	2.3	50.0	2.1	7.0
South Korea	-0.6	1.7	46.0	1.3	3.3
Sweden	-0.9	1.1	48.0	0.8	6.7
Switzerland	-0.1	0.5	5.0	0.0	1.0
Thailand	-1.1	0.5	0.0	-	-
UK	0.0	0.4	0.0	-	-
Average of sample	0.2	1.6	46.0	1.3	4.7
Average of industrialised countries	0.0	1.1	32.0	0.7	3.9
Average of other countries	0.3	2.0	55.0	1.5	4.5

On first impression the Central Bank of Iceland appears to rank with the poorest performers in inflation targeting: only five countries have a higher standard deviation and none of them is an industrial country. However, several qualifications need to be made, all partly explaining Iceland's poor rating in this comparison. First, Iceland bases its inflation target on the headline CPI. Several other central banks base their targets on a core index which is less volatile than the headline index. Second, a number of central banks in the sample have regularly changed their targets over the period, sometimes even in line with the inflation outlook, with the aim of reducing target misses. Examples are the changes in central bank targets in Brazil and Columbia in recent years. Third, it should be pointed out that some central banks did not set numerical targets until several years after formally moving onto an inflation target, to allow the surge in inflation caused by imbalances under the preceding monetary framework to subside. Examples are South Korea and Sweden when they abandoned their fixed exchange-rate regimes. This obviously produces smaller deviations from target in these countries compared to Iceland, which de-

Chart 1
Deviation of target misses (two-year window)
Q4/2002 - Q2/2005



Source: Central Bank of Iceland.

fined a numerical target from the outset and has not changed it since. In fact, deviations from the inflation target in Iceland can largely be attributed to pressures which accumulated during the fixed exchange-rate era and came to the fore in the first year after the target was introduced. The króna depreciated swiftly after it was floated, which sent inflation soaring. This is evident from Chart 1, where the standard deviation of target misses (using a two-year window) has been falling in recent times and is currently around 1%, in line with the figures for other industrial countries.³

Despite these shortcomings in the comparison, it cannot be denied that Iceland has shown fairly large deviations from the inflation target. A number of explanations are possible. First, the Central Bank of Iceland might simply be underperforming in its targeting relative to other central banks, and be less credible than most other central banks. Another explanation is that Iceland simply experiences a more volatile business cycle with sharper impacts on inflation developments than most other countries (especially the industrialised ones), making it more difficult to keep inflation on target.

One approach for exploring this more closely is to examine the correlation between the standard deviation of target misses and the standard deviation of output growth in the respective countries (output growth data are from Pétursson, 2005). In the total sample, the correlation is only 0.2, which is hardly large enough to support this hypothesis conclusively. However, countries such as Brazil, South Africa and Hungary have had difficulty in keeping inflation close to target in spite of relatively mild business cycles in the sample period, while others such as South Korea and New Zealand experience strong swings but have still kept exceptionally close to target. Removing these five countries from the sample substantially increases the correlation between standard deviations in the inflation target and output growth, to just over 0.6. Thus Iceland's target misses appear to be attributable to economic volatility to some degree. While the objective of monetary policy is admittedly to dampen business cycle volatility, some fluctuations can be expected to persist in Iceland on account of its small and relatively undiversified economy, the strong impact that exchange rate fluctuations have on domestic prices, and the importance of industries based on natural resources which are prone to fluctuations beyond the scope of monetary policy.

Inflation beyond the target range

Most inflation-targeting central banks also set a target range around their point targets, but assign different functions to them. Some countries only define a target range within which inflation will be kept. In other countries, including Iceland, the range defines only the size of deviation that may be regarded as normal based on underlying fluctuations in inflation; in such cases, the central bank is expected to provide an explanation when inflation moves outside the range.

3. When Iceland moved onto an inflation target in 2001, the Central Bank announced its objective of bringing inflation down to target no later than the end of 2003, which was achieved. Confining the study to the period since 2003 yields an average deviation from target of only 0.4% and a standard deviation of 0.9%.

However, these countries have generally underlined that the range serves no real role in monetary policy decisions, emphasising the point target as the focal point of policy decisions and that inflation outcomes outside the range can sometimes be natural.

Column three of the table shows the frequency of target range misses in the 21 sampled countries. It shows that inflation has always stayed within the range in Thailand and the UK but has been outside the range in more than 80% of cases in the Czech Republic, Israel and the Philippines. In Iceland, inflation has been outside the range in one out of three instances. This is in line with the experience of other industrialised countries, although it should be borne in mind that the target range in Iceland is wider than in other industrial countries (3% as against 2%; see Pétursson, 2004). Based on the standard deviation of target misses and assuming a normal distribution, inflation in Iceland could have been expected to be outside the range in 45% of cases.⁴ Thus the frequency of range misses has been somewhat lower than might have been expected for a normal distribution.

As the fourth column shows, the absolute deviation of range misses has been greatest on average in Brazil and South Africa. Iceland's average has been around 1.7%, which is somewhat higher than in other industrialised countries despite its rather wider range, and is the result of the high rate of inflation during the first year of targeting, as pointed out above.⁵

Finally, the table shows the average number of quarters when inflation has been outside the target range. Norway has experienced the longest duration of range misses, with inflation below the range for just under the last three years. Inflation has been outside the range for three quarters on average in Iceland, which is less than the industrial countries' average. In general, however, these deviations appear to be relatively short-lived, given the lags in the transmission mechanism of monetary policy, which is commonly considered to be around two years. This implies that central banks respond to foreseeable target range breaches well before they actually occur.

Conclusion

The finding of this comparison is that Iceland has experienced greater deviations from its inflation target than other industrialised countries, partly reflecting its highly volatile business cycle. However, the bulk of these deviations may be traced to the inflationary phase following the exit from the fixed exchange-rate regime in 2001, so that the standard deviation of target misses is probably greater so far than may be expected in the future. The frequency of target range misses is well in line with that of other industrialised countries and is what might be expected given the underlying fluctuations in inflation in the sample period. The target range misses have, moreover, been relatively short-lived.

4. The range was narrowed from 5% in 2001 to 3.5% in 2002 and to the current 3% in 2003. Based on a 2.3% standard deviation of target misses, the range should contain 55% of the probability distribution of inflation on average over the whole period, i.e. inflation should lie outside the range in 45% of cases based on a normal distribution of target misses.

5. For the period since 2003 the numerical value of deviations from the target range is 0.4%.

The general conclusion is that deviations from the inflation target appear to be fairly common and sometimes fairly large and persistent. Nonetheless, this has not permanently damaged the credibility of the regime, and no central bank has abandoned inflation targeting due to dissatisfaction with its results.⁶

Sources

Pétursson, Thórarinn G. (2004): Formulation of inflation targeting around the world, *Monetary Bulletin* 2004/1, 57-84.

Pétursson, Thórarinn G. (2005): Inflation targeting and its effects on macroeconomic performance, *SUERF Studies*. Forthcoming.

6. Finland and Spain discontinued inflation targeting in 1999 when they joined the EMU. Poland, the Czech Republic and Hungary will do the same several years hence.

Appendix 2

What do exchange rate indices measure?

New environment – new viewpoints

Review of the Central Bank of Iceland's methodologies for calculating exchange rate indices

A rough observation of methods of calculating effective exchange rate indices in several neighbouring countries reveals significant changes in recent years in the principles on which they are constructed. The introduction of the euro and floating of most currencies in the world appears either to have diminished the emphasis on such indices (including not even updating their baskets) or prompted methodological review. There appears to be an increasing focus on broadening the indices, i.e. including more currencies rather than fewer. The change in Iceland's monetary policy framework in 2001 likewise gives grounds for revising the methods used for calculating the exchange rate index for the króna.

Methods for determining the weight of a currency in a basket vary considerably. In some cases merchandise trade is the sole determinant of the distribution of weight. Since geographical distribution of trade in services is generally considered less reliable, some countries have simply assumed that it is broken down along the same lines as merchandise trade. Other countries take full account of trade in services, while others still confine themselves to a geographical breakdown of tourism receipts.

Iceland's monetary policy framework underwent a radical change in 2001 when the fixed exchange-rate regime was abandoned in favour of inflation targeting with a floating exchange rate. The setting of currency weights in the official exchange rate index under the fixed exchange-rate regime was partly determined by the need for a monetary policy anchor in the form of a fixed reference value. The basket therefore had to be composed of currencies with a strong internal value, i.e. those from low-inflation countries. This viewpoint was particularly prominent over the period 1990 to 1995 when the share of low-inflation countries was increased. In 1995 the policy was eased with the adoption of a broader index. Admittedly this made little difference in practice, because global inflation was on a downward trend. However, Iceland never followed the policy of a hard currency peg like many neighbouring countries, which pegged against the ECU and thereby, implicitly, against the Deutschmark. Iceland never entirely abandoned the philosophy that, besides providing a monetary policy anchor, the exchange rate could serve as an important instrument for adjusting to external shocks, so it was considered important that the index should also reflect changes in the competitive position of industries.

The floating of the króna in 2001 has significantly diminished the need for a reference basket of hard currencies. Nonetheless, calculation of indices still serves two important purposes: monitoring the competitive position and the impact of foreign exchange-rate movements on the domestic price level. The latter is surely particularly important after the inflation target became the anchor of monetary policy. Different indices have in fact been calculated as potentially useful analytical tools. The Central Bank of Iceland's official exchange rate index is based on hybrid methodologies with fairly vague objectives. It is a point for consideration to stop publishing this index and replace it with indices which serve clearer objectives, or at least publish them simultaneously.

One of the ambiguities in the current foreign exchange-rate index is how to account for Iceland's trade in services. A completely different approach is taken than in the case of merchandise trade. In the merchandise trade-weighted index, weights are determined on the basis of data on the destination country of exports and land of origin of imports. Services trade weights, on the other hand, are largely determined by the share of the vehicle currency of transactions, which may differ from the country of origin or destination. This has increased the weight of major currencies, which are often used by smaller countries in their bilateral trade. Using these currencies in such transactions does not necessarily affect Iceland's long-term competitive position. Generally speaking, the reliability of data on geographical distribution of international trade in services is questionable. Some countries therefore ignore them and others only take them partly into account. Those that acknowledge trade in services determine individual country weights on a different basis from Iceland, i.e. with direct surveys of their geographical distribution (by destination or origin), rather than using data from forex trading systems.

Clear objectives should be set in advance for the methodologies for evaluating the currency basket weights used to calculate new indices for the króna. The new indices would have three purposes:

1. To measure changes in the short-term competitive position (and in the long term when they are used to evaluate the real exchange rate).
2. To measure the inflationary impact of changes in the exchange rate.
3. To measure the position of the króna relative to a basket of major world currencies.

To fulfil the first two objectives, the indices should be as broad-based as possible. The reason is that a country with a relatively small market share may have an inordinate effect on Iceland's competitive position if its exchange rate is characterised by large swings. For example, a sizeable appreciation of the yuan (renminbi) – which is widely deemed to have been undervalued by 20-30% below its equilibrium exchange rate recently – could then have a substantial impact on domestic prices in Iceland, despite its small weight in Iceland's foreign trade. In the case of a currency where the stability of its internal value does

not need to be taken into account, the most obvious approach is to apply a rule for the minimum volume of trade required for a country to be included in the index. A necessary condition of course is that the exchange rate of the currency in question is available at sufficient frequency and that a multicurrency regime is not in operation.

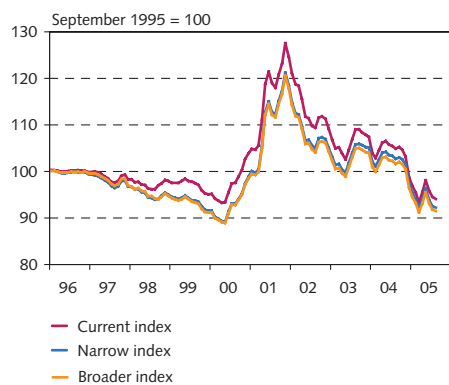
The Central Bank of Iceland has calculated two new indices as follows:

1. All countries accounting for more than 1% of Iceland's total foreign merchandise trade are included in the "narrow" index. The "broader" index covers all countries accounting for more than 0.5% of Iceland's total foreign merchandise trade.
2. Merchandise trade with countries that are not included in the basket is excluded from the calculations, i.e. given a zero value. The previous methodology of attributing the share of trade with "outsiders" to the major currencies, i.e. according to their share in SDR, increased the weight of the hard currencies. This becomes pointless if the index does not serve as an anchor for a fixed exchange-rate regime.
3. To avoid the problem of frequently needing to add or remove currencies from the index as a result of annual fluctuations in trade, the criterion for inclusion or removal is the three-year average of merchandise trade.
4. Third-country effects are omitted from these indices. Although they would be preferable, such calculations are difficult from a technical point of view and as practised in Iceland hitherto have only been based on rough estimates of the third-country impact of a couple of countries which have not been updated regularly. The advantage is not considered sufficient to justify regular updating.

When the three-year average of merchandise trade is calculated to determine the composition of the new indices based on a 0.5% and 1% minimum entrance rule, several countries are added which are not in the current official index. The indices have been calculated retrospectively to 1995. The main difference between the new narrow (1%) index and the current index is that Russia, Australia and Taiwan are added in 1995. China joins in 1999 and Estonia in 2002. However, not all these countries remain permanently, because Taiwan drops out again in 1999, Canada in 2003 and Australia in 2004. The broader index includes 14 extra countries at various times, and comprises a total of 19 currencies for 2005, instead of the present 9.

Since the purpose of the new indices is to measure Iceland's competitive position vis-à-vis main trading partner countries, trade in services should preferably be included insofar as reasonably reliable data on their composition are available. A hypothesis has been put forward that the breakdown of merchandise trade is comparable to the breakdown of trade in services excluding the travel and tourism sector. Given that services trade in the current index breaks down very differently from merchandise and services trade in other countries, data from the forex trading systems arguably give a mis-

Chart 1
Comparison of the current exchange
rate index and new exchange rate indices
January 1996 - August 2005¹



1. The current index has been set at September 1995 = 100.
Source: Central Bank of Iceland.

leading picture of its actual geographical breakdown, and are therefore unreliable. Information on the nationality of foreign tourists and destinations of Icelandic tourists is available, however, and could be taken into account.

Exchange-rate developments according to the new indices

No major difference is revealed between the narrow and wide indices over the past ten years even though the latter includes considerably more currencies. The reason is that the extra currencies in the broad index still constitute a very small part of total trade. In the long run, these indices can be expected to diverge more. As Chart 1 shows, the discrepancy has been growing over the past two to three years in pace with the increasing number of currencies in the wide index and the diminishing weight of hard currencies. Nonetheless, both indices display a clear difference from the one currently recorded. The explanation is that the US dollar has a much larger weighting in the official index than in the new ones. In general, the new and old indices diverge the most when the dollar has appreciated. During dollar depreciations, the króna has appreciated more according to the official index than the new ones, aligning it more closely with them.

It could be feasible to calculate more indices. Given the growing weight of trade in services in recent decades, the failure to include them is a flaw. Preferably they should be incorporated to some extent. Since reasonably reliable indications can be obtained about the geographical distribution of tourism, it is useful to calculate other indices which take into account the estimated breakdown of revenues and expenditures from this sector. Surveys on trade in services are already made in many countries and could provide a basis for taking full account of such data in Iceland in the future.

Another useful reference might be an index showing the exchange rate of the króna vis-à-vis several major world currencies, on a narrower basis than in both the official index and the new ones. Its main purpose would be to present a picture of the position of the króna in a long-term context against currencies that have established themselves as reserve currencies and are characterised by low inflation and very active trading in forex markets.