Economic and monetary developments and prospects[1]

Demand picks up and inflation creeps up towards target

GDP contracted last year by slightly more than had been forecast and inflation has remained below target so far this year. The outlook is for inflation to remain there until the final quarter of next year, even though demand has begun to pick up and a broad-based recovery is in sight. Main reasons are the strengthening of the króna in recent months, which largely seems to be driven by expectations about large-scale investments in the aluminium sector and lower-than-expected global inflation. The new macroeconomic forecast assumes that work will be launched on the Norðurál aluminium smelter expansion, although there is still some uncertainty about this project. According to the forecast, GDP growth will measure 2½% this year and 3¼% next year. Macroeconomic balance is forecast to remain intact for almost the entire period, with inflation staying around target towards the end of next year and then creeping upwards, assuming a constant exchange rate and no changes in the Central Bank policy interest rate. The inflation forecast does not warrant any change in interest rates for the time being. When construction activity approaches its peak, the scope and timing of interest rate hikes will be determined as always by the course of events and not least by fiscal policy design. The fiscal and monetary policy mix will be particularly important in the medium term and could prove crucial for constraining further real appreciation of the króna, which is already beginning to hit export and competing industries.

I Economic developments

Domestic demand is showing various signs of recovery after two years of contraction. These include growth in payment card turnover, motor vehicle registrations, imports of consumer goods, cement sales and, not least, an upswing in the housing market. Hitherto the recovery appears to be mainly confined to private consumption. An improvement in private consumption is not surprising given the substantial growth in real wages after inflation slowed down, coupled with lower interest rates and greater confidence in economic stability. While unemployment has increased, job-creation measures announced by the government and subsequent aluminium-related activity make it unlikely to take root and dampen household confidence. Foreseeable capital inflows in connection with the planned aluminium projects and a comfortable external balance have spurred a further strengthening of the króna over the past three months and contributed to a low rate of inflation. However, housing costs have increased rapidly and account for roughly half the inflation measurement over the past twelve months. Inflation has been below the target since November, but has crept upwards since January.

1. This article uses data available on May 9, 2003.

Price developments

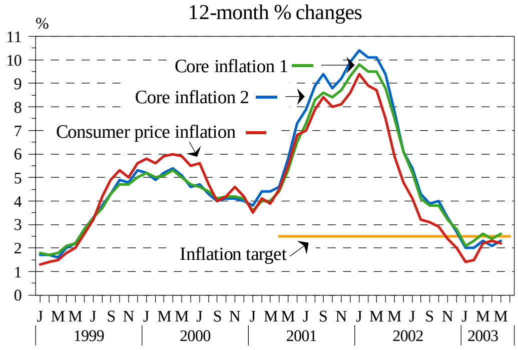
Inflation developments over the past quarter

In April, twelve-month headline inflation was 2.3%. The inflation rate therefore increased somewhat since January, when it measured 1.4%, but was still below the Central Bank's target. Core Indices 1 and 2 rose by 2.4% and 2.1% respectively over the same period.[2] Seasonal price increases due to the end of winter clearance sales account for just under half the rise in the CPI over the past two months, but the impact on the annual inflation rate is insignificant. The main impetus behind inflation in recent months has been housing costs, which account for more than half the rise in the CPI over the past twelve months. Excluding housing costs, annualised inflation was only 1.1% at the beginning of April. Over the past three months private service prices have been rising at a noticeably slower rate, while prices of public services have outpaced the CPI as a whole. Prices of imported goods were marginally lower in the beginning of April than a year before, but prices of domestic goods were slightly higher, apart from agricultural products which have gone down. Since the last *Monetary Bulletin* in February, goods prices have been falling at a slower rate, but in April grocery prices were still 2.3% lower than a year before.

Chart 1

CPI inflation 1999-2003

12-month % changes



Source: Statistics Iceland.

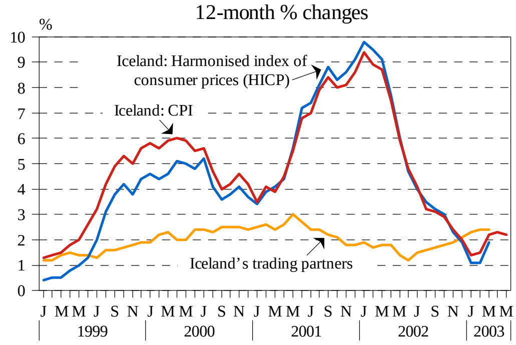
2. Core Index 1 is the CPI excluding changes in the price of vegetables, fruit, domestic agricultural products and petrol. Core Index 2 excludes the price of public services as well, which explains why it has risen by less than Core Index 1 over the past year.

Iceland's inflation rate has been below that of most trading partner countries. In March only five countries recorded lower inflation than Iceland. As measured by the EEA Harmonised Index of Consumer Prices (HICP), inflation was 2.3% in the European Economic Area (EEA) but 1.9% in Iceland.

Chart 2

CPI and HICP inflation 1999-2003

12-month % changes



Source: Statistics Iceland.

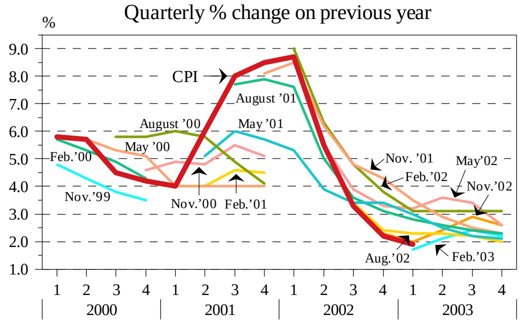
Inflation in the last quarter broadly in line with forecast

The rise in the CPI between Q4 in 2002 and Q1 in 2003 was broadly in line with the Central Bank's forecast in January. The Bank had forecast a 2.1% rise from Q1/2002 to the same period in 2003. In the event the index rose by 2.1%. Early this year there were some claims that inflation was heading for a very low rate and could even fall below the 1% lower

Chart 3

CPI and the Central Bank inflation forecast 2000-2003

Quarterly % change on previous year



Sources: Statistics Iceland, Central Bank of Iceland.

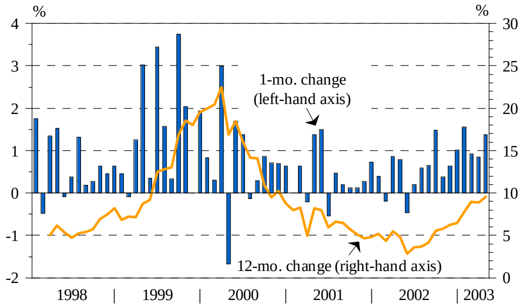
tolerance limit of monetary policy. Most analysts forecast rather lower inflation than the Central Bank. This has not turned out to be the case.

No end in sight to housing price inflation

The component of the CPI which has had the largest impact on inflation over the last year is the rise in housing costs. In April, housing prices had risen by 9.6% over the preceding twelve months and 6.5% over six months. Weighing more than 11% in the CPI, housing price increases have accounted for 1.1% of the rise in the index over the past twelve months and 0.7% over the past six. This is the largest twelve-month rise in housing prices since November 2000. The housing market is discussed in more detail below.

Chart 4

Market price of housing (imputed rent in the consumer price index) 1998-2003



Source: Statistics Iceland.

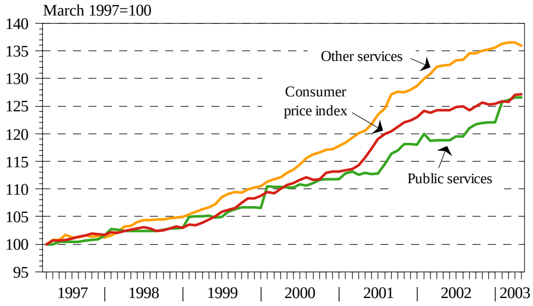
Public service prices have risen more than the average price level over the past twelve months, but the increase in private sector service prices has slowed down

Over the twelve months until the beginning of April, prices of public services rose by 6.6%. The increase in public service prices has far outstripped other price rises and significantly exceeds the inflation target. Part of the twelve-month rise in public service prices stems from a backlog from the previous year, because increases were postponed during the first half of 2002 to prevent inflation from triggering a review of wage settlements in May that year. Public service prices generally rise most at the beginning of the year. They rose by 1.7% around the New Year 2001/2002, falling short of the year-on-year increase in the CPI. Thus public service prices lagged behind the CPI in 2002. Withdrawal of certain increases caused public service prices to fall by 1% in February 2002 and they did not rise again until into the summer. This caused the twelve-month rate of public service price rises to surge in February, the base effect of which will not begin to tail off until the summer. After rising 3.7% so far this year, public service prices are broadly back in line with changes in the general price level since 1997, but have gone up by less than private sector services over that period (see Chart 5).

Private sector service prices have risen by less than public service prices over the past twelve months, or by 2.7%. Indeed, they declined by 0.4% between March and April, after remaining unchanged the month before. The decrease can large-

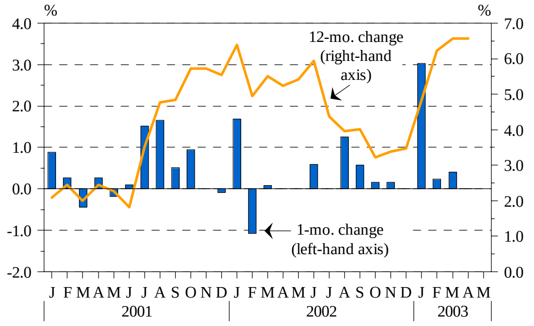
Chart 5

Service prices and the general price level 1997-2003



Source: Statistics Iceland.

Changes in public service prices in the consumer price index 2001-2003



ly be attributed to a drop in catering prices. The recent strengthening of the króna has pushed food prices down by 2.4% over the past year, which may have had an effect on catering prices.

Price in most categories of goods lower than a year before

Food prices have fallen by 2.4% in the space of a year, as pointed out above. The most pronounced decrease has been in imported food prices, at 5.5%, which can be attributed to the strengthening of the króna. Domestic food prices have also come down. Agricultural products and vegetables, for example, have decreased by 2.3% and the price of other food items by 1%. Oversupply and intense price competition in the meat market have brought prices there down by more than 4% over the past three months and by almost 6% over the past year. Prices of non-food imports have gone down by almost 2% over the past year. The categories of goods where prices have not decreased recently are petrol, alcohol and tobacco, and domestic goods other than food.

The inflation premium on Treasury bonds and a business survey show inflation expectations around or below the target over the next two years

The two-year inflation premium on Treasury bonds has recently been hovering around the same level as at the end of January, just before the last *Monetary Bulletin* was published, i.e. at or below 2%. However, the premium on interest rates on non-indexed bonds with a longer lifetime has risen over the period, despite a short-lived dip in the first days of February which had been more than reversed by the end of the month. In the first week of May, the respective inflation premiums on bonds with a lifetime of 4 and 6 years were 0.1 and 0.5 percentage points higher than in the last week of January.

According to a February survey of Iceland's 400 largest corporations, business executives expect an average 2.1% rise in the CPI over the following twelve months and an annualised 2.4% two years ahead. This is more or less in line with forecasts by the Central Bank and financial market analysts then, but somewhat lower than the outcome of a similar survey in September. (see Box 4 on p. 28)

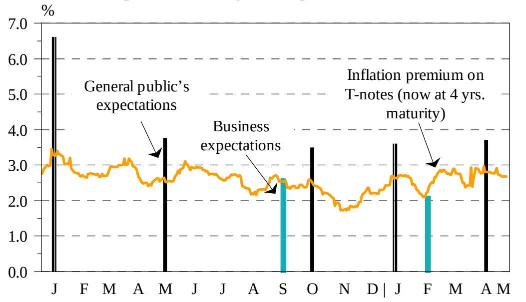
Households expect marginally higher inflation than they forecast in January, but the gap between measured inflation and inflation awareness is closing

In April, households expected an inflation rate of 3.7% twelve months ahead, which is 0.1 percentage point more than they foresaw in January. The largest group of respondents expected 3% inflation over the following twelve months. Expectations at the time of the survey possibly reflected the pending parliamentary elections and government measures to boost economic activity this year. Household inflation awareness had moved closer to measured inflation in April compared with January. In April, respondents considered the rate of inflation over the preceding twelve months to have been 3%, while in January they considered it 3.2%. Actual inflation rates were 2.3% and 1.4% respectively.

Chart 6

Inflation expectations 2002-2003

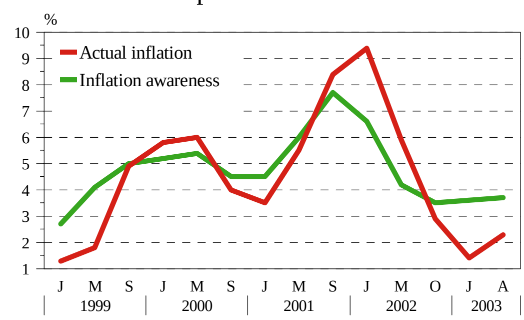
Daily inflation premium on non-indexed T-notes and survey-based expectations of general public and businesses



Source: Central Bank of Iceland.

Chart 7

Household inflation awareness[1] and actual inflation in past 12 months 1999-2003



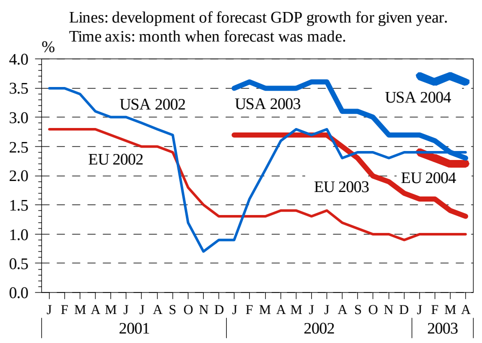
Sources: IMG Gallup in Iceland and Statistics Iceland.

Box 1 The global economic situation and prospects and their impact on the Icelandic economy

Global economic prospects

In the first half of 2002 there were many indications that the global economy was recovering and for most of the year substantial economic growth was foreseen in 2003. In the autumn, however, expectations of continued growth were dampened. The most recent statistics, including those for the USA and UK, indicate even lower first-quarter growth this year than anticipated. Growth forecasts have therefore been revised downwards (see chart). Industrial production on both sides of the Atlantic is still depressed and unemployment has remained high or increased. Outlook indicators are weak. The IMF is currently forecasting a global growth rate of 3.2% this year, 2.2% in the USA and 1.1% in the euro area. OECD's forecast is along similar lines (see Table 20 in the Appendix of Tables and Charts).

Forecast economic growth in the USA and EU 2002-2004



Source: Consensus Forecasts.

Various reasons lie behind the sluggish recovery. Oil prices were volatile and climbed rapidly from late in 2002 until the war in Iraq. Businesses and households were reluctant to commit themselves in the climate of uncertainty caused by the war. Investments have been stifled by large-scale excess production capacity, a legacy from the last upswing which ended with an equity bubble and overinvestment. The end of the war in Iraq has dispelled various uncertainties and oil prices are stabilising at well below pre-war levels. Equity markets are still depressed, but have rebounded a little since before the war.

Demand has recently widely been sustained by private consumption, and investment has not gained sufficient momentum to support growth. In particular private consumption has been important in the USA, as the table shows. In 2001 and 2002 private consumption there well outpaced GDP growth, but more balanced growth is forecast over the next two years. In the euro area private consumption growth has been more in line with GDP growth over these years.

GDP and private consumption growth 2001-2004

Consensus Forecasts projections for 2002-2004

	USA				*Euro area*			
%	*2001*	*2002*	*2003*	*2004*	*2001*	*2002*	*2003*	*2004*
Economic growth	0.3	2.4	2.3	3.6	1.4	0.8	1.0	2.0
Private consumption growth	2.5	3.1	2.3	3.3	1.8	0.6	1.1	1.8

Low interest rates and housing price inflation have kept consumption buoyant in the USA, UK and elsewhere, to a large degree financed by mortgage equity withdrawal. Interest rates are currently at a historical low and there seems to be little scope for further reductions. The rate of growth in housing prices has been slowing down and an episode of real estate disinflation may lie ahead. Also, the labour market on both sides of the Atlantic is being squeezed, which naturally erodes real disposable income. Under such circumstances, the risk is that private consumption will give way before investment recovers. In a worst-case scenario the outcome could be another recession, although forecasts generally do not foresee this happening.

A slow economic recovery is considered more probable this year, and is more likely in 2004. There are risks for the outlook as always. The SARS outbreak in Asia has been spreading. It has already had a marked economic impact in China and Hong Kong. A worldwide epidemic would have serious consequences, but currently there does not seem to be much risk of this happening. The huge US treasury deficit and smaller ones in Germany and other European countries are also worrying. A persistent deficit could cause interest rates to rise.

Impact on the Icelandic economy

Although the global economy is still subdued and a second recession cannot be ruled out in important trading partner countries, at least one risk factor for Iceland has abated. When the US military supremacy in Iraq was established and it became increasingly likely that the conflict would end without major damage to Iraq's oil wells, oil prices plunged on expectations that the UN boycott would soon be lifted and full production recommence. Oil prices are volatile and it is worth examining the impact that their fluctuation has on Iceland's economy. The impact is both direct and secondary and is difficult to assess in full. The following discussion focuses primarily on the direct impact of a 10% rise in the price of energy (oil and petrol), which is actually a fairly modest change compared with past decades. Much larger swings have been observed.

- Iceland's energy imports last year amounted to 15 b.kr. or roughly 2% of national income. A 10% rise in the price of oil and petrol would therefore cut national income by 0.2%.
- Petrol weighs roughly 4% in the CPI. With the usual assumptions about domestic oil company margins, a 10% higher purchasing price of petrol can be expected to push up its retail price by 6% and cause a 0.3% rise in the CPI, with a corresponding erosion of real disposable income and rise in households' inflation-indexed debt. Both may result in lower private consumption although the scale will probably depend upon whether these changes are viewed as temporary or permanent.
- Imported fuel is a major operational cost component in various sectors, e.g. fisheries. By far the largest user of fuel is the fishing fleet, which consumes imported oil for 7-8 b.kr. a year. Fuel costs are equivalent to 10-12% of total fleet operating expenses and 8-9% of revenues. The changes in fuel prices assumed above would thus cut the profit-to-turnover margin of fishing operations by roughly 1½ percentage points.

Direct effects are naturally only part of the total impact. Changes in energy prices affect the entire global economy. Higher prices squeeze demand and all import prices are ultimately affected. A long-lasting inflationary impact would provoke friction over the relative shares of wages and capital in national income and result in higher interest rates. This is particularly true of sharp and persistent swings such as those witnessed in the 1970s and 1980s. Fiscal policy measures to mitigate the contraction can send interest rates even higher. One factor of concern has been growing public sector deficits in a number of OECD countries. The turnaround has been especially sharp in the USA. At the same time as the subdued state of the economy has struck at public sector revenues, outlays to the military have been stepped up and taxes cut. If this turnaround eventually forces interest rates up, the Icelandic economy could be affected significantly.

Based on Iceland's net debt position at the end of last year, the impact of a 1% rise in foreign interest rates would be equivalent to about 1.7% of export revenues, or 0.7% of national income. The decline in Iceland's net external debt service from roughly 10% of export revenues to 5½% over the period 2000-2002 gives a hint of the possible scale of variation.[1] If the decrease in interest rates that caused this change is reversed, the increased deficit on the balance on income would cause national income to decline by 1½%-2%. Furthermore, the impact of higher foreign interest rates on business investment would need to be taken into account.

The worst risk of shocks to the Icelandic economy can now be said to have passed by. This would have been a scenario of soaring oil prices, leading to higher inflation, lower private consumption in trading partner countries, hence weak export prices and high foreign interest rates. Given Iceland's heavy external debt ratio, it is easy to envisage that such an episode could bring national income down by several percentage points. This is unlikely but the risk remains that when the global economy recovers and interest rates head upwards again, Iceland will benefit less than countries with lower debt levels, especially if private consumption growth is sluggish. On the other hand, economic growth in Iceland in the next few years will largely depend on other factors which are beyond the scope of this analysis.

1. In the 1980s the ratio was much larger despite a lower level of indebtedness, due to far higher foreign interest rates than over the past decade.

External conditions and output

No major changes have taken place in the external conditions of the economy over the past two years, despite sizeable swings within each year. Fish catches were strong in the first half of 2002, waned over the second half and so far in 2003 have been down from last year. Prices of marine products fell around the middle of last year, but recovered as the winter progressed. Measured in terms of foreign currencies, prices over the first two months of this year were 3% higher than the average for the whole of 2002. Oil and petrol prices fell sharply over 2001, then rose throughout last year and until the outbreak of the war in Iraq, but have dropped again since. Despite these fluctuations, no decisive or lasting changes have taken place.

Fish catches in the first three months of this year were lower than over the same period in 2002. The main factor at work was the pelagic catch, which declined by more than 300 thousand tonnes from the year before. The cod catch was just over 8% down, while other demersal species increased somewhat. Export volume of marine products so far this year has exceeded the figure for 2002, in spite of smaller catches. The impact of the slump in pelagics for fish oil and meal processing has not yet been felt in full, nor the cod fishery ban during the spawning season in April. The outlook is that exports of marine products over the year as a whole will be broadly unchanged from 2002. Much uncertainty surrounds this estimate, however, since quotas for the next fishing year, commencing on September 1, have yet to be set. Furthermore, there are uncertainties about the capelin run and quotas from this stock in the autumn and winter. Quotas for cod and perhaps haddock, two of the most valuable demersal species, are quite likely to be upped for the next fishing year, but the impact will mostly be felt in 2004.

The surge in fuel prices as a result of the Middle East conflict has been reversed in recent weeks. Average crude oil prices in the first three months of this year were more than one-quarter higher than on average in 2002, and prices of petroleum products and petrol one-third higher. This rise has largely been reversed. Futures prices indicate that oil prices will be roughly unchanged from 2002 on average, and enter a downward trend stretching into next year. Oil prices are likely to remain moderate in the near term and could even drop further if UN trade sanctions against Iraq are lifted and large-scale production recommences from its fields, the second-richest in the world. Global oil prices are denominated in the US dollar which recently has depreciated sharply. Retail prices in króna should therefore come down by more than they have declined in dollar terms.

However, the recovery expected among Iceland's main trading partner countries has been delayed. Recent economic statistics may have reflected the conflict in Iraq, but it is too soon to say whether the end of the war will spell much of an improvement. Diminishing growth in private consumption is a particular cause for concern and may trigger lower prices for Iceland's main export products. Slack in export markets has already squeezed down prices of marine products and the outlook is for weaker export prices in the near future.

The weak global economy recently has not been entirely negative for Iceland. It has contributed to low interest rates – which benefits Iceland's high-debt economy, as discussed in Box 1.

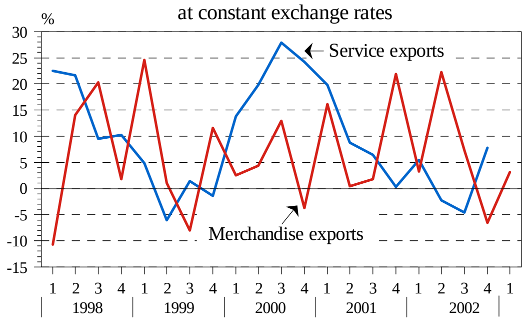
Export prices drop during the first quarter

Merchandise export volume in Q1 grew by 7-8% from a year before, after a low around the end of 2002. Nonetheless, export value in terms of domestic currency shrank markedly, by just under 7% – the combined effect of lower foreign currency prices for marine products and a 10% depreciation of them against the króna. Exports of marine products were

Chart 8

Goods and services exports 1998-2003

Change on same quarter in previous year, at constant exchange rates



Sources: Statistics Iceland, Central Bank of Iceland.

marginally higher than in the same quarter in 2002, despite sluggish catches during the first months of this year. Export value of catches fell by 10% in króna terms, however. The volume of aluminium exports rose sharply, but is prone to sharp monthly swings. Exports of other manufactured goods in Q1 were lower than a year before. External trade tends to be volatile in the first quarter and may be affected by the timing of public holidays. Hence, trade figures should be interpreted with caution.

Imports, excluding vessels and aircraft, rose strongly in Q1

Excluding an aircraft valued at almost 6 b.kr. in March last year, first-quarter imports were 11% higher than a year before, measured at constant prices. Preliminary trade figures for April also point to some growth. In terms of volume, import growth in Q1 was somewhat lower, or about 6%, apparently due to higher-priced motor vehicles and rising petrol and pharmaceuticals prices. It should be borne in mind that imports, excluding the aircraft, were at bottom in Q1/2002, picked up into the summer and then waned again for the remainder of the year. The surge in imports of consumer durables is particularly noticeable. In volume terms, they were roughly one-fifth up on the previous year. Some three-quarters of this figure was accounted for by motor vehicles, and the value of private car imports almost doubled at constant exchange rates. Imports of other consumer durables rose by one-third. Fuel imports also soared, reflecting both the rise in oil prices which has now been levelled out and increased energy consumption.

A strong surplus was shown on the merchandise account during the first two months of this year but a deficit of 0.6 b.kr. in March. Total surplus for the first quarter was 6.6 b.kr., compared with 4.8 b.kr. last year, calculated at the average exchange rate for January-March 2003. Excluding vessel and aircraft imports, however, the surplus has shrunk by almost 3 b.kr.

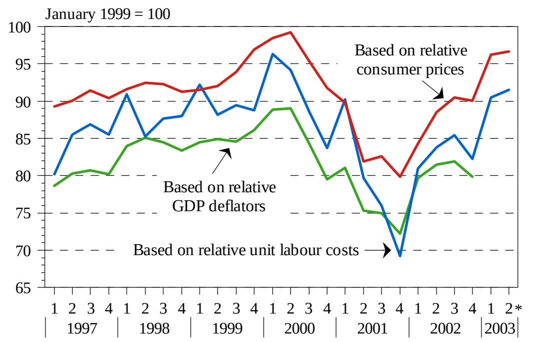
Competitive position of businesses worsened last year under stronger exchange rate ...

Companies listed on Iceland Stock Exchange reported good profitability last year. Turnover grew considerably, EBITDA was comfortable and profits after tax soared. Nonetheless, changes in the operating environment during the year were not favourable for all these companies. The surge in profits after tax is largely explained by lower financial expenses on account of the stronger króna and lower interest rates – both domestically and internationally. However, the competitive position of export and competing industries deteriorated over the year. The fisheries sector also faced a drop in output prices in the second half of the year. The króna appreciated by 13% between the last quarters of 2001 and 2002. Over the same period, the real exchange rate appreciated by almost 19% in terms of relative unit labour costs but by 12½% in terms of relative consumer prices. So far this year the real exchange rate has continued to strengthen with a quarter-on-quarter appreciation in Q1/2003 of 6½% in terms of consumer prices and even more in terms of unit labour costs. The rise is even more pronounced if measured against the last quarter of 2001, when the króna was at its weakest. From then until the first quarter of this year, the real exchange rate appreciated by 30% based on relative unit labour costs. This year the real exchange rate has been close to its peak from 2000. In terms of relative unit labour costs it was 7.8% above the 10-year average and 2½% above the 20-year average, but still way below the peaks of 1981-1982 and 1987-1988. Averages do not provide an absolute measure of whether a currency is over- or undervalued, or of the competitive position, as discussed further in the Appendix.

It has been claimed that conventional measures of the real exchange rate give a distorted picture of the competitive position of Icelandic businesses, because

Chart 9

Real exchange rate of the króna 1997:1 - 2003:2



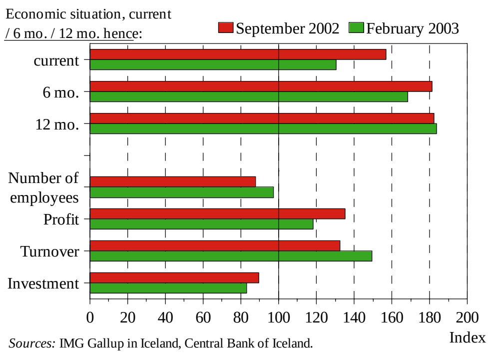
* Forecast for 2003/Q2. *Source:* Central Bank of Iceland.

Box 2 Survey of Icelandic business sentiment

For the second time, the Central Bank and the Ministry of Finance commissioned Gallup to conduct a survey of the expectations and intentions of the 400 largest companies in Iceland. The first survey was in September 2002 and the survey discussed here was made in February this year. As before, executives were questioned about their views on the current economy and outlook, and the development of prices, the exchange rate and interest rates, together with various details of their own business operations such as sales turnover, inventories and number of employees. The questions were therefore both qualitative and quantitative. Responses to the qualitative questions are calculated as indices.

Business sentiment

Based on the Gallup surveys of business sentiment



Sources: IMG Gallup in Iceland, Central Bank of Iceland.

A comparison between the two surveys reveals that executives were not as satisfied with the economic situation and outlook this February as they were in September 2002, as the chart shows. However, they are equally optimistic about the economic situation twelve months ahead, and their indices for turnover and number of employees have risen. Indices for profit and investment are down. However, this is not to say that sentiment is particularly pessimistic: Almost three out of every four respondents expects profit this year to be similar to or greater than in 2002. Executives at fisheries companies seem to have weaker expectations about the future than those in other sectors. Businesses in the Greater Reykjavík Area also foresee brighter prospects than those in regional Iceland. The table shows responses to selected questions.

Businesses expect turnover to grow by an average of just under 5% this year, while in last autumn's survey they foresaw a contraction in gross turnover in 2002. Accordingly, there are virtually no plans to cut back on staff this year, while last autumn they predicted redundancies over 2002. Some measure of wage drift is also apparently expected. Overall, average wages were expected to rise by 2.2% over the following six months; when the survey was taken in February, negotiated wage rises for 2003 had already gone into effect. In line with expectations of lower inflation than last September, executives foresaw smaller rises in product and input prices, although they still expected inputs to increase by more than products. Responses to questions about the policy interest rate both last September and this February seem to reflect the rates in effect at the time the survey was conducted. It is interesting to note that executives expected more weakening of the króna twelve months ahead than they did in September 2002. At the time of the February survey, the króna had strengthened somewhat since the autumn and decisions on aluminium and hydropower investment programmes had just been taken.

Gallup surveys of business sentiment[1]

% unless otherwise indicated	*September 2002*	*February 2003*
Increase/decrease or no change in the number of employees in next 6 months (index)	88	97
Change in the number of employees in the respective year	-2.4	-0.3
Change in turnover on previous year (in real terms)	-1.6	4.6
Change in average wages in next 6 months	1.7	2.2
Change in product prices in next 12 months	1.6	1.3
Change in input prices in next 12 months	3.4	1.8
The Central Bank policy interest rate 12 months hence	6.8	5.4
Inflation over next 12 months	2.6	2.1
Change in the exchange rate of króna in next 12 months	-1.5	-2.8

1. The table indicates percentage changes except for interest rates (percentage points) and the change in number of employees, which is indicated by an index number. The index values are in the range 0 - 200. An index value close to 100 indicates an equal number of positive and negative responses.

the wage indices on which they are based underestimate domestic wage increases compared to those abroad. Such distortions can be avoided by using domestic and foreign GDP deflators instead of wage and price indices. The drawback of such criteria is that terms of trade movements can affect the estimation of the real exchange rate although they do not change the competitive position.[3] Another drawback is the short range of historical quarterly data. As Chart 9 shows, this measure yields a very similar result to the others for 2003. According to forecasts the real exchange rate of the króna will be 7% higher on average than over the past 10 years, but broadly in step with the 20-year average. The deviation from the 10-year average is less than if the real exchange rate is defined in terms of relative unit labour costs, but larger than the corresponding deviation of a CPI-based index. The GDP deflator-based definition yields the smallest deviation from a 20-year average (see Appendix).

Volatility on the scale experienced recently has widely varying impacts on businesses, depending on the nature of their operations. The competitive position of exporters has worsened, while the position of indebted service and retail firms has improved.

... which is reflected in poorer performance in Q4/2002 than the first half of the year

Business profitability could be expected to reflect changes in the competitive position. Overall, however, profitability has not been under as much strain as might have been thought, judging from the results posted by listed corporations. Up-to-date figures for other companies are not available. Listed companies' profits diminished in the course of the year. The ratio of EBITDA to turnover among all listed corporations was 6.9% in the final quarter, but 10.2% over the whole year. On the other hand, profit after tax rose on account of exchange rate gains on foreign borrowing. EBITDA dropped most sharply among fisheries companies, whose average ratio to turnover of 26%-28% during the first three quarters had slid to 17.3% in Q4. Nonetheless it is interesting to note that manufacturing and pharmaceuticals companies, the bulk of whose turnover derives from exports, did not witness a drop in EBITDA ratio despite adverse exchange rate changes. The same applies to marine product sales and marketing companies. Many of these companies operate outlets or subsidiaries outside Iceland. Changes in EBITDA in other sectors are difficult to assess due to seasonal swings in turnover and profitability. Listed companies continued to make satisfactory profits in Q4/2002, although noticeably less than in the first half. Ongoing real exchange rate appreciation and lower product prices have squeezed exporters further in the first months of this year. However, the position of service sector companies with high levels of debt has taken a turn for the better.

3. For example, a rise in prices of marine products is reflected in a rise in GDP prices and the real exchange rate. Thus the index may show a competitive deterioration when the position of exporters is in fact improving.

Table 1 Business profitability 1999-2002

Percent unless stated otherwise

All corporations listed on ICEX	*1999*	*2000*	*2001*	*2002*
Turnover (b.kr.)	285.9	360.7	425.6	456.4
Financial items (b.kr.)	-1.0	-12.6	-17.2	9.8
Working capital from operations (b.kr.)	15.0	21.4	26.5	35.3
EBITDA/turnover	7.1	9.2	10.1	10.2
Profit after tax/turnover	2.3	-0.6	0.8	8.6
Return on total assets	6.9	8.9	10.0	9.1
Return on equity	6.7	-2.0	2.4	20.9
Capital ratio	33.0	31.1	30.6	36.7
Turnover/total assets	0.97	0.97	0.99	0.89
Fisheries sector				
EBITDA/turnover	13.7	17.7	27.1	23.3
Profit after tax/turnover	-0.1	-8.6	4.1	18.6
Capital ratio	32.7	28	28	33.3
Manufacturing and pharmaceuticals sectors				
EBITDA/turnover	7.0	13.2	12.9	13.3
Profit after tax/turnover	3.3	2.7	5.2	7.8
Capital ratio	43.4	38.1	42.5	37.1
Transport sector				
EBITDA/turnover	2.3	5.6	5.1	13.4
Information technology sector				
EBITDA/turnover	4.3	23	17.3	18.2
Retail and services sectors, construction				
EBITDA/turnover	6.4	6.7	5.6	-0.8

GDP contracted by 3% in Q4/2002

GDP contracted by slightly more in 2002 than the Central Bank had estimated in February this year, or ½%. The discrepancy mostly stems from lower-than-expected exports in the fourth quarter, and higher imports. Exports in Q4/2002 decreased by 2½% from the year before. Towards the end of 2001 exports had been exceptionally buoyant and imports unusually low, so import growth in Q4/2002 was also strong compared with the corresponding quarter of the previous year. Export volatility was probably partly caused by inventory changes. Private consumption has gradually been recovering from a dive around the New Year 2001/2002. In Q4 last year it was just over 1% up from a year before, but for the year as a whole it was just over 1% lower than in 2001. Fourth-quarter GDP shrank by 3% in 2002 from the preceding year. Subdued export growth was the main cause, while private consumption picked up from the year before.

The impact of exchange rate changes on different sectors of the economy is clearly reflected in turnover figures for the last two months of 2002. Total turnover deflated by the CPI declined by almost 5% from the previous year. However, this figure clearly exaggerates the scale of the contraction, since an estimated two-fifths of turnover was associated with external trade. Foreign currency prices fell by more than 12½% over the same period and had a marked effect on turnover. After taking this impact into account, a slight rise in total turnover can be assumed at the end of 2002 compared with the previous year.

Table 2 Turnover in November-December 2002

Change on previous year in %	
Total turnover	-4.9
– adjusted for changes in the exchange rate	1.3
Wholesale	-14.0
Construction	-12.8
Manufacturing	-2.7
– adjusted for changes in the exchange rate	-0.6
– domestic market	1.7
Retail	0.0
Services	6.7
Change in the exchange rate of foreign currencies vis-à-vis króna	-12.6

The sharpest contraction was in wholesaling, which to a considerable extent may reflect exchange rate changes, and in construction. Manufacturing turnover was roughly unchanged from the year before, after adjustment for exchange rate movements, and manufacturing output picked up in the domestic market after a downturn lasting since March 2002. Retail turnover was unchanged in real terms after declining since September 2001. However, given the decrease in goods prices, deflating them by the CPI is likely to lead to underestimation of real turnover. Service sector turnover soared from the year before, with the growth rate rising significantly from the preceding months. However, real turnover growth in the service sector may be overestimated, given that the service component of the CPI rose by more than the index as a whole over the period.

Domestic demand

Signs of robust growth in the first quarter

Although GDP contracted in the fourth quarter of 2002, national expenditure was broadly unchanged from the year before after declining for almost two years, and private and public consumption increased year-on-year, as mentioned earlier. Gross fixed capital formation, however, still showed some contrac-

Table 3 Indicators of demand in the first quarter of 2003

Change on previous year in real terms unless otherwise indicated (%)	
Turnover in groceries	0.9
Credit card and debit card turnover	8.3
Automobile registrations (increase in number)	56.8
Cement sales (increase in tons)	19.7
General imports	6.4
Imports of consumer goods	19.4
Imports of investment goods excluding ships and aircraft	11.0
Housing prices in Greater Reykjavík Area (price change)	9.5
Lending by Housing Financing Fund	43.3
Treasury revenues from VAT (change on previous year based on the four months-period to March 2003)	12.8

tion from the previous year. Turnover figures for the first months of 2003 suggest that the trend emerging at the end of last year has continued. Admittedly, the comparison is complicated by the fact that Easter was in March 2002 but in April this year, which probably explains the year-on-year contraction in groceries turnover in March, and weak first-quarter growth. However, Q1 payment card turnover rose by 8.3% in real terms from the year before. Import data also suggest a strong upswing in private consumption. Imports of consumer durables were up almost one-fifth in Q1/2003 from the same period a year before, and motor vehicles and other durables were particularly buoyant. The upswing is likely to extend to imported services, which were starting to gain momentum towards the end of last year, but Q1 data are not available. Credit growth and housing market developments also point in the same direction, as described in more detail below.

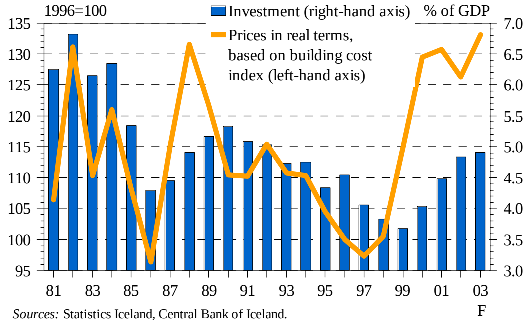
There is no doubt that higher real wages, lower interest rates, lower goods prices and pending construction projects have given households increased confidence, as Gallup's index confirms.

Brisk turnover and rising prices in the housing market signal burgeoning household demand

Strong demand and rising prices in the housing market recently are probably the clearest sign of burgeoning growth in household demand. As pointed out earlier, higher housing costs explain roughly half the twelve-month inflation rate. Inflation that significantly outpaces underlying cost increases is a clear sign of excess demand, either as a result of a surge in demand which the supply side is unable to accommodate in the short term, or because housing supply has been suppressed by external factors. Higher prices in turn give an added incentive for meeting this demand.

Chart 10

Residential housing investment and housing prices in Greater Reykjavík Area 1981-2003



Sources: Statistics Iceland, Central Bank of Iceland.

Volatile real estate prices are the product of the fairly long "gestation period" of housing investments. Property developers respond with a lag to the message about a shortage which higher prices imply. A characteristic feature of the upswing in recent years has been that a significant gap has remained between housing prices and construction cost for an extended period without investment gaining momentum on the scale known from previous upswings. Since the period 1996-1998, housing price rises have outstripped construction cost increases by roughly 30%. Higher prices may to some extent reflect changes in quality, but given the scale of the increase it is unrealistic to assume that this explains more than a small part.[4] The muted response in investment to a significant price-cost gap could suggest supply constraints. Various factors could have been at work. For example, a shortage of land for development and large-scale construction activity in other fields could have held back residential building.

Notwithstanding conceivable supply constraints, the recent rise in real estate prices has almost certainly been mostly driven by demand growth, combined with increased credit supply. Earlier editions of *Monetary Bulletin* have discussed structural reforms in the housing market which have fuelled credit supply.[5] Given recent economic developments, however, it is fair to assume that this is not the only reason for buoyant demand for housing, and perhaps not even the chief one:

- Real wages increased substantially over the past year and coincided with the surge in housing prices.
- Climbing housing prices have also coincided

4. Conceivably, changes in certain components of the construction cost index may be underestimated, especially wage costs. In the long term this will probably not have much effect, however. On the other hand, the index may overestimate prices of concrete by ignoring discounts that have become more common with growing competition.
5. Higher loan ceilings, higher mortgage ceilings in some cases and reforms to the social housing system have boosted credit supply.

with falling interest rates for both short-term liabilities and longer-term indexed loans. The discounting rate on 25-year housing bonds, which was around 10% at the beginning of last year, has been virtually zero recently. A prospective buyer who receives more valuable housing bonds in exchange for mortgage bonds is in a position to offer a higher price, all things being equal, without increasing his payments burden. Thus sellers have apparently been in a position to raise the cash price by the equivalent of the decrease in discounting rate.

- At the same time, disinflation and a more stable inflation outlook have greatly reduced the risk that the debt service burden on indexed loans will grow in excess of disposable income.

There are no signs that the housing market is losing its buoyancy. On the contrary, prices have been rising with growing momentum. Prices in multiresidental housing (smaller apartments) in the Greater Reykjavík Area have been climbing at a particularly fast rate. In March, prices were 14% higher than a year before and 8.3% higher than half a year before. Likewise, lending for housing purchases has been climbing in the beginning of this year. In the last quarter of 2002 considerably fewer loans were disbursed by the Housing Financing Fund than the year before and a downturn in housing inflation was thought likely if the trend continued. This has not proved to be the case. Over the first three months of 2003, housing bond issues grew considerably year-on-year. The Housing Financing Fund has not approved so many loan applications during the first quarter since the housing bond system was introduced in 1990.[6] In real terms, housing prices in the Greater Reykjavík Area have surpassed the peak reached in 2001. Given the fairly favourable economic situation and outlook described here, construction of residential accommodation ought to be profitable at present.

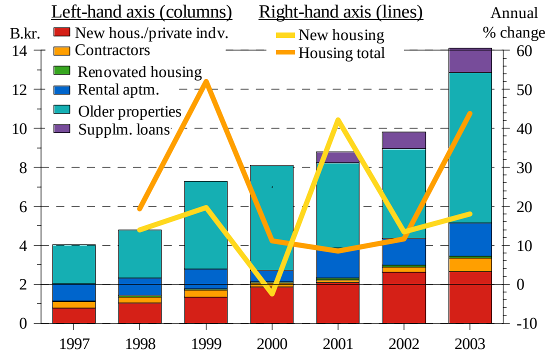
Recent changes in the housing market reinforce the view that supply will increase in the near future. To an increasing extent, contractors are building housing on their own account and marketing it at a later stage of construction than before, even as completed units. Contractors have therefore increasingly been borrowing from the Housing Financing Fund themselves, conceivably due to subdued activity on larger construction projects. This increases the likelihood of excess supply. The mild winter probably also stimulated building work in the first quarter of this year.

Another factor which could spur housing supply in the near future is the increase in the number of rental apartments that have been built in recent years, by larger construction companies, housing societies, semi-official institutions, colleges and municipal authorities. Loans were granted for the construction of more than 600 rental housing units in 2002 and this year's figure is heading for as much as 1,100.

Older housing has also increasingly been changing hands recently. Some transactions may be prompted by recapitalisation of housing purchases through the loan system (selling and buying with the sole purpose of obtaining higher loans), but the abolition of municipal authorities' pre-emptive right under the old social housing system and the availability of supplementary loans are also factors at work. Just under 8,000 homebuyers have exercised their entitlement to supplementary loans which may amount to as much as 90% of the market value of their housing. Availability of supplementary loans presumably reduces the need for rental accommodation and could conceivably push it into oversupply.

Chart 11

Housing Financing Fund lending in Q1 1997-2003



Source: Housing Financing Fund.

6. Total lending by the Housing Financing Fund increased by almost 44% over the first three months of this year from the same time in 2002, of which loans to construction contractors grew by 162%

Signs of increased housing and public sector investment, but business investment indicators are ambiguous

Most indicators point to some growth in housing investment, as discussed above, which is likely to gain momentum during the year. Firm growth in public sector investment can also be expected. The number of public tenders increased substantially in the first quarter and bid prices were higher, even excluding the tender for the Fáskrúðsfjörður road tunnel which weighs heavily in these figures and was some way above official estimates. Business investment statistics, however, are more ambiguous. The fact that business investment figure for the first quarter of 2002 was inflated by an aircraft purchase probably implies a drop in Q1/2003, even though increased imports of investment goods may indicate an underlying recovery in business investment.

Labour market and wage developments

Seasonally adjusted unemployment still on the increase but could be approaching a peak

Some of the most important indicators of domestic demand are provided by labour market statistics. Developments in the labour market last year reflected slackening demand. Employment dropped, the unemployment rate rose, fewer vacant positions were advertised and the number of work permits issued to non-residents plummeted. Wage drift slowed significantly as well. Unemployment continued to rise over the first months of this year, but some growth in vacancies and a drop in new unemployment registrations could be the first signs that demand is beginning to recover.[7] It should be borne in mind that, as a rule, unemployment peaks some while after an economic recovery is under way.

In March, just over 6 thousand persons were registered as unemployed, or 4% of the estimated workforce. Statistics Iceland's labour market surveys give approximately the same results, with unemployment measuring 3.9% in the first quarter of 2003. Seasonally adjusted unemployment remained fairly stable from September to December last year, in the range 2.9% to 3%, but has been mounting since and reached 3.3% in March, the highest figure since December 1997.

Initial claims for unemployment benefit on the decline and vacancies rise

There are emerging signs of a recovery in employment. Employment agencies have reported a sharp drop in initial claims for unemployment benefit in recent weeks. Vacancies have also risen from the year before, which may suggest growing demand for labour. More job training agreements have also been made so far this year. On the other hand, the sharp drop in number of work permits issued in the past year, especially first-time permits, indicates dwindling demand for labour that cannot be met in the domestic market. In the first quarter only 43 new work permits were issued on average per month, compared with almost four times as many over the same period last year. The first workers are being hired for aluminium-related construction projects, but few of the planned job-creation schemes by the state and City of Reykjavík are under way yet. When these are launched in the summer and autumn, unemployment will probably contract sharply.

How fast will job creation programmes reduce unemployment over the medium term?

Although unemployment has shot up in recent years it can hardly be considered high by international standards. Increased allocations towards job-creation schemes and the pending launch of one of the largest construction projects in the history of Iceland prompt the question whether the available domestic labour force can fulfil their probable needs. It cannot be taken for granted that aluminium-related construction and the planned job creation schemes will create jobs for those who are currently unemployed.

If the work generated by the job-creation scheme and aluminium projects has stronger appeal to, for example, the educational backgrounds, working experience and interests of male employees, it will be more likely to attract males than females from the pool of unemployed. If unemployment is more pronounced among males with suitable experience and training, this could help the labour market to adjust to increased demand. A gender-based breakdown of

7. A rise in wages in excess of estimated negotiated increments during Q1 could also point in the same direction, but is more likely to reflect negotiated rises which were not taken into account in the original cost estimates.

unemployment does not offer a clear answer to this question. Somewhat more males than females were registered unemployed in March, unlike the prevailing pattern over the past decade. Nonetheless, a higher proportion of the female labour force was unemployed. In March, seasonally adjusted unemployment measured 3.8% among females and 2.9% among males.

According to Statistics Iceland's labour market survey, unemployment was highest in the youngest age group (16-24 years old), or 8.5%, and lowest in the oldest group. If the youngest age group is also the most mobile, the age composition of unemployment ought to help the labour market adjust to new requirements. The question remains, however, whether this group has the experience and training required.

In March, unemployment was running considerably higher in the Greater Reykjavík Area than regional Iceland, or 3.7% and 2.7% respectively on a seasonally adjusted basis. The difference is accounted for entirely by male unemployment. Unemployment among males was 1.3 percentage points higher in and around the capital than in regional Iceland, and increased the most in the winter. All sections of the labour force have witnessed mounting unemployment in recent years, but to varying extents. Almost one-third of unemployed in March were manual labourers and another third from commercial and other service sector backgrounds.

The large number of people who are unemployed for several months may suggest that they lack the qualifications or incentives to tackle new jobs which are on offer. During periods of structural changes, however, fairly high unemployment may develop simply because many people need to change jobs without necessarily implying that each one is out of work for long. Because unemployment levels in Iceland have been low for many years, long-term unemployment has been rare. It has been on the increase in recent years, however, as typically happens when joblessness grows. In March, one out of every four unemployed had been without work for more than six months, and 15% for a year.

Real wages 3½% higher in the first quarter than a year before

While labour market pressures eased noticeably last year, domestic wage increases have exceeded those among Iceland's main trading partner countries. According to Statistics Iceland's wage index, wages in the non-financial private sector rose by 5.3% from Q1/2002 to the same period this year, and real wages by 3.4%. This is a sharp turnaround from the first quarter of last year, when real wages had contracted by 2.1% in the space of a year despite higher nominal wage growth, at 6.4%. Most of the change occurred in the beginning of the year. Civil service and bank employees' pay went up somewhat more, by 6.1%.

Wage drift, i.e. the component of wage changes that cannot be explained by official wage settlements, declined steadily last year and was under 1% between the last quarters of 2001 and 2002, whether measured in terms of the Statistics Iceland wage index or statistics from the Institute of Labour Research.[8] This trend is consistent with other indicators of growing slack in the labour market.

Public sector finances

The Treasury balance is set to weaken more between 2002 and 2003 than according to budget projections

Provisional figures for the Treasury balance on a cash basis in 2002 revealed a 13 b.kr. deficit. Proceeds from the privatisation of Landsbanki at the end of the year are not included in this figure, but generated a gain for the Treasury of approximately 12 b.kr. above book value. These figures can best be compared with cash basis figures in the fiscal budget. The budget for 2002 projected a 2 b.kr. deficit on a cash basis, excluding proceeds from the sale of assets, a 5% rise in tax revenue between the years in króna terms, an 11% rise in total revenues (due to estimated proceeds from privatisation) and a 5% rise in outlays. In December, the supplementary budget revised the estimated increase in revenue between the years (excluding privatisation proceeds) to 10% on a cash basis and growth in outlays to about 12%. The provisional cash-basis balance shows that out-

8. According to the Institute of Labour Research's survey in Q4/2002, average wages were 4.8% higher than a year before. Wage drift in the period was therefore 0.6%, which is markedly lower than at the same time in 2001, when it was 2%, to say nothing of the 4.5% peak recorded in the first half of 2001, which was considerably higher than measured by the Statistics Iceland wage index. Wages rises were the same in the Great Reykjavík Area and regional Iceland.

lays were in line with the supplementary budget, while revenue excluding privatisation proceeds kept pace with the fiscal budget projections, i.e. the rise in revenue projected in the supplementary budget did not materialise. An important contributing factor was that the supplementary budget's projection for direct tax revenue was not realised, particularly regarding personal and corporate income tax. Table 4 presents an attempt to translate the Treasury balance from a cash basis to a probable accruals basis.

So far in 2003, Treasury revenues have been 23% higher than over the same period in 2002. In particular, the spurt in revenue can be attributed to the sale of Búnadarbanki. Excluding these privatisation proceeds, total revenue increased by 4% and tax revenue by 5%. Outlays grew by 11% over the same period. Accumulated interest payments in connection with a bond class redemption weighed heavily in this figure; excluding interest payments, outlays increased by 8% from the first quarter of 2002 to the same period in 2003.

The budget proposal for 2003 projected a nominal increase in collections excluding privatisation proceeds amounting to just over 3%, and expenditures excluding interest amounting to just over 4%. Insofar as cash-basis figures for the first quarter provide an indication for the year as a whole, the year-on-year change in the Treasury balance is likely to weaken more than projected in the budget. Figures for 2002 suggest that this weakening came on top of a poorer-than-expected result that year.

Treasury debt falling in line with Ministry of Finance forecasts

Privatisation of Treasury assets represents unsustainable revenue, but the proceeds have been deployed to reduce debt and thereby debt service in the long term. Measured at end-2002 GDP prices, Treasury debt has declined from 226 b.kr. at the end of 1996 to approximately 160 b.kr. at the end of last year, from 34% to 20% of GDP. According to Ministry of Finance schedules debt will be down to 154 b.kr. at the end of 2003, measured at fixed prices. Furthermore, sizeable contributions have been made towards Treasury pension fund commitments, which have thus remained unchanged as a proportion of GDP since instalments began in 1999, despite growing by 50 b.kr. in real terms. Over the previous decade pension liabilities rose from 13% of GDP to 22%, and are expected to stay at this level to the end of 2003.

Table 4 Treasury finances on an accruals basis 1999-2003

B.kr.	*1999*	*2000*	*2001*	*Budget 2002*	*Final budget 2002*[1]	*Outcome 2002*[2]	*Budget 2003*[3]
Revenues	222.6	224.7	237.4	257.9	267.3	259	274
Expenditures	199.0	229.0	228.7	239.4	251.3	251	265
Balance	23.6	-4.3	8.6	18.5	16.0	8	9
Revenues excluding proceeds from asset sales	206.6	220.9	236.3	242.4	253.0	247	262
Expenditures including regular pension charges and tax claim write-offs	192.0	203.1	231.1	241.1	253.5	253	267
Balance excluding proceeds from asset sales but including regular pension charges and tax claim write-offs	14.5	17.8	5.2	1.3	-0.5	-6	-5
Percent of GDP							
Revenues	35.8	33.4	32.0	32.8	33.9	33.4	33.9
Expenditures	32.0	34.1	30.9	30.4	31.9	32.4	32.7
Balance	3.8	-0.6	1.2	2.4	2.0	1.1	1.2
Revenues excluding proceeds from asset sales	33.2	32.9	31.9	30.8	32.1	31.9	32.4
Expenditures including regular pension charges and tax claim write-offs	30.8	30.2	31.2	30.7	32.2	32.7	33.0
Balance excluding proceeds from asset sales but including regular pension charges and tax claim write-offs	2.3	2.7	0.7	0.2	-0.1	-0.8	-0.7

1. Including supplementary budget. 2. Central Bank estimate. 3. Including supplementary budget in March 2003.

Slight narrowing of local government deficit last year

Local government finances have been difficult in recent years. A major reason is probably the increased cost of providing mandatory schooling. Large-scale investment has been required in order to implement whole-day schooling, which is apparently nearing completion in most places. Although comparisons are complicated by a fundamental change in municipal accounting methods as of 2002, provisional figures from the Association of Local Authorities show that the large deficit amounting to 8 b.kr. in 2001 in the buildup to the local elections apparently narrowed slightly to 7 b.kr. in 2002. Budgets for 2003 project a balance of 6 b.kr., if capital outlays are expensed as was the practice until 2001. However, figures from Statistics Iceland and an estimate from the Ministry of Finance put the local government deficit at only 5½ b.kr. in 2001, 4 b.kr. in 2002 and an estimated 3 b.kr. in 2003.

Despite a persistent deficit, local government debt has remained in the range 7-8% of GDP over the

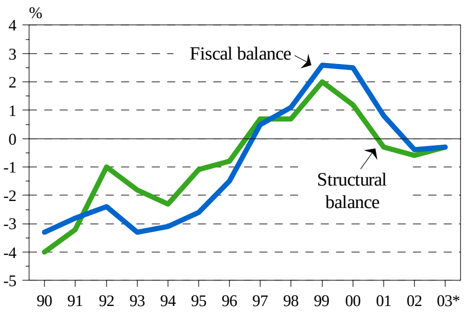
Box 3 The economic cycle and public sector finances over the past decade

The public sector as a whole refers to central and local government, excluding enterprises owned by them (such as power companies and harbours) but including the social security system, which in Iceland is in fact almost entirely run by the State. Statistics Iceland (and previously the National Economic Institute) compiles statistics for public sector finances in accordance with international standards for national accounting. These are the most complete available statistical data series for public sector finances. In certain respects their presentation diverges from the principles employed for the fiscal budget and state accounts (which produce the result shown in the first two lines of Table 4 on p. 19) and corresponding local government accounts. The most important differences are that gains on sale of assets are not included among revenues, corrections of pension fund liabilities due to retroactive revisions of assumptions are not included among outlays, tax collection write-offs are deducted from revenues and not classified as outlays, and various state service charges are deducted from outlays instead of being entered on both the revenue and outlay sides. Lower figures are thus yielded for central and local government revenues and outlays than those presented in budgets and accounts. Nonetheless, the Treasury result according to these accounts remains similar to the bottom line of Table 4.

The accompanying chart shows the public sector result with and without cyclical adjustment. It shows the result and output gap as a proportion of GDP over the past twelve years along with estimates for 2003 and 2004, based on data from Statistics Iceland for 2002 and the Ministry of Finance's estimates of year-on-year changes in 2003. After a persistent deficit over the period 1985-1996, which reached as much as 4½% of GDP in the contraction years 1993-1994, the public sector achieved balance in 1997 and over the following years a surplus was formed which roughly corresponded to the extra revenue that the Treasury earned from excessive national spending as represented by the current account deficit. At the same time, central and local government revenues from direct taxation (income and net wealth taxes, and national insurance contributions) grew from 16% to 20% of GDP, while outlays remained close to 40% of GDP. Thus it seems reasonable to claim that the public sector deficit was eradicated with more revenues from direct taxation, and that the ample surplus in 1999-2000 was connected with strong overheating, a current account deficit and private sector debt accumulation.

Public finances 1990-2003

% of GDP



* Forecast. *Sources:* Statistics Iceland, Ministry of Finance and Central Bank of Iceland.

past ten years. The explanation is rapid GDP growth as well as sales of assets or the introduction of separate accounting for municipal enterprises, which have been recapitalised alongside transfers to local government budgets.

Public sector deficit 5½ b.kr. last year

The most complete available statistical data series for public sector finances are compiled by Statistics Iceland (see Box 3), but their presentation diverges somewhat from the principles employed for the fiscal budget and state accounts. According to Statistics Iceland, the Treasury deficit was 3 b.kr. in 2002. There was a 1½ b.kr. surplus on the social security system but a 4 b.kr. deficit by local authorities. Total public sector deficit was therefore 5½ b.kr. According to estimates by the Ministry of Finance, the Treasury will be in surplus this year and in 2004, which will slightly more than outweigh the local authorities' deficit.

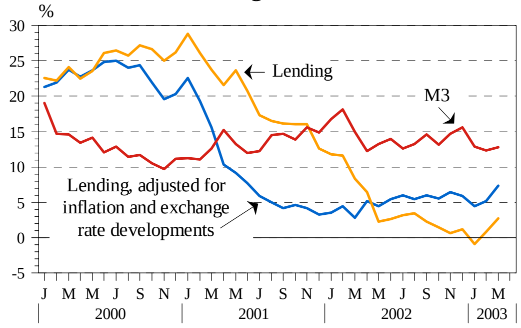
Minor cyclical fiscal deficit in 2002 and this year

Iceland's tax system, especially as regards Treasury collections, is structured in such a way that a larger share of private incomes is taxed in boom times than during cyclical troughs. For this reason, the headline Treasury and public sector balance gives a misleading picture of the underlying fiscal balance. A deficit may be normal when the economy is at a low and a balance may imply insufficient restraint during an upswing. A better view of the fiscal balance under average economic conditions is obtained by eliminating the cyclical impact. The outcome is known as the structural fiscal balance. The chart in Box 3 on p. 20 shows the Central Bank's evaluation of the structural Treasury balance for 1990-2003 based on current estimates. The cyclical impact and output gap are expected to be at a minimum this year and the structural balance broadly the same as the real balance, showing a minor Treasury deficit and somewhat larger deficit for the public sector as a whole on account of the poorer result of local authorities. The output gap is expected to widen next year. The Treasury balance is projected to improve, but not more than warranted by the business cycle.[9]

Financial markets

The financial markets underwent a sharp turnaround last year. Credit growth slowed down sharply, interest rates dropped and the króna strengthened. Since the last *Monetary Bulletin* in February the króna has continued to strengthen, short-term interest rates have fallen further despite an unchanged Central Bank policy rate since February 10, and interest rate differentials with abroad have narrowed to the lowest figure for seven years. However, in recent months yields on non-indexed long bonds have not kept pace with short-term yields.

Chart 12
M3 and deposit institutions' domestic lending 2000-2003



Source: Central Bank of Iceland.

Twelve-month growth of domestic lending and securities portfolios slowed down from 19% to 3½%. The sharpest drop in growth was in corporate lending, which increased by one-fifth in 2001 but by only 1% last year. A factor at work there is the 17% strengthening of the króna over the year, since half of corporate debt is indexed against foreign currencies. Lending to individuals grew by somewhat more, at 7%, reflecting brisk growth in lending by the Housing Financing Fund and pension funds, which increased by about 12%.

Credit growth has been speeding up again in recent months. It appears to have bottomed out

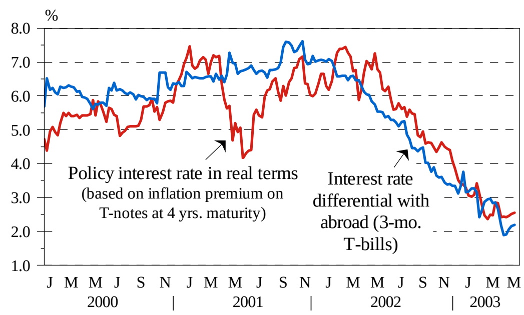
9. It should be pointed out that these estimates assume unchanged foreign interest rates, which were exceptionally low last year. Adjusting the fiscal balance for this factor would produce a somewhat poorer result in 2002 and this year. If interest rates return to their former level, which is unlikely this year but fairly probable over the next 2-3 years, the balance could deteriorate by the equivalent of just under 0.4% of GDP.

among deposit institutions in January and picked up in February and March. Excluding the impact of exchange rate changes and price indexation on the loan stock, growth is at its highest rate since spring 2001. Since the beginning of this year the króna has strengthened by almost 4%.

There have been no major changes in short-term interest rates since February. The Central Bank's policy rate was last cut on February 10 by half a percentage point, to 5.3%. Measured in terms of the inflation premium on non-indexed Treasury notes, the real policy rate has been edging down over the past three months, from around 3½% in the beginning of February to 2½% in recent weeks. This is the lowest real policy interest rate since March 1996. The reduction in real terms after the last policy rate cut reflects increased inflation expectations since December following the announcement of planned aluminium-related investments. Another form this has taken is a wider spread in yields between longer and shorter non-indexed bonds so far this year. Average spread between bonds with a lifetime of four and ten years was 1 percentage point in April compared with 0.6 percentage points at the end of 2002, which is largely explained by higher yields on the longer bonds. In the beginning of May the yield on Treasury bonds with a maturity of 10½ years had gone down by half a percentage point since the beginning of the year. The yield on four-year Treasury notes has fluctuated but has been on a slight upward path in recent months.

Chart 13

The Central Bank policy interest rate and interest differential with abroad 2000-2003



Source: Central Bank of Iceland.

The short-term interest rate differential with abroad has narrowed over the past few months in tandem with lower T-bill interest rates. It averaged almost 2% in April and for three-month Treasury bills dipped to 1.8% on April 16, the lowest figure since mid 1996.

No decisive rise has been noted in yields on indexed bonds carrying state guarantees so far this year, after they slid in 2002. Housing bond supply has been strong so far, and so has demand. Yields have therefore changed little. By and large the yield on 25-year housing bonds has been below 5 percentage points so far this year and the discounting rate on housing bonds has therefore been virtually zero.

II Macroeconomic forecast and inflation forecast

The Central Bank's macroeconomic and inflation forecast presented in this section assumes that proposed expansion of the Nordurál aluminium smelter will go ahead, in addition to the construction work connected with the Fjarðarál aluminium smelter in East Iceland. Other assumptions have been updated in light of the most recent data. As usual, an unchanged monetary policy stance and exchange rate are assumed throughout the forecast period.

According to the forecast, GDP growth will grow by less than output capacity this year. Somewhat higher GDP growth is forecast in 2004, however, although the economy will remain in good balance. The output gap will be zero and the labour market in equilibrium. Inflation will decrease somewhat for much of the forecast period, partly as a result of the recent strengthening of the króna. At the end of the forecast period, however, inflation will be close to the Bank's target. Forecasting risk is assumed to be biased downwards on a one-year projection, but two years ahead inflation is more likely to exceed the forecast than fall short of it.

Demand and output

Little change in assessment of developments last year

Statistics Iceland's national account estimates for 2002 are broadly in line with the Central Bank's last macroeconomic forecast. Gross fixed capital formation shrank by less than was projected in February, mainly because of a smaller contraction in business investment. On the other hand, public sector investment decreased by more and investment in residential accommodation increased by more than was previously estimated. Total national expenditure is now estimated to have contracted by 2½% instead of 3¼%. External trade did not support GDP growth as much as had been foreseen, however. Export growth proved slower than had been forecast in February and the drop in imports was smaller. Thus estimated GDP growth last year was broadly in line with the February forecast.

Stronger króna and lower export prices than assumed in February

The exchange rate of the króna has continued to strengthen so far this year. External conditions have also changed since the Central Bank's last macroeconomic forecast was published in February. The following forecast assumes that the exchange rate of the króna will be approximately 3% higher for the duration of the forecast period than in the February forecast. The current forecast is based on the exchange rate index value on April 25, when it stood at 120. In part the higher exchange rate may be attributed to expectations about the impact of the proposed expansion of the Norðurál smelter, which is incorporated into the Bank's current macroeconomic forecast. Investments associated with this project stimulate general demand, but much of this impulse will probably be felt later than the forecasting period.

The assumptions for external conditions of the economy over the next two years have changed whereby prices of marine products are expected to decline by more than assumed in the last forecast. Somewhat lower growth in marine export production is also foreseen this year. This will be offset by a corresponding increase in 2004, leaving the two-year projection virtually unchanged. Aluminium prices are expected to fall considerably less this year than was assumed in the previous forecast, which was based on international forecasts. The current forecast is based on futures, which indicate a slight drop in aluminium prices next year, instead of the rise foreseen in the previous forecast. The outlook for fuel prices is also assessed on the basis of futures. Fuel prices this year were projected to rise by roughly 13% in the February forecast, but by only 2½% now. Next year, prices are expected to drop by 14%, instead of remaining unchanged as in the previous forecast. A smaller rise is also expected in other import prices in the near term, in light of the sluggish global economic recovery. Finally, interest rates on foreign debt of domestic entities are expected to be to be rather lower until the end of the forecasting period than assumed in the last forecast.

The forecast incorporates public sector construction projects which were decided recently. However, it does not take into account various proposals for tax cuts which were put forward by most political parties during their election campaigns, since the details of their implementation are uncertain.

GDP growth will be below potential this year but increase somewhat in 2004

According to the forecast, GDP will grow by 2½% this year. This figure implies output growth below potential, since the output gap will shrink and unemployment will increase compared with the previous year. Next year GDP growth is forecast to expand marginally in excess of potential to reach 3¼%. This is a rather higher rate of growth than forecast in February and is mainly driven by more growth in national expenditure, especially next year. A slightly wider current account deficit is projected this year and in 2004 than forecast in February.

After two years of contraction, private consumption is expected to grow marginally this year and gather pace in 2004. Investment will grow substantially over both years, largely as a result of hydropower construction activities. However, business investment excluding power-intensive industries, vessels and aircraft is estimated to increase by 2% this year. Offsetting this, public sector investment will increase substantially this year as a result of plans to expedite public sector construction projects, and will be considerably more than was assumed in February. Investment in residential accommodation is expected to increase over both years, while the Bank's last forecast foresaw some contraction. As discussed above, housing prices have risen sharply and more credit is available to finance residential construction, coupled with other factors which have spurred housing supply and demand. Nevertheless, the growth rate of investment in residential accommodation is expected to be somewhat lower this year than in 2002.

Table 5 The Central Bank macroeconomic forecast

	Billion krónur at current prices			*Volume change on previous year (%)*[1]			*Change since previous forecast (%)*[1]		
	2002	*2003*	*2004*	*2002*	*2003*	*2004*	*2002*	*2003*	*2004*
Private consumption	419.5	433.6	452.2	-1¼	1	3	¼	¾	1½
Public consumption	194.7	202.4	218	3	2	2½	0	-¼	0
Gross fixed capital formation	146.5	169.1	188.9	-12¾	11½	10¾	1¾	1	1¾
Industries	79.4	94.2	114.4	-19½	14½	19¾	1½	-3¾	5¼
Excl. power-intensive projects, ships and aircraft	64.5	65.4	72.2	-9	-2	9½	.	.	.
Residential housing	37.4	39.9	41.6	5¼	3	3½	3¼	4½	5¼
Public investment	29.7	35	32.8	-8¼	14	-7	-1¾	12½	-8½
National expenditure	760.6	805	859.1	-2½	3½	4½	¾	¾	1¼
Exports of goods and services	307.3	288.3	302.2	3	1¼	3¾	-1¼	-1¾	1
Imports of goods and services	293.5	284.4	305	-2½	4	7	1½	-2	3
Gross domestic product	774.4	809	856.3	-½	2½	3¼	-¼	¾	¼
Current account balance, % of GDP	.	.	.	¼	-1	-2¼	-¼	½	¼
Unemployment, % of labour force	.	.	.	2½	3	2½	0	-½	-½
Output gap, % of GDP	.	.	.	½	0	½	-¼	0	0

1. Volume changes are calculated at constant 1990-prices.

Exports are forecast to grow by just over 1% this year, which is less than half the rate forecast in February. However, next year's export growth forecast is slightly higher than was projected then. Robust import growth is still foreseen; somewhat lower growth this year compared to the February forecast is offset by higher growth next year.

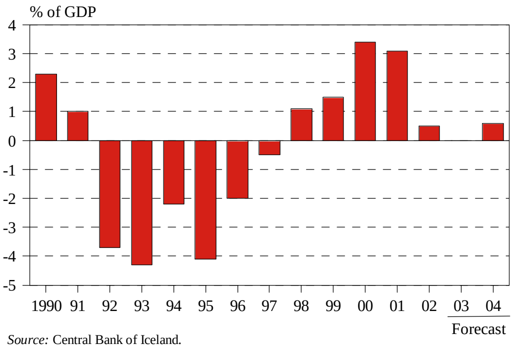
As mentioned earlier, construction work on the Norðurál smelter expansion is now included in the current forecast. Some uncertainty still surrounds this project, although parliament has passed legislation authorising it. Norðurál still has to complete agreements on anodes for the plant extension, the power agreement needs to be finalised and no final decisions have been made on the design of the Norðlingaalda hydropower facility to supply it. If the project fails to materialise, GDP growth could be 2% this year instead of 2½% and 2½% in 2004 instead of 3¼%. Unemployment would then run higher in both years and the output gap would be smaller.

Tightening of the goods and labour markets similar to the February forecast

Unemployment is expected to be slightly lower this year and next year than was forecast in February. As mentioned elsewhere, there are signs of an imminent turnaround in the labour market. The slack which has continued to build up this year will probably begin to

Chart 14

The output gap 1990-2004



Source: Central Bank of Iceland.

wane and disappear in the course of 2004. Stepped-up public sector construction projects will play some part, and work in connection with the Norðurál expansion is expected to be able to begin shortly.

However, the estimated output gap has changed little. Last year's output gap is estimated slightly lower than before, reflecting a lower GDP growth rate, but this year and next it is expected to be similar to the previous forecast. The outlook for the domestic labour and goods markets suggests that domestic demand will be consistent with full utilisation of the factors of production in 2003 and 2004. Thus modest inflationary pressure can be expected to stem from domestic demand.

The inflation outlook

Cost-push inflationary pressure on the wane

As pointed out above, the following inflation forecast is based on the assumptions that the Norðurál smelter expansion will go ahead, in addition to construction activity for an aluminium smelter in East Iceland. The monetary stance is assumed to remain unchanged throughout the forecast period, i.e. the Central Bank's policy interest rate and the nominal exchange rate of the króna will remain unchanged from the day of the forecast. The reference value is the exchange rate index on April 25, when it stood at 120, which implies that the króna will strengthen by almost 4% over this year, or just over 3 percentage points more than was assumed in the last forecast.

Other assumptions concerning demand and the output gap have been outlined above. In addition, the inflation forecast is based on assumptions concerning several key cost-push factors such as wage costs and import prices.

Table 6 Main assumptions of the inflation forecast

	Previous forecast			*Current forecast*		
	2002	*2003*	*2004*	*2002*	*2003*	*2004*
Labour cost[1]	5	4¼	4	5	4½	5
Domestic productivity[2]	½	1	1½	1	1½	1½
Exchange rate of króna (import-based weights)[1]	-12	-¾	0	-12	-4	0
Import prices in foreign currency terms[2]	-1	1	1½	-½	-½	½

1. Percentage change within year. 2. Percentage change between annual averages.

These cost factors are expected to generate less inflationary pressure than was assumed in February. The chief factor at work here is imported inflation. Latest data, forecasts by international institutions and forward oil prices suggest that imported inflation will be just under 1½ percentage points lower this year and 1 percentage point lower next year than was expected in February. Based on the revised macroeconomic forecast, fractionally more favourable productivity developments are now assumed this year. Wage costs per unit production will therefore increase less than was previously envisaged. Next year the forecast still assumes that the rise in wage costs per unit production will be in good harmony with the Central Bank's inflation target, in terms of annual averages. As the year progresses they will show some increase, however, and exceed a level compatible with the inflation target.

Inflation will be less than previously forecast until mid-2004, and around the target two years ahead

Given the above developments, the rate of inflation until around the middle of next year is lower than was foreseen in February. Inflation on a one-year projection is forecast at 1.8% instead of 2.2% in the last forecast. Nonetheless, inflation is gradually expected to accelerate as the forecasting period wears on. Two years hence, inflation is expected to be around the target, or 2.6%, compared with 2% in the Bank's previous forecast (or 2.2% relative to the same quarter, i.e. Q1/2005).

Despite the outlook that inflation will temporarily dip below the target, the forecast nonetheless remains well above the lower tolerance limit for the entire forecasting period and close to target in the second half of the period. At the end of the two-year forecasting period, when demand pressure mounts due to stepped-up aluminium project construction, inflation will clearly accelerate somewhat, assuming that the monetary stance remains unchanged.

Considerable uncertainty about exchange rate trend ...

As usual, the exchange rate trend of the króna is the greatest uncertainty in the inflation forecast. The króna has strengthened significantly recently, and by more than assumed in the last forecast. Whether it will continue to strengthen over the next few months

Table 7 Central Bank inflation forecast

Quarterly changes (%)

	Percentage change on previous quarter	*Annualised quarterly change*	*Change on same quarter of previous year*
2001/Q1	0.8	3.4	4.0
2001/Q2	3.5	14.5	6.0
2001/Q3	2.3	9.7	8.0
2001/Q4	1.6	6.6	8.5
2002/Q1	1.0	4.2	8.7
2002/Q2	0.4	1.6	5.5
2002/Q3	0.2	0.7	3.3
2002/Q4	0.6	2.3	2.2
2003/Q1	0.7	2.9	1.9
2003/Q2	0.9	3.5	2.3
2003/Q3	0.3	1.1	2.4
2003/Q4	0.2	0.6	2.0
2004/Q1	0.5	2.1	1.8
2004/Q2	0.8	3.1	1.8
2004/Q3	0.7	2.6	2.1
2004/Q4	0.5	2.1	2.5
2005/Q1	0.6	2.6	2.6
2005/Q2	0.9	3.6	2.7

Figures indicate changes between quarterly averages of the consumer price index. Shaded area indicates forecast.

Annual changes (%)

Year	*Year-on-year*	*Within year*
2000	5.0	3.5
2001	6.7	9.4
2002	4.8	1.4
2003	2.2	1.9
2004	2.1	2.6

Shaded area indicates forecast.

cannot be stated with absolute certainty. However, a further strengthening is conceivable as the industrial and hydropower construction projects draw closer and the impact of greater currency inflows becomes more marked.

... and about the proposed Norðurál smelter expansion

Plans to expand the Norðurál aluminium smelter remain uncertain. If the expansion does not materialise during the forecast period, two impacts will pull inflationary pressures in opposite directions. On the one hand, there will probably be a short-term drop in the exchange rate which will push up inflation over the ensuing period. On the other hand, there will be a smaller output gap and less unemployment, especially next year. This will serve to dampen inflationary pressure as the forecasting period progresses.

Imported inflation could prove even lower than assumed

Some uncertainty still surrounds global economic developments. Recovery is sluggish and it cannot be ruled out that it will prove even slower than assumed in the forecasts on which the inflation forecast is based. This could lead to lower inflation among Iceland's trading partner countries, bringing imported inflation down below the rate assumed in the forecast. The risk assessment in recent forecasts by international agencies, for example, has shown some negative bias, i.e. economic growth is thought more likely to fall short of the rate in the baseline forecasts rather than exceed it. In fact most of the forecasts were made before the end of the war in Iraq, but statistics published since then have not been encouraging.

However, domestic demand could prove greater on a longer-term scenario

Wage settlements covering the majority of wage earners are up for renegotiation next year. Since demand will increase over the forecasting period, there is some risk that wage rises will exceed the forecast assumptions. Unit labour costs would then rise above the inflation target. On the other hand, it should be borne in mind that from a historical perspective wages are already high as a proportion of national income. This suggests that further rises could throw the economy out of balance. On the other hand, employers are likely to resist further increases in the wage share.

Other major uncertainties involve the fiscal outlook and public sector resistance towards civil service wage increases. As discussed later, it is clear that implementing sizeable tax cuts without a corresponding cutback in public spending would pose a risk that inflation will overshoot the forecast, especially on a longer-term view.

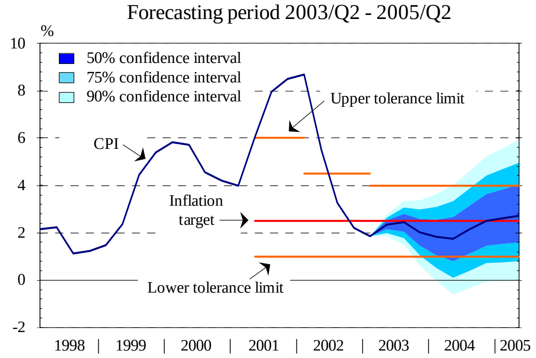
The risk spectrum is considered negative in the short term but with a positive bias over the longer term

On balance, there is a higher probability that inflation next year will fall short of the forecast than exceed it. The probability of weaker domestic and foreign demand, along with conceivable delays to the Norðurál smelter expansion, is thought to outweigh the impact of exchange rate developments or a lax fiscal stance in the near term. However, inflation later in the forecast period seems more likely to exceed the forecast than fall short of it. Domestic demand may conceivably prove stronger than assumed here, depending upon the fiscal stance among other things. Uncertainty connected with the conceivable postponement of the Norðurál project, however, slightly reduces the asymmetry of the risk spectrum in the longer run.

As pointed out before, estimates of forecasting errors based on historical data are likely to exaggerate to some extent the uncertainties that lie ahead, since they tend to be unduly influenced by the recent period of high and variable inflation. Thus uncertainties over the next two years are considered to be somewhat less than historical forecasting errors would suggest.

Chart 15 Central Bank inflation forecast

Forecasting period 2003/Q2 - 2005/Q2



Source: Central Bank of Iceland.

Chart 15 presents the Bank's main forecast for the next two years together with an assessment of its confidence range. Thus the entire coloured 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 the longer the horizon of the forecast, as reflected in the widening of the confidence intervals.[10]

Table 8 Probability ranges for inflation over the next two years

	Inflation				
Quarter	*under 1%*	*in the range 1%-2½%*	*under 2½%*	*in the range 2½%-4%*	*above 4%*
2003:2	< 1	73	73	27	< 1
2004:1	24	50	74	24	2
2005:1	15	30	45	32	23

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

According to the above, the probability that inflation one year ahead will be below the target has continued to increase. Two years ahead, on the other hand, the probability has diminished. The probability of inflation remaining within the tolerance band of the target has changed little since the last forecast, and the same applies to the likelihood of disinflation.

III Monetary policy

The Central Bank last lowered its policy interest rate in February this year, by 0.5 percentage points, and the monetary stance eased even further in the subsequent period. At the beginning of May the policy rate was 2½% in real terms, its lowest level since early 1996. A lowering of the required reserve ratio spurred liquidity supply and contributed to lower yields in the money market. Furthermore, the interest rate differential with abroad has narrowed and has not been less since September 1996. In spite of this, the króna has been strengthening and was 2% higher in early May than in the beginning of February. Measures taken by the Central Bank in recent months, cuts in interest rates and lowering of the required reserve ratio coupled with currency purchases in the interbank market, serve to lean against the exchange rate, at least temporarily. The recent

10. The range for which the Bank has not previously forecast is based on a simple projection. Just as forecasts for individual values are subject to uncertainty, so is the method of estimating the uncertainty of forecasts. The estimated forecast uncertainty should therefore be interpreted with caution. The aim is to highlight the inherent uncertainty of forecasting rather than to provide a precise assessment of the probability distribution of forecast inflation.

Box 4 Financial market analysts' assessments of the economic outlook

A year ago the Central Bank approached a number of financial market analysts to survey their forecasts for various economic aggregates which have subsequently been published in *Monetary Bulletin*.

The accompanying table shows the forecasts made in April. The average inflation forecast for 2003 (January-January) is higher than in the January survey but in line with the inflation target. Soaring real estate prices in recent months and a surge in inflation in March have been cited as reasons for upping the forecast. The Central Bank's inflation forecast for the same period is somewhat lower, or 1.9%, which is down from its January projection. Analysts and the Central Bank are virtually unanimous about the year-on-year increase between 2002 and 2003. Financial market analysts are forecasting a higher rate of inflation in 2004 than the Central Bank, in particular in terms of the year-on-year figure.

As usual, analysts were also asked about the outlook for other key economic aggregates. In January there was a fairly wide divergence in the growth forecasts by financial companies and the Central Bank. That discrepancy has all but disappeared and GDP growth forecasts are quite similar. The Central Bank forecasts 2½% GDP growth this year and 3¼% in 2004.

All the respondents expect little change in the exchange rate of the króna for the next twelve months and over a two-year horizon most of them foresee little change in the value of the króna. As in January market analysts consider that the lowering of Central Bank interest rates has come to an end, which naturally reflects the pending aluminium industry investments. They expect the policy rate to be up to 6% after one year and close to 7% after two years, which is virtually identical to their previous forecasts.

The analysts expect rather more modest rises in equity prices than in the last survey. Expectations vary widely, however, as indicated by the wide range between the highest and lowest values. Views on the outlook for real estate prices also differ, but none of the analysts expects a fall over the next two years.

Overview of forecasts by financial market analysts[1]

	2003			*2004*		
	Average	*Highest*	*Lowest*	*Average*	*Highest*	*Lowest*
Inflation (within year)	2.5	3.4	2.0	2.9	3.5	2.0
Inflation (year-on-year)	2.3	2.9	2.0	2.8	3.5	2.0
GDP growth	2.2	2.5	1.9	3.4	3.8	3.0
	One year forward			*Two years forward*		
The effective exchange rate index of foreign currencies vis-à-vis króna (Dec. 31, 1991=100)	120.0	122.0	118.0	122.0	125.0	115.0
Central Bank policy interest rate	6.0	6.3	5.8	6.8	7.6	6.5
Nominal long-term interest rate[2]	7.4	8.0	7.0	7.8	8.2	7.3
Real long-term interest rate[3]	4.7	5.1	4.3	4.8	5.4	3.8
ICEX-15 share price index (12-month change)	4.9	10.0	-1.1	9.8	18.0	4.2
Housing prices (12-month change)	4.7	7.0	1.0	6.1	12.5	2.0

1. The table shows percentage changes, except for interest rates (percentages) and the exchange rate index for foreign currencies (index points). Participants in the survey were the research departments of Búnaðarbanki, Economic Consulting and Forecasting, Íslandsbanki, Kaupþing, Landsbanki and SPRON (Reykjavík and Environs Savings Bank). 2. Based on yield in market makers' bids on non-indexed T-notes (RIKB 07 0209). 3. Based on yield in market makers' bids on indexed housing bonds (IBH 41 0315). *Source*: Central Bank of Iceland.

appreciation of the króna has not been driven by the monetary stance; apparently its roots lie more in expectations aroused by the pending aluminium industry-related construction projects. These activities will be accompanied by sizeable currency inflows and interest rate rises will inevitably exceed those among Iceland's main trading partner countries. Both these factors will exert upward pressure on the króna and in a forward-looking market the impact will be transmitted immediately.

The stronger exchange rate is attributable to expectations in connection with aluminium industry investment

The appreciation of the króna represents part of the economy's adjustment to the pending construction projects for the aluminium industry. The appreciation which has already taken place will help the economy to absorb these large-scale projects by offsetting their inflationary impact and restraining economic growth in the period leading up to them. However, the problem is that a stronger exchange rate hits exporters and competing industries and can cause difficulties for them if the appreciation is substantial and lasting. During the first quarter the real exchange rate of the króna had risen well above its historical average and was over 6% higher than the average for the past ten years. The effect can be seen in lower gross profits among exporters, especially in the fisheries sector. However, it should be borne in mind that their gross profits were at a historical peak over the past two years and were unlikely to be sustained. Businesses could therefore expect some deterioration in their position. Another consideration is that the real exchange rate is still some way below the peaks reached in previous cycles and not far from the rate in 2000 (see Appendix). Thus assuming an unchanged monetary stance, the real exchange rate is likely to appreciate even further when the peak of aluminium project construction activity draws closer, regardless of whether the driving force is a higher nominal exchange rate or higher wage rises and inflation than among trading partner countries.

A tight fiscal stance is the best way to counter the rising real exchange rate

A further appreciation of the real exchange rate would naturally create some anxieties about the position of exporters and competing industries. It is therefore only normal to consider ways to moderate such increases. As pointed out elsewhere, recent measures by the Central Bank have tended to contribute to a lower exchange rate rather than to strengthen it. Nonetheless, it has sometimes been claimed that the Central Bank ought to engineer an even further depreciation, for example with a sharp cut in interest rates and strong intervention in the foreign exchange market. Ideas have also been raised for the Treasury to attempt to influence the exchange rate by borrowing domestically in order to amortise foreign debt. The problem with further reductions in interest rates is that they are incompatible with the Central Bank's inflation target. The inflation forecast presented here, which assumes unchanged interest rates, is very close to the target two years ahead, when in fact it will be on an upward path. In light of the economic outlook, an interest rate cut would hardly be a credible move. Expected future short-term interest rates would not go down, so long-term rates would probably not go down either. The impact on the interest rate differential at the longer end of the market, and hence on the exchange rate of the króna, would therefore be virtually negligible. The Central Bank intends to continue purchasing currency in the market over the next few months. Even though they naturally contribute towards some short-term weakening, currency purchases cannot be expected to have a permanent effect on the exchange rate. Experience both in Iceland and internationally shows that interventions in the foreign exchange market which are sterilised to prevent them from affecting interest rates generally only have a short-lived impact on the exchange rate.[11] The same applies to conversion of Treasury debt from foreign to domestic borrowing. This could raise domestic long-term interest rates for a while and if Central Bank interest rates remain unchanged the impact on the exchange rate would probably be slight and short-lived. It is quite a different matter that it will be a prudent move to allocate the surplus that the Treasury needs to produce at the peak of the industrial development projects

11. See Gerdur Ísberg and Thórarinn G. Pétursson: "Central Bank interventions in Iceland's foreign exchange market and their effect on the exchange rate of the króna", *Monetary Bulletin* 2003/1.

towards amortising its foreign rather than its domestic debt.

Other measures are therefore needed in order to contain an undesirable rise in the real exchange rate. One of the most effective would be to tighten the cyclically adjusted fiscal stance, in particular by cutting back public sector construction activities when activity connected with the aluminium projects reaches a peak. Such measures would dampen domestic demand and lead to a lower real exchange rate than otherwise. Likewise, labour supply could be boosted during the construction phase by employing more foreign labour. This would alleviate pressure in the labour market and moderate the resulting rise in the real exchange rate.

It is important to realise what a tighter fiscal stance implies. A crucial factor is that the development of Treasury revenues and outlays should contain the growth of demand within the economy instead of stimulating it. In this context it is not enough to consider the Treasury result alone. The Treasury's result may improve during an upswing because greater activity generates more revenue for it, without any specific action having been taken on the revenue or outlay side. Rebates and increments within the tax system imply that tax receipts generally rise by more than the tax base during an upswing, and the tax burden increases. This acts as an automatic stabiliser, because a greater tax burden moderates demand. If the additional Treasury revenues generated by greater activity are ploughed back into the economy through lower taxes or higher outlays, this automatic stabiliser is rendered ineffective and demand is stimulated instead of being contained. To yield a correct evaluation of the fiscal impulse on demand, it needs to be cyclically adjusted (see Box 3). The change thus shown in the cyclically adjusted balance is the best criterion for the tightness of the fiscal stance (and in fact for general government, i.e. central and local government). To tighten the fiscal impulse therefore requires an improvement in the cyclically adjusted result.

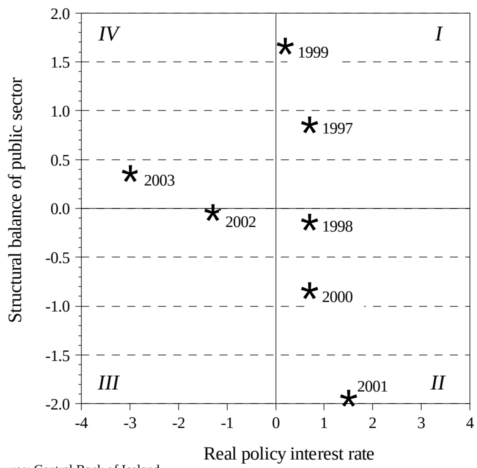
Monetary and fiscal policy mix will be crucial in the medium term

As mentioned above, the outlook is for a cyclically adjusted public sector deficit this year. Given that an upswing has apparently begun and GDP growth looks set to exceed potential by next year, it seems

Chart 16

Monetary policy and fiscal policy 1997-2003

Change between annual averages (%)



Source: Central Bank of Iceland.

certain that the public sector fiscal stance cannot be eased without further constricting the position of exporters and competing industries. The reason is that monetary policy would then shoulder a larger share of the burden of containing demand, resulting in a stronger real exchange rate, at least temporarily. The fiscal and monetary policy mix is always important but will be particularly so in the medium term. Chart 16 shows the policy mix in recent years, by mapping changes in the Central Bank's short-term interest rates against the cyclically adjusted public sector balance. The chart is divided into four areas. In Area I, the fiscal stance and monetary stance are both tightened. These impulses operate in the same direction. Area II shows tighter money with an easing of the fiscal stance and the impulses are conflicting. In Area III the impulses are synchronised again, but this time they serve to ease the stance. In Area IV the monetary stance is easing but the fiscal stance is tightening. In order for monetary and fiscal policy to work in unison, they need to fall within either Area I or III. This has not always been the case, however, as the chart shows. Thus the monetary stance was tightened in 2000 and 2001 while the fiscal stance was eased.[12] In 1997 they were very closely synchro-

12. The findings of Björn R. Gudmundsson and Gylfi Zoega suggest that

nised, however. The current year falls into Area IV, since present estimates project a slight tightening of the fiscal stance. Nonetheless, it is quite conceivable that these estimates are overoptimistic, cf. the sizeable increase in the underlying Treasury deficit during the first three months of this year.

As the peak of industrial construction activity looms, it is crucial for the policy mix to shift to Area I. Its precise location within Area I will depend on how much the fiscal stance is tightened again in the budget for 2004. The tighter the stance, the less hike will be needed in the Central Bank's policy rate, and it could conceivably be implemented later.

Since expectations have played a key role in the recent strengthening of the exchange rate, a major contribution would be made towards keeping further rises in check by presenting a credible estimate for the fiscal result over the next few years, clearly illustrating how it will counter the effect of aluminium project construction work. This would also facilitate coordination between fiscal and monetary policy and reduce the likelihood of a misdirected monetary stance due to lack of information about fiscal plans. Design of such a plan must surely be one of the most pressing tasks for the months to come. The Central Bank is ready to cooperate with the government in such work.

No grounds for a change in interest rates for the time being

The inflation forecast presented above gives no grounds for a change in interest rates for the time being. Inflation will be below target two years ahead. It could remain some way below 2% until the first half of next year, partly because of current low global inflation and the recent strengthening of the króna. However, monetary policy must take increasing account of construction work for the aluminium industry as its peak approaches. As always, monetary policy will respond to unfolding economic developments, and unexpected changes which could affect its implementation can never be excluded. Based on the new forecast and longer-term outlook, however, interest rates are most likely to remain unchanged for the time being and then begin to rise. The scale and timing will be determined both by future developments and the fiscal policy drawn up by the new government.

fiscal policy in Iceland has generally not been systematically applied as a stabiliser in Iceland over the period 1960-1998. Specific actions appear to have amplified swings while automatic stabilisers as a rule ensured that fiscal policy was broadly speaking neutral. See *Fjármálatíðindi*, vol. 45, 1998.

Appendix The exchange rate and international price comparisons

The impact of the exchange rate of the króna permeates the whole Icelandic economy. It directly affects the prices of imported and exported goods and services, the combined value of which amounts to 80% of GDP. Besides its direct impact on prices of imported goods, the exchange rate also has a secondary effect on prices of domestic goods which use imported inputs in their production. The exchange rate and nominal prices determine how high or low prices in Iceland are, relative to those elsewhere. The ratio of prices in Iceland to other countries is termed the real exchange rate (relative to unit prices). Real exchange rate is also measured in terms of unit wage costs. Although both these measurements are known as real exchange rates and are used to gauge whether the króna is over- or undervalued in terms of its exchange rate (real exchange rate), they differ in many ways.

Equilibrium real exchange rate – equilibrium exchange rate

Discussions of whether a currency is overvalued or undervalued are based on some kind of notional equilibrium exchange rate. Two references are most commonly used. One is macroeconomic balance, especially the current account balance. The exchange rate would be termed overvalued if it leads to a persistent current account deficit and accumulation of debt by the economy.[1] The other reference is relative prices: the exchange rate is overvalued if the price of similar goods is much higher in Iceland than abroad, measured in the same currency and after adjustment for transportation costs, business costs, trade barriers, differences in taxation of goods and services between countries, measurement errors connected with differing composition of baskets of goods between countries and other factors that explain "normal" international price differences. This definition of the equilibrium exchange rate is linked to the hypothesis of purchasing power parity (PPP). Besides providing this definition, the hypothesis implies that since international trade competition will eventually eliminate "abnormal" differences between the prices of comparable goods, the equilibrium exchange rate will quite soon trend towards the equilibrium real exchange rate. Otherwise, enterprising individuals would buy goods where they are inexpensive and sell them at a profit where they are expensive. The difference in prices – the equilibrium real exchange rate – is then determined by trade barriers, differences in taxation and "normal" transportation and business costs.

In addition to this measurement of the equilibrium real exchange rate, which takes account of conditions in markets for goods and services, there are others based on financial market conditions. The most common is uncovered interest rate parity. This assumes that equilibrium in a financial market is based on the spread between domestic and foreign interest rates being equal to expected changes in the exchange rate, so that investors expect the same return in their own country as abroad after allowance for risk. If investors foresee much higher domestic than foreign interest rates in the years to come, this should cause a capital inflow into the country which will lead to lower interest rates and a stronger home currency. Equilibrium is established when interest rates have fallen and/or the currency has appreciated sufficiently for an expected weakening of the currency to level out the spread between domestic and foreign returns.

Price differences

Based on the PPP hypothesis, the Economist publishes an index of the price of a Big Mac in different countries to give some idea of relative prices and thereby whether a country's currency is undervalued or overvalued. From the perspective of the PPP hypothesis, however, the Economist has not chosen a particularly suitable reference. Hamburgers cannot be transported between countries without loss of quality, and there are widespread barriers to trading in major inputs such as meat and labour.

Everyday experience teaches us that the price of

1. The equilibrium real exchange rate is commonly defined as the (real) exchange rate that maintains a country's external and internal balance, i.e. there is no unsustainable external debt accumulation and the factors of production are reasonably utilized. A detailed study of real exchange rate theories is given in Arnór Sighvatsson, "Jafnvægisraungengi krónunnar – Er það til?" in *Fjármálatíðindi*, vol. 47, 2000.

identical goods depends on where they are bought. Important considerations are the location of the vendor (for reasons including transportation cost), the scope of business, wage costs, level of service, etc. These factors affect measurements of prices and price changes. The real exchange rate of the króna, for example, would probably be valued higher in regional Iceland than in Reykjavík.

No direct measurements are available for relative prices of an identical basket of goods and services along the lines of the Economist's Big Mac index. However, some efforts have been made to produce an international index for prices. The accompanying table shows prices in Iceland relative to those in 15 European Union countries.

Comparative price levels for Iceland

15 EU countries = 100	*1995*	*1999*	*2000*
Private consumption	122	123	131
Food	145	154	166
Meat	154	164	168
Fish	87	91	104
Clothing, shoes	127	130	146
Heating and electricity	83	91	92

Source: Statistics Iceland.

Relative prices of individual categories of goods vary widely. Fish is cheap in Iceland, but meat relatively expensive. A different outcome would be obtained if another reference was used instead of the 15 EU countries in the table. In 1999, private consumption prices measured 124 in Sweden, 127 in Norway and 133 in Switzerland. Comparable figures for 2000 are 128, 129 and 135 respectively. As the chart shows, the real exchange rate of the króna was relatively strong over these years.

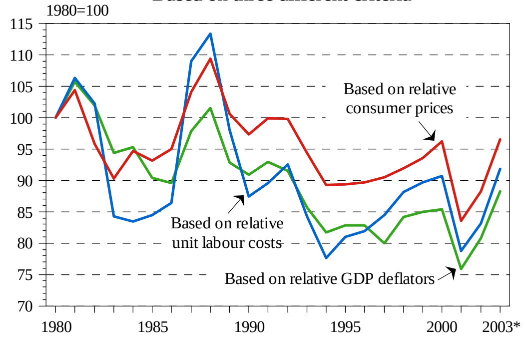
Development of relative prices

Trade barriers and different levels of wages and productivity affect prices in individual countries. An array of trade barriers create marked differences in prices of agricultural products. Prices of goods and services which are not determined by international competition, e.g. because of transportation costs, will also differ. Housing and hairdressing are examples of such products. Countries where productivity is high in competing industries and wages are relatively high will also have high prices for goods and labour-intensive services. For this reason there is a positive correlation between productivity (GDP per capita) and relative prices. Additional factors in the Nordic countries and Switzerland are typically high transportation costs and substantial barriers to trading with agricultural products, despite the fact that most of them are fairly unsuitable for producing such goods.

Because of the difficulty of comparing relative prices, the equilibrium exchange rate is often measured in terms of relative price changes rather than direct price measurements. The drawback to this approach is that it forgoes the direct measurement of equilibrium real exchange rate according to the PPP hypothesis. Indices measure changes. The index value of the real exchange rate at any time therefore says nothing about whether it is close to equilibrium. Any conclusions drawn from real exchange rate indices have to be based on the average over a given period, in the hope that this will reflect the equilibrium rate. Thus the real exchange rate is strong when it is higher than its average over a specific period. It cannot be ruled out that a given index average will deviate considerably from the equilibrium value in the sense used by PPP. The real exchange rate may also change because of a change in the equilibrium rate rather than by appreciating against it, for example due to changes in transportation costs or increased weight of a good when competition is not at hand and technological development is slow (e.g. a service).

The real exchange rate of króna 1980-2003

Based on three different criteria



* Forecast. *Source:* Central Bank of Iceland.

The chart shows the development of three different real exchange rate indices for the króna over the period 1980-2003. All of them show sharper swings than could normally be expected on the basis of the PPP hypothesis. (Other currencies would show even more marked deviations if their real exchange rates were examined on the same principle). Nonetheless, most economists agree that the hypothesis holds "in the long run", despite deviations caused both because the equilibrium real exchange rate has changed and also because the real exchange rate fluctuates from its equilibrium value. The chart shows that the real exchange rate (based on relative consumer prices) has appreciated since 2001 but is not high from a historical perspective. In 1981, for example, the real exchange rate was 10% above the estimate for 2003 and in 1987 it was 15%. The real exchange rate this year is 5% higher than the average over the past 10 years but 1% higher than over the past 20 years.

The first index in the chart maps the real exchange rate trend against consumer prices. Probably the best reference for the real exchange rate would be producer prices (or wholesale prices) since these are least prone to changes in transportation and distribution costs. Regrettably, data are still not available for calculating the real exchange rate of the króna relative to producer prices.

The second index maps the real exchange rate against GDP prices. This reflects relative prices of all goods and services produced in Iceland better than the CPI (and also prices of imported goods). However, it is less suitable for evaluating the equilibrium real exchange rate because it contains a larger proportion of goods and services that depend on specific conditions in individual countries. As a yardstick of competitive position it can also be misleading. For example, a rise in fish prices pushes up GDP prices and thereby the real exchange rate. The competitive position would appear to have worsened although that of fisheries companies, at least, has improved. According to the chart, GDP prices and consumer prices produced similar results for the real exchange rate. The estimated real exchange rate in 2003 is 3% higher than over the past 10 years and 3% lower than over the past 20 years.

Development of wage costs

The third index on the chart is relative to wages and shows the development of unit wage costs in Iceland and abroad. Besides changes in wages and the exchange rate, this index is also affected by productivity. It differs from price-based indices of the real exchange rate insofar as it is independent from the PPP hypothesis.[2] Thus the equilibrium real exchange rate based on relative wages cannot be explained in terms of that hypothesis. This real exchange rate index gives an indication of relative wage cost developments and thereby also of the profitability and competitive position of businesses. Based on wage levels in 2003, the estimated real exchange rate is almost the same as in 1999 and 2000, but 8% higher than over the past 10 years and 3% higher than over the past 20 years.

All in all, the three indices for the real exchange rate of the króna yield similar results. So does a comparison of the real exchange rate for 2003 with the averages over the past 10 or 20 years. Also, the chart shows that on all three indices the real exchange rate of the króna was considerably lower in 2001 and 2002 than at any time over the period since 1980. Obvious as it may seem to compare the real exchange rate today with historical averages, it is uncertain whether the latter provides a true picture of the equilibrium rate. Conceivably, the economic outlook in Iceland has driven the equilibrium real exchange rate up.[3] Likewise, expectations of continuing high interest rates in Iceland may cause the exchange rate to appreciate in order to maintain balance in the financial markets. The relativity of these three indices is also demonstrated by the way that they all show the real exchange rate for 2003 as being equal to that for 2000. However, the current account deficit then was equivalent to 10% of GDP but is forecast to be 1% this year. Thus external macroeconomic balance can vary widely at the same real exchange rate.

2. The indices are still closely related since wage cost developments should, in the long run, reflect price and productivity trends.

3. A study by Arnór Sighvatsson, Már Gudmundsson and Thórarinn G. Pétursson suggests that fluctuations in the terms of trade and real exchange rate are quite important for the economic cycle in Iceland. See *Fjármálatíðindi*, vol. 48, 2001.