Economic and monetary developments and prospects[1]

Improved prospects for stronger exchange rate

Inflation, measured as the twelve-month rise in the CPI, escalated in 2001 and finished at 9.4% from the beginning to the end of the year. The agreement between employers and unions in December reduced the likelihood of a wage, exchange rate and price spiral, and contributed towards an appreciation of the króna. For these and other reasons, the inflation outlook for this year has improved and the Central Bank is now forecasting a 3% rate of inflation over the year despite a large increase in the CPI at the beginning of the year. It is unlikely that the price index target set for May in the agreement by the partners in the labour market will be attained, however, unless the exchange rate strengthens further and/or concerted direct action to cut prices produces significant results. Prospects for a higher exchange rate have improved considerably because the current account deficit is shrinking faster than had been expected and there is evidence that this year the deficit will be easily financed by the private sector, irrespective of whether there is a special foreign borrowing operation by the treasury or Central Bank. Export activities have been dynamic and the profitability of listed companies has improved. On the other hand, turnover in sectors primarily manufacturing for the domestic market has begun to contract, reflecting the improved internal and external balance in the economy. A further strengthening of the exchange rate or more slackening of domestic demand appears necessary, however, in order for the Central Bank's inflation target to be attained during the forecast period. All things being equal the inflation rate will be around 3% in 2003. If prospects for attaining the inflation target do not improve in the near future, further easing of the monetary stance will be delayed.

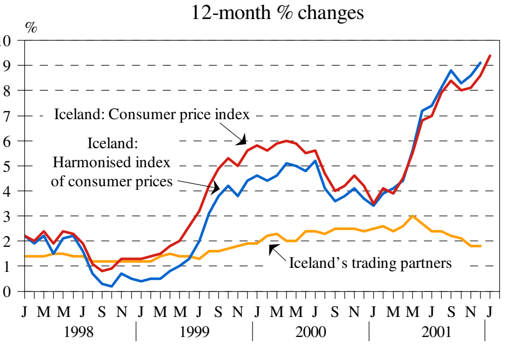
Inflation increased substantially last year

Inflation increased substantially last year. The CPI rose 9.4% from the beginning to the end of the year, the largest twelve-month increase since August 1990. Year-on-year average inflation between 2000 and 2001 was 6.7%, the highest average since 1991. As shown in Chart 1, inflation has been increasing steadily since March last year. The increase may be attributed to wage rises in excess of productivity growth in recent times, and to the depreciation of the króna since mid-2000. The Statistics Iceland (Statice) wage index rose by 7.6% in the course of 2000 and by 9.6% over 2001. Productivity, measured as the increase in GDP over and above labour force growth, went up by 2.7% in 2000 and only 1% in 2001. The price of foreign currency rose by 17.3% in

Chart 1

CPI inflation 1998-2002

12-month % changes



Source: Statistics Iceland.

1. This article uses data available on January 25, 2002.

the course of 2001 and by the end of the year was 26.7% higher than in mid-2000. Both the large wage increases and the depreciation of the króna, however, have their roots in the overheating and external imbalance that became entrenched in the economy over the period 1998-2000. The gap between inflation in Iceland and its main trading partner countries naturally widened too. In main trading partner countries, average inflation shrank from 2.7% in June 2001 to 1.8% in December. In the European Economic Area, average inflation ran at 2% in December, based on the twelve-month increase in the Harmonised Index of Consumer Prices (HICP) for the area. In Iceland the HICP had risen by 9.1% in December and the twelve-month increase had exceeded 8% since August. The main reason that the HICP now shows a higher rate of inflation than the Icelandic CPI lies in different ways of accounting for housing costs in these two indices.

The CPI rise in the last quarter was marginally more than the Central Bank's November forecast

In November, the Central Bank forecast that the CPI would be 8.1% higher on average in Q4/2001 than in Q4/2000. The actual figure was 8.5%. The forecasting error was thus 0.4%, which is within the statistical confidence limits. At the same time, the Bank forecast that the CPI increases over 2001 would be 8.5%. The rate turned out to be 9.4%, as stated above. A large rise in the CPI at the beginning of January, by 0.9% in all, accounts for a major part of this deviation. The January increase was much more than had been expected by all those who publish monthly CPI forecasts. On average they had forecast a rise of 0.3%. In part the deviation is explained by unexpected increases in vegetable and fruit prices as a result of bad weather in Europe (contributing to an 0.2% rise in the CPI) and a stronger impact from public service charge increases than had been commonly assumed.

Box 1 Forecasting errors in Central Bank and other inflation forecasts

Monetary Bulletin 2001/1 included a survey of errors in inflation forecasts by the Central Bank and other forecasters of inflation in Iceland. These errors have now been reassessed. It is vital for the Central Bank to monitor the errors in its inflation forecast, which is now one of the most important aspects of its activities after last year's change in the monetary policy framework. Together with other economic analyses, inflation forecasts play a key role in the Bank's monetary decisions. The following is an assessment and comparison between the Central Bank's annual and quarterly forecasts and corresponding forecasts from other sources.

Evaluations of inflation forecasts focus on their bias and root mean square error (RMSE). The bias shows the forecasts' mean deviation from actual inflation and thus whether inflation is being systematically over- or underpredicted. The root mean square error measures how far the forecast value differs from the true value.

Table 1 presents a survey of annual inflation forecasts by the Central Bank of Iceland and other analysts, together with actual inflation figures for the period 1994-2001. As a rule the forecasts cited were those published closest to the beginning of the respective year, and in most cases after the CPI for January was made known. They are based on changes in annual averages of the CPI. Up to and including 1998 there was a tendency to overpredict inflation, which was reversed in the second half of the period when all analysts underpredicted inflation for 1999 and 2001. Forecasts for 2000 turned out to be in line with the actual rate of inflation during the period. Until last year the Central Bank's forecasts had both the lowest RMSE and smallest bias until it produced a large deviation which gave the National Economic Institute the lowest RMSE, while the bias is roughly the same for all forecasters. Over the entire period the RMSE is 1.1% in Central Bank annual forecasts, 0.9% at the NEI and the 1.4% at the Economic Consulting and Forecasting Ltd. (ECF). The Central Bank's mean bias is -0.2% compared with 0.1% at the NEI and -0.1% at the ECF. Íslandsbanki hf produced only three annual forecasts, hardly enough to draw any conclusions, and other forecasters produced even fewer.

Table 2 compares quarterly forecasts by the Central Bank and ECF. Íslandsbanki hf was included in the survey a year ago but has not published quarterly forecasts for some time, so it is omitted now. As far as is

Table 1 Forecasts for annual CPI inflation 1994-2001[1]

%	1994	1995	1996	1997	1998	1999	2000	2001
Central Bank of Iceland	1.4	2.5	2.4	2.1	2.6	1.9	5.0	4.3
National Economic Institute	2.5	2.5	2.5	2.5	2.7	2.5	3.9	5.8
ECF	1.3	3.0	2.9	2.3	3.2	2.3	5.0	3.7
Íslandsbanki[2]	.	.	.	.	.	1.7	4.9	4.4
Landsbanki Íslands	.	.	.	.	.	.	.	3.5
Kaupthing	.	.	.	.	.	.	.	3.6
Realised inflation	1.5	1.7	2.3	1.8	1.7	3.4	5.0	6.7

1. Change in consumer price index between annual averages. Forecasters' closest forecast to the New Year is shown in each case.
2. Prior to the merger of Íslandsbanki and FBA, the FBA forecast is used for 2000 and the Íslandsbanki forecast for 1999.

known, no other sources have produced quarterly forecasts. The scope of this comparison is from 1995-2001, involving periods of different lengths; ECF forecasts do not go back any further. ECF does not publish quarterly forecasts, only the monthly values of the index three months in advance, which are recalculated here as quarterly forecasts. In the first half of the period ECF overpredicted inflation on average, by 0.26% from 1995-2000, but underpredicted it by 0.05% on average in 1999-2001. Last year saw ECF's first underprediction for the following quarter since 1995: by 0.4% on average, distributed fairly evenly over the year. For most of the period the Central Bank's bias was much lower, or 0.06% from 1995-2000 but -0.11% in 1999-2001. The Central Bank also underpredicted inflation for the following quarter last year, by an average of 0.3% or rather less than ECF. The main factor at work there was a 1% underprediction during Q2, when the CPI rose by 3.5% between quarters. The mean bias for the other three quarters was acceptable, falling only 0.1% short. ECF's RMSE is rather higher than the Central Bank's for the period as a whole, although the difference is only slight. During the second half of the period, from 1999-2001, ECF's RMSE was 0.41%, which is lower than the Central Bank's 0.53% then.

Table 2 Comparison of quarterly forecasts

%	Root mean square error (%)	Mean bias (%)
Central Bank		
1995:1-2001:4	0.44	0.00
1995:1-2000:4	0.42	0.06
1999:1-2001:4	0.53	-0.11
ECF		
1995:1-2001:4	0.45	0.16
1995:1-2000:4	0.45	0.26
1999:1-2001:4	0.41	-0.05

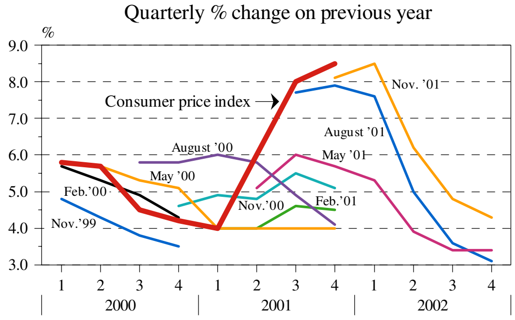
Finally, the Central Bank's forecasts four quarters in advance were examined. Data are available for the period 1998:1-2001:4, apart from the first two quarters of 1999 and 2000, for which forecasts four quarters in advance were not published. Thus there are twelve measurements over the period with a mean bias of -0.6% and an RMSE of 1.9%. The forecast four quarters in advance from January 2001 makes a great difference here, since it ended up outside the 90% confidence limits. Excluding this single forecast, the mean bias is -0.3% and RMSE 1.6%. If the current forecast holds good or underpredicts inflation, the forecast four quarters in advance to the first quarter of this year will also end up outside the 90% confidence limits. The main reason for the greater forecasting error last year was that an unchanged rate of exchange is always assumed for the forecast period. Over last year the króna weakened by almost 15%. Studies of the effect that exchange rate has on prices show that, assuming unchanged wages, prices rise by 0.4% in the long run when the exchange rate depreciates permanently by 1%. If the above depreciation proves permanent, all things being equal it should cause the price level to rise by almost 6% in the long run.

The error in the Central Bank's forecast made in January last year is much bigger, and outside the confidence limits. The Bank had forecast inflation of 4.6% within the year 2001, roughly half the actual rate. The primary source of the error is the standard assumption of an unchanged exchange rate from the day of the forecast. The exchange rate applied in the January 2001 forecast was almost 15% higher than in the one presented here. The same goes for most other forecasters. Errors in inflation forecasts are discussed in Box 1.

Chart 2

CPI and Central Bank inflation forecasts 2000-2002

Quarterly % change on previous year



Sources: Statistics Iceland, Central Bank of Iceland.

Higher import prices are the main source of CPI inflation, but private sector services still weigh heavily

Inflation is not only significantly higher now than at the beginning of the current inflation period, but also radically different in composition. At the start of the period the two main driving forces behind inflation were higher petrol prices in foreign markets and the overheated housing market, which pushed up housing prices. Last year, price developments in these two areas served to contain inflation, but the interaction of the sliding króna and domestic wage trends led to much more extensive inflation than before. The type of inflation that occurred last year can be expected to have had a much greater effect on purchasing power than before. Higher housing prices primarily affect first-time buyers or people moving into larger residential accommodation, but for others it mainly represents an increase in the value of their assets, although the opportunity cost of living in own housing has gone up. On the other hand, every consumer is affected by higher food prices, which was the CPI component that went up the most last year, and services, which weigh heavily in the index. The rise in prices of imported goods accounted for more than ¼ of the CPI increase over the past three months and explains almost half the increase over the past 12 months, despite the fact that petrol prices fell by 7½% in the past three months to a level similar to that of a year ago. Imported goods other than food and beverages such as motor vehicles, alcohol and tobacco rose sharply during the year, more or less in pace with the weakening of the króna.

Prices of private sector services continued to increase in Q4, or by 1.9% from October to January. The twelve-month rise in services accelerated from 8.8% to 9.6% over the same period. Private sector

Table 1 Analysis of CPI inflation by origin 2000-2001

	Annualised change in index in the previous		*Relative contribution to change in CPI*	
%	*3 mo.*	*12 mo.*	*2000*	*2001*
(1) Domestic agricultural products less vegetables ...	5.8	6.3	6.2	4.4
(2) Vegetables	18.8	14.9	0.1	1.5
(3) Other domestic food and beverages	14.5	14.6	3.0	10.2
(4) Other domestic goods	10.5	8.1	4.6	4.1
(5) Imported food and beverages	28.9	27.7	-0.7	9.4
(6) Cars and spare parts	18.4	14.8	2.1	14.7
(7) Petrol	-26.7	0.5	6.8	0.2
(8) Other imported goods	2.8	8.7	-3.3	13.5
(9) Alcohol and tobacco	12.9	13.0	2.9	4.5
(10) Housing	6.1	6.4	35.3	9.0
(11) Public services	6.6	6.4	7.6	8.2
(12) Other services	7.6	9.6	35.4	20.3
Total	*7.2*	*9.4*	*100.0*	*100.0*
Domestic goods (1,2,3,4)	10.7	10.0	14.0	20.2
Agricultural products and vegetables (1,2)	7.3	7.3	6.3	5.9
Domestic goods less agricultural products and vegetables (3,4) ..	12.8	11.8	7.7	14.3
Food products, total (1,2,3,5) ...	13.8	13.7	8.6	25.4
Imported goods, total (5,6,7,8,9)	5.7	11.3	7.8	42.3

services have a weight of 20% in the CPI and their price increases accounted for roughly one-fifth of the rise in the index over 2001. Normally, seasonal increases in public service charges take place in January, and they went up by 1.7% in January 2002. Over the past twelve months, prices of public services rose by 6.6%, which is less than the overall rise in the CPI.

Big increases in food prices recently

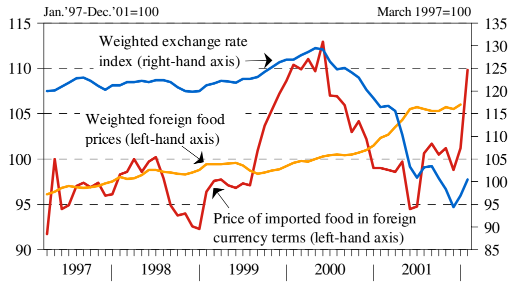
During the last quarter of 2001, the price of imported food and beverages rose the most of individual CPI components, by 6.5% (annualised 28.9%) from October and by 27.7% from January 2001 to January 2002. The rise in imported food and beverages is mainly attributable to the depreciation of the króna. From January 2001 to January 2002, imported food prices rose by 5%-6% in excess of the appreciation of foreign currencies against the króna, using average December exchange rates for 2000 and 2001 as a benchmark, which is a minimum lag for the effect of exchange rate changes on food prices. The difference between exchange rate movements and the retail price of imported food and beverages roughly corresponds to the rise in food prices in euro countries over the corresponding period and hence seems to be fully explained by external factors. The surge in European food prices may, however, partly be attributable to higher meat prices, which probably have a smaller share in food imports to Iceland than in consumption in Europe. The average exchange rate of the króna in January 2002 was almost 3% higher than in December. Increases in food import prices can therefore be expected to slow down in the near future and might even fall. Domestic food prices, excluding agricultural products and vegetables, also rose sharply in January and had gone up by 3.4% since October and 14.6% since January last year. In all, roughly one-quarter of the CPI rise in 2001 can be attributed to rises in food and beverages, compared with less than 10% in 2000.

In light of recent discussions of the contribution of imported food prices to domestic inflation, it is interesting to view the development of domestic food prices over a longer time span in comparison with food prices in trading partner countries. Chart 3 shows the food price index for the main countries of origin for imports to Iceland, and the index for imported food in the CPI. Both indices are calculated in terms of foreign currency. The indices of main countries of origin are weighted according to each country's share in imports of food for household consumption in 2000. The EU is weighted at ¾ and the USA ¼.[2] These weights are also used to calculate the foreign currency equivalence of the prices of imported foods in the CPI.

Chart 3

Imported food prices and foreign food prices 1997-2002

Weights: USA/USD 1/4; EU/EUR 3/4



Sources: EcoWin, Eurostat, Statistics Iceland and Central Bank of Iceland.

The chart suggests the trends in foreign prices and the price of imported food denominated in foreign currency are quite similar, and this is confirmed by statistical tests. Looking at the period as a whole, there is thus no evidence of abnormal developments in the prices of imported food. Calculated in terms of foreign currencies, however, domestic prices fluctuate more than prices abroad. These swings may be explained by lags in the transmission of exchange rate changes to domestic prices. When the exchange rate strengthened in 1999 and until spring 2000, prices denominated in króna did not follow suit, and hence rose when expressed in terms of foreign currencies. This trend was reversed when the króna began to weaken. The rise in domestic food prices did not entirely reflect the current increase in the

2. Food prices in the EU are more specifically the sub-index for food and beverages in the Harmonised Index of Consumer Prices (HICP) in the European Economic Area. Food prices in the USA are the foods sub-index within the CPI. Developments of these two foreign indices proved similar over the period. The weighting between the USA and Europe is calculated from Statice import figures and represents a rough weighting for processed and raw food and beverages, especially for household consumption, in 2000.

price of foreign currencies. After the middle of last year, however, prices measured in foreign currencies began to rise at the same time as the króna continued to slide, i.e. the increase in prices in domestic currency exceeded the appreciation of trading partner currencies. Plausible explanations of the faster transmission of the lagged exchange rate impact are that the depreciation became viewed as more persistent than before and that wholesalers and retailers had little scope left to absorb the impact of further depreciation of the króna by reducing margins. The surge in the price of imported food in January, notwithstanding the appreciation of the króna in the preceding month, can be attributed to lagged exchange rate impact. At the same time as the lagged impact pushed prices up in terms of domestic currency, the strengthening of the króna caused prices measured in terms of foreign currencies to rise even more. This spike in food prices should level out if the króna does not weaken from its current position, as the ratio of foreign and domestic prices turns to its long-term equilibrium, albeit with some lag. If this fails to happen, prices of food imports could be seen as abnormally high relative to foreign prices and the exchange rate.

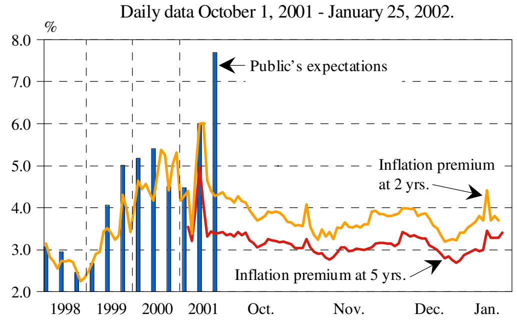
Volatile inflation expectations

The inflation premium on treasury bonds has been fairly volatile since the beginning of November, when the last issue of Monetary Bulletin was published. In the beginning of November the inflation premium on T-bonds with a lifetime of two years was 3.6%, and on five-year bonds it was 3%. In November and the beginning of December the T-bond inflation premium rose somewhat. The agreement made on December 13 between employers and unions to postpone an inflation-triggered review of wage agreements in 2002, however, substantially reduced uncertainties over the wage and price outlook, generating lower inflation expectations. From December 10, when the proposed agreement was reported, to the end of the year, the inflation premium on T-bonds with a lifetime of two years dropped from almost 4.0% to 3.2%, and on five-year bonds from 3.4% to 2.7% – or 0.7 percentage points in each case. In January the inflation premium on T-bonds increased again and peaked on January 14 when the CPI for January was published showing a rise far in excess of market participants' expectations. Since

Chart 4

Inflation expectations 1998-2002

End-of-month data January 1998 - September 2001.
Daily data October 1, 2001 - January 25, 2002.



Source: Central Bank of Iceland.

then the inflation premium has dipped back and on January 25 it was 3.2% and 3.0% on bonds with a lifetime of two years and five years respectively.

Wages rise in excess of wage agreements for the largest sections of the labour force

The Statice wage index rose by more than 1% between Q3 and Q4 of 2001. Almost two-thirds of the increase can be traced to wage rises in the public sector and among bank employees, and one-third to the non-financial private sector. Public sector wage increases are largely explained by new agreements with several smaller groups of public employees. In the private sector, wage increases can largely or entirely be attributed to wage drift, i.e. rises in excess of the provisions of wage contracts between the Confederation of Icelandic Employers and major trade unions in the private sector. Wage drift between the fourth quarters of 2000 and 2001 measured 3.4%.

Real wages in the labour market as a whole grew by 0.8% between the fourth quarter of 2000 and 2001. Of this figure, real wages rose by 3.5% for public sector employees and bank employees, but decreased by 1.1% in the private labour market.

All things being equal, the inflation outlook for 2003 has worsened

The exchange rate of the króna on January 21 was 3.3% higher than in October, when the Bank's previous inflation forecast was made. At the same time, it has become increasingly clear that the economy is cooling down. Inflation, however, is still running high. The following forecast assumes that inflation

Table 2 Inflation forecast of the Central Bank

Quarterly changes

	Percentage change from previous quarter (%)	*Annualised quarterly change (%)*	*Change on same quarter of previous year (%)*
2001:1	0.9	3.4	4.0
2001:2	3.5	14.5	6.0
2001:3	2.3	9.7	8.0
2001:4	1.6	6.6	8.5
2002:1	1.3	5.2	9.0
2002:2	1.0	3.9	6.3
2002:3	0.9	3.5	4.8
2002:4	0.6	2.5	3.8
2003:1	0.6	2.5	3.1
2003:2	0.9	3.8	3.1
2003:3	0.9	3.6	3.1
2003:4	0.6	2.4	3.1
2004:1	0.5	2.1	3.0

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

Annual changes (%)

	Year on year	*Within year*
1999	3.4	5.8
2000	5.0	3.5
2001	6.7	9.4
2002	5.9	3.0
2003	3.1	3.0

Shaded area indicates forecast.

will decelerate quickly over the next few months and be somewhat lower over 2002 than was previously forecast. The forecast entails that, in May, the CPI could end up just above the price index target set in the agreement between unions and employers in the general labour market, although the shortfall will probably be small. This does not rule out the possibility of achieving the target. However, it requires some change in addition to the forecast assumptions, e.g. a strengthening of the exchange rate in the near future, for which the fundamentals appear to be in place, and/or significant results from specific measures aimed at reducing prices. Such measures could contribute to a temporary drop in prices or speed up the impact of a stronger exchange rate. However, they will not have any significant effect on inflation in the long run, except insofar as they would ensure that the wage agreements are not revoked.

The current forecast suggests that it will take the Bank a longer time to achieve its inflation target than it has assumed hitherto. The target of 2½% inflation by the end of 2003, for example, will not be achieved given the assumptions on which the forecast is based. However, inflation will probably have moved within the upper tolerance limit of the target by the end of this year; in accordance with the joint declaration of the Government of Iceland and the Central Bank from March 27, 2001, the limit was lowered to 4½% at the beginning of this year. Inflation will then be within the tolerance limit in 2003. If the fundamentals do not change in favour of the inflation target in the near future, with an appreciation of the króna or faster cooling down of the economy than currently assumed, a tighter monetary stance could be required later. On the other hand, an appreciation of the króna in the order of 3% until the spring of 2002 should suffice to bring inflation down to the Bank's 2.5% inflation target early in 2003.

The inflation outlook has improved for this year but worsened for next year

Last November, the Central Bank forecast an inflation of 4.1% in the course of 2002. At present the outlook is for somewhat lower inflation, at 3%, which is close to the rate of inflation forecast last July. The main reason for the more favourable outlook is that the exchange rate of the króna was 3.3% higher on the day of forecast, January 21, than when the November forecast was made. Furthermore, according to IMF and OECD forecasts, import prices in foreign currency will rise more slowly in 2002 than expected 3 months ago.

Inflation prospects for next year, on the other hand, have deteriorated somewhat. An inflation rate of 3% is forecast over 2003, compared with a rate of 2.3% forecast in November. There are two main reasons: Firstly, international forecasts assume that prices in international trade will rise considerably again next year when the global economy picks up. Secondly, the agreement between unions and employers in the non-financial private sector provides for further rises in wage costs this year and next year (discussed further in Box 2). The forecast presented here spans the first quarter of 2004. In line with the joint declaration of the Central Bank and Government from March 27, the Bank publishes a forecast spanning two years. Henceforth the forecast will be extended by one quarter each time a new forecast is published. The forecast is presented here within that time-frame for the first time.

Table 3 Other inflation forecasts and inflation expectations

	2002		*2003*	
	Year on year	*Over year*	*Year on year*	*Over year*
Average forecast	5.7	3.9	3.4	2.5
Highest value	6.1	4.9	.	.
Lowest value	5.4	3.5	.	.

Inflation forecasts are published by ECF, Íslandsbanki, Landsbanki and the National Economic Institute. Only Íslandsbanki has issued a forecast for 2003. *Source*: Central Bank of Iceland.

As Table 3 shows, the Central Bank's forecast does not deviate significantly from those of other institutions and market participants. The Bank forecasts marginally higher annual average inflation between 2001 and 2002, and marginally less inflation over the year. The opposite applies as regards 2003. This difference is hardly statistically significant and is largely explained by different assumptions for import price developments and different exchange rates on which the forecasts are based.

Another criterion for comparing the Bank's forecasts against is the inflation premium on interest rates that can be read from the interest rate differential between non-indexed government bonds and comparable indexed ones. On January 25, the premium was 3.2% on bonds with a two-year lifetime, which is somewhat lower than when the monetary policy framework was changed on March 27, but virtually unchanged from the Bank's last inflation forecast in October. Market participants' inflation expectations are therefore moving into line with the Central Bank's inflation target, although they are still some way above it (after adjustment for the risk premium on non-indexed bonds). Accordingly, market participants assume that inflation over the next two years will average 3.2%, which is quite consistent with the Bank's forecast.

Assumptions behind the inflation forecast

The forecast is based, among other things, on a National Economic Institute forecast published in December, forecasts of the IMF and OECD on price developments in international trade, prices in forward oil contracts and various information on the domestic labour market, including the agreement between unions and employers to postpone an inflation-triggered review of wage agreements until May. This agreement entails greater pension fund obligations on the part of employers, which are evaluated in the forecast as equivalent to a ½% wage rise this July, and a 0.4% supplementary wage rise in January 2003 (as discussed further in Box 2).

The forecast also assumes no contractrual wage increases in the non-financial private sector beyond what is provided for in current wage agreements. The forecast assumes some slowing in wage drift in the near future, reflecting an easing of pressure in the labour market. Offsetting this is a low rate of growth in labour productivity this year. According to OECD and IMF forecasts, prices of industrial goods, oil and other commodities in global markets will decline in

Table 4 Main assumptions of the inflation forecast

Percent changes between annual averages	*2001*	*2002*	*2003*
Contractual wages	5.4	4.0	3.6
Wage drift	2.5	1.9	1.0
Domestic productivity	1.7	0.3	1.0
Exchange rate of króna, based on an import-weighted basket of foreign currencies	20.2	2.6	0.0
Import prices in foreign currency terms	1.0	0.2	1.6
Percent changes within year			
Contractual wages	3.8	4.2	3.3
Wage drift	3.0	1.0	1.0
Domestic productivity	0.0	0.5	1.5
Exchange rate of króna, based on an import-weighted basket of foreign currencies	17.1	-1.4	0.0
Import prices in foreign currency terms	0.5	0.0	3.0

2002. The forecast incorporates these scenarios, but also assumes a greater rise in import prices next year than was previously expected.

A standard assumption is that the exchange rate remains unchanged from the forecast day. When the forecast was made on January 21 the official effective exchange rate index was 139.8, which is 3.3% higher than in the previous inflation forecast when it was 144.4. This assumption represents a 2½% drop between annual averages for 2001 and 2002, but a 1½% strengthening over 2002 if the exchange rate remains unchanged from the forecast day. As discussed later, the grounds for a higher exchange rate in the coming months have strengthened somewhat recently.

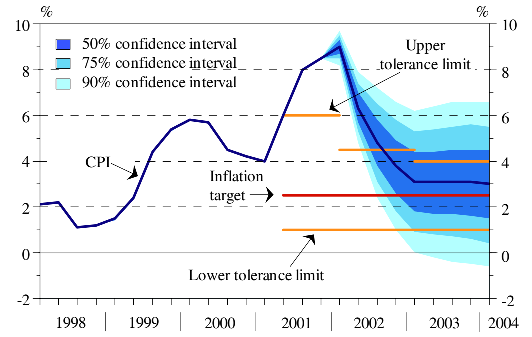
The forecast assumes that concerted direct action by unions and employers to bring down prices will have some effect towards a further reduction in the CPI in February, and that the government will recall some of the increases announced in public service charges in the New Year. In April, changes to the import tariff arrangements for vegetables and fruit are expected to make the CPI 0.1% lower than otherwise, plus a further 0.2% reduction in April and May which will be cancelled out again in the final months of the year. This is because the abolition of seasonal import tariffs will presumably alter the seasonal cycle in the CPI. In its most recent forecasts, the Bank has also assumed that housing prices will fall this year. This has not occurred and it is unclear whether it will, despite lower prices for some real estate categories. Rises in housing prices outside the capital area and the procedure for measuring housing prices in the index may explain why the housing component of the CPI has not fallen. In light of this development, the current forecast does not assume any particular effect from changes in housing prices.

Uncertainties and risk factors

In view of the inherent uncertainties in all forecasts which make it rash to draw sweeping conclusions from specific values, the forecast is shown with an assessment of its uncertainty range in Chart 5. Thus the entire coloured area shows the 90% confidence area; the two darkest ranges show the corresponding 75% confidence interval, and the darkest range is the one inside which there is 50% probability that inflation will fall. The uncertainty increases the longer the horizon of the forecast, as reflected in the widening of the confidence interval.[3]

Chart 5

Central Bank inflation forecast



Source: Central Bank of Iceland.

Uncertainties about whether the forecast will hold good can broadly be divided into two types: uncertainties given the assumptions on which the forecast is based, and uncertainties about the assumptions themselves. The former type of uncertainty involves in part the links between underlying factors in the inflationary process and inflation itself. Models which take more account of the long-term relationship between prices and underlying factors influencing it, such as wage cost and the exchange rate, and also allow for the output gap, indicate that the tail of the inflationary curve could prove even longer than assumed here. Great uncertainty surrounds the stability of underlying relationships, however. For example, it is uncertain to what extent a weakening of the króna will be reflected in higher prices and how long it will take. Experience of countries which have adopted floating exchange rate regimes suggest that short-term swings are transmitted more slowly to prices than they were in the past.[4]

3. The assessment of uncertainty in the inflation forecast is principally based on the Bank's historical forecasting errors where appropriate, and on a simple extrapolation of the forecasting uncertainty over the horizon the Bank has not hitherto forecast. Just as forecasts for individual values are subject to uncertainty, so is the estimated 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.

4. See, for example, Thórarinn G. Pétursson, "The transmission mechanism of monetary policy", *Monetary Bulletin*, 2001/4, pp. 59-74.

Thus it is conceivable that the transmission of short-term exchange rate fluctuations into prices are so prolonged that the economy will have cooled down and the external balance improved, with a subsequent strengthening of the exchange rate, before their inflationary impact is felt in full.

Regarding the forecast assumptions, the greatest uncertainties involve exchange rate developments and the domestic labour market outlook. After unions and employers announced that they had postponed an inflation-triggered review of wage agreements, the króna strengthened and the exchange rate index appeared to stabilise temporarily around 140 points. The outlook is for a fairly swift decline in the current account deficit in the near future and that its financing will be forthcoming, even in the absence of a discretionary foreign borrowing operation by the treasury or Central Bank. Thus the probability of a further strengthening of the króna has increased. The Central Bank has previously stated its view that the real exchange rate will strengthen in the long run. Better prospects for financing the current account deficit increase the likelihood that the higher real exchange rate will be achieved through a higher nominal rate rather than through higher inflation.

Developments in the domestic labour market will have a considerable effect on the exchange rate trend in the near future. The postponement of the review of wage settlements contributed to a strengthening of the króna by reducing uncertainty about the economic outlook, but a jump in the CPI in January reduced the likelihood that the price level target in that agreement would hold good. If wage agreements are revoked in May and higher wage rises are negotiated

Box 2 Agreements between the Icelandic Federation of Labour (ASÍ) and Confederation of Employers (SA) on a review of wage agreements in 2002, and declarations by the Government of Iceland and Central Bank of Iceland in December 2001

The wage agreements between several major labour union organisations and the Confederation of Employers (SA) contain identical clauses stating the assumptions underlying them. A committee was to be appointed in February 2001, 2002 and 2003 specifically to assess whether these assumptions have held good. Most other wage agreements make reference to the committee's findings. At the above-mentioned dates the committee was to discuss whether the assumption of decreasing inflation had been fulfilled. If it failed, the wage section of the agreement may be revoked with three months' notice. Inflation accelerated rapidly in 2001 and most of the evidence indicated that the assumption of declining inflation would not hold up in February 2002. Great uncertainty about wage and price developments therefore prevailed during the second half of 2001. ASÍ and SA reached an agreement on December 13, 2001 that the assessment of the assumptions in the wage agreements should be postponed, from February 2002 to May the same year. At the same time the Government issued a declaration, and the Central Bank followed suit.

The agreement between ASÍ and SA also made the following stipulations:

1. *Trigger reference*
   The contracting parties agree that if the CPI is no higher than 222.5 points in May 2002, the inflation assumptions behind the wage agreements are deemed to have held good. If the assumptions are not fulfilled, the wage sections of the respective agreements may be revoked in May with three whole months' notice.

2. *Supplementary contribution to pension savings fund*
   According to current wage agreements, an employer is obliged from January 1, 2002 to pay a 2% contribution to a pension savings fund (or where appropriate a defined benefits fund) to match a 2% supplementary contribution by the wage earner. It is agreed to amend this clause whereby from July 1, 2002 employers will pay a 1% pension savings fund contribution with no contribution on the part of the wage earner. The rule on a 2% contribution to match the wage earner's 2% supplementary pension saving remains in effect and is not increased

by the supplementary contribution. The above change does not apply, however, in cases where the employer's mandatory and contractual pension contributions total 7% or more. This contribution is paid to the pension savings fund department of the pension fund to which the respective wage earner belongs, unless he decides otherwise.

3. *General wage rise on January 1, 2003*
   It is agreed that the general wage increase on January 1, 2003 will be 0.40% higher than otherwise would have been the case.

The above addenda to the wage agreements concerning supplementary pension savings fund contributions and the general wage rise on January 1, 2003 are conditional on the price level reference according to item 1 above being fulfilled in May 2002 and the wage section of the agreements not being revoked. If the wage section of the agreements is revoked in May 2002, the supplementary payments do not take effect.

On the basis of this agreement by ASÍ and SA, their joint committee on wage agreement assumptions ruled that it entailed a final assessment of the assumptions behind wage agreements in 2002. At the same time, the government issued a declaration in which it stated the importance of pursuing a tight fiscal stance. The budget for 2002 assumed the same surplus as had been decided in the draft budget, despite the fact that the economic situation had worsened. It was also stated that the treasury's borrowing policy would reflect general economic developments and thereby take into account the objectives behind the unions' and employers' agreement and the position in the domestic credit market. In this regard attention would be paid both to the effect on the exchange rate and its long-term effect on domestic demand. The government also declared that it would work towards the abolition of, or a major reduction in, import tariffs on vegetables, and that national insurance charges would be reduced in 2003 from 6% to 5.73%. An increase in this charge from 5.32% to 6% had been passed as law by parliament in the autumn.

The Central Bank also issued the following statement on this occasion:

The Central Bank of Iceland welcomes the December 13 agreement between major private sector unions and employers' associations entailing the postponement of the review clause of existing wage agreements in 2002. It reduces uncertainty about the development of wages and prices in the coming year. The Bank is also of the view that conditions have strengthened for an appreciation of the króna and that the likelihood of the Bank achieving its inflation target has improved.

Central Bank interest rate changes only affect inflation with a lag. Thus, interest rate policy cannot have a decisive impact on whether the CPI will be below the reference level agreed between the labour market participants for May 2002. Nevertheless, the reference level conforms broadly with the inflation forecast, which the Central Bank published at the beginning of November. A higher exchange rate and the impact of lower vegetable prices (resulting from the abolition of import tariffs) improve the prospects for the attainment of the CPI target level in May.

Over the long term, the prospects for inflation will be influenced by the stance of monetary policy in relation to domestic demand. Important in this respect is that the fiscal budget for 2002, which parliament recently approved, shows the same surplus as the budget proposal introduced at the start of October, in spite of worse prospects in the economy for the coming year. It is very important that the fiscal budget be implemented according to plan. The Central Bank deems it important to administer the treasury's borrowing operations in the coming year in such a way that they support a higher exchange rate of the króna and the inflation target of the Central Bank. For that to happen, consideration must be given to the long-term impact of external borrowing by the treasury on domestic demand and inflation, as well as to the short-term impact on the exchange rate.

The agreement among the labour market participants improves the prospects for the forecast slowdown in the rate of inflation in 2002. At the start of November, the Central Bank forecast an inflation rate of 4% within the year 2002. If the exchange rate of the króna appreciates in the period ahead, for which all preconditions seem to be in place, inflation could be lower. In that case, conditions for a further reduction in interest rates will be created, other things remaining unchanged.

than assumed in the Bank's forecast, there is a risk of a weaker exchange rate and higher rate of inflation. In that case the Central Bank's inflation target would hardly be met within a satisfactory time span unless the Bank tightened its monetary stance, which could lead to more economic contraction and higher unemployment. Some uncertainty surrounds housing price developments, as mentioned above. The drop in housing prices that the Bank has assumed in recent forecasts could eventually materialise after all. Inflation would then be lower, other things being equal. A substantial fall in housing prices could also have a negative impact on asset value, cutting back aggregate demand and bringing down the inflation rate.

On the whole, if the assumptions remain unchanged, the probability that the target of 2½% inflation in 2003 will be attained has diminished, as pointed out earlier. According to the current forecast it will not be achieved during the forecast period. A conceivable further strengthening of the króna and faster closure of the positive output gap than assumed here, however, could change this outlook in the near future. If these fail to materialise, an even tighter monetary stance could be needed in order to reach the target. However, this would not necessarily call for a rise in the policy interest rate; it is possible that more gradual easing of the monetary stance than the narrowing of the positive output gap or growing slack would call for will suffice. The risk posed by too lengthy a period of adjustment is that it will reduce the credibility of the inflation target and that inflation might become entrenched due to sluggish adaptation of inflation expectations to the Bank's inflation target. It should be borne in mind that macroeconomic equilibrium might stabilise inflation at either too high or too low level. It the economy adjusts to an equilibrium at a relatively high rate of inflation, attaining the Bank's target may be a more painful process. Thus it is vital to continue to enhance the credibility of the inflation target.

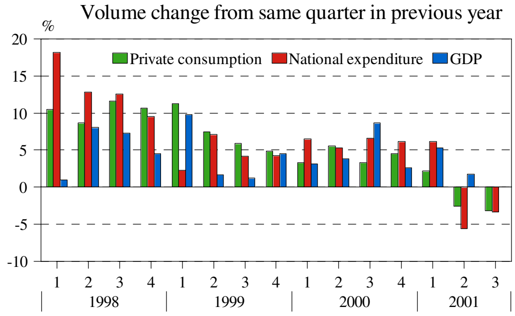
Economic growth measured zero in Q3/2001 but exports rallied in the last quarter

Since the publication of Monetary Bulletin in November the National Economic Institute (NEI) has published two reports showing that considerable adjustment is taking place in the Icelandic economy, while also broadly confirming the outlook that it presented. These are the revised National Budget, published in the beginning of December, and the quarterly national accounts until the third quarter of 2001. There are clear signs of a sizeable contraction in private consumption and national expenditure from the previous year. National expenditure shrank by 3%, a similar reduction to that forecast by the NEI for the whole year. GDP during the third quarter was unchanged from a year before. Export growth of 3½% and a 4½% reduction in imports prevented GDP from dropping.

Chart 6

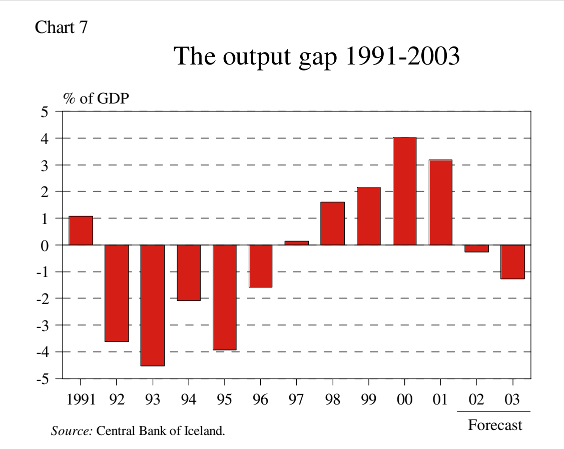
Quarterly private consumption, national expenditure and GDP 1998-2001

Volume change from same quarter in previous year



Source: National Economic Institute.

Additional data which have become available since the NEI reports were published suggest that economic growth last year may have exceeded the 2.2% forecast by the NEI in December. Exports rallied sharply in October and November, largely attributable to robust exports of marine products. Total turnover over the months January to October 2001 was 5% more in real terms than in 2000, after adjusting domestic items with the CPI but applying the exchange rate to export items, motor vehicles and fuel. There is also an outlook for less contraction in GDP this year than would otherwise have been the case, following decisions on increased fishing quotas and the recent robust export performance; in December the NEI forecast a 1% contraction during the year. Chart 7 shows the Central Bank's assessment of the output gap based on the last NEI forecast. According to this, the output gap will swing over to show a minor degree of slack this year. However, if economic growth turned out to be greater last year



than in the NEI forecast and this year's contraction also proves to be smaller, it is uncertain that the output gap will close before well into this year.

The current account deficit is shrinking faster than previously expected...

The slide in the króna, more favourable oil prices and higher export prices for marine products have brought about a sizeable decrease in the deficit on the goods and services account, while the depreciation of the króna has widened the deficit on the income account. The merchandise deficit during the first 11 months of the year shrank by 22 b.kr. or two-thirds from the same period in 2000. After adjustment for exchange rate changes the adjustment has been even bigger, or close to ¾. During the first 9 months of the year the service account shifted from showing a 4.9 b.kr. deficit to a 1.8 b.kr. surplus, a turnaround of 6.7 b.kr.

In the third quarter, most of the turnaround was explained by lower merchandise imports. In October and November, on the other hand, it was robust exports of marine products which made the biggest contribution to the total 4½ b.kr. surplus recorded on the merchandise account for those months, compared with a deficit of more than 6 b.kr. over the same period the previous year. Exports of marine products in October and November were almost 11 b.kr. more than at the same time the previous year, largely accounting for the turnaround on the merchandise balance, although imports also decreased.

The deficit on the factor income account over the first 9 months was roughly 8.2 b.kr. more than at the same time the year before, measured at constant exchange rates. The widening deficit was mainly caused by increasing foreign debt service.

It is uncertain whether the strong marine exports in recent months will be sustained. The upswing may have various explanations, including favourable weather, more value added in processing, for example with more freezing of herring, and favourable price developments. In spite of this boom in October and November, export volume of marine products

Box 3 Financing of the current account deficit and other currency outflows since 1998

The accompanying table presents an overview of funding of the current account deficit and other currency outflows since 1998. Initial estimates for 2002 are also given, but should be taken with great reservations.

The table shows the basic balance which comprises currency outflow for the current account deficit, net direct investment and net portfolio investment in foreign securities. It then shows how the basic balance is financed respectively by the private sector and by the public sector and Central Bank. The difference is the net currency outflow. By way of comparison, the Central Bank's net sale of currency in the interbank market and changes in foreign assets of pension funds are also quoted.

Figures for 2001 and 2002 are based on the Central Bank's rough update of the National Economic Institute forecast for the current account deficit, incorporating new data which have become available since the forecast was made. It is also based on a survey of plans for foreign borrowing by the main financial institutions, the largest power company (Landsvirkjun) and municipal authorities. It is assumed that the outflow to meet direct investment and investment in foreign securities more or less halted during the second half of the year and that broadly the same pattern will be followed in 2002.

The main finding that the table produces is as follows: A substantial public sector foreign financing requirement emerged in 2000. It was similar last year, but started to decrease as the year progressed and will be below zero this year if the assumptions made in the survey hold good. A sharp turnaround has taken place in the basic balance. In 2000 an exceptionally wide current account deficit was accompanied by a massive outflow on portfolio investments abroad, financed by a credit inflow which was equivalent to one-fifth of GDP yet was not sufficient to keep the exchange rate stable. Last year, when the current account deficit shrank and the outflow of venture capital dropped at the same time, the ratio of basic balance to GDP is estimated to have diminished to 8%, from 20% in 2000. If the estimates outlined above are realised, this year's basic balance will be equivalent to 5.7% of GDP.

Financing of the current account deficit and other currency outflows 1998-2002

B.kr.	*1998*	*1999*	*2000*	*Oct.-Dec. 2000*	*Jan.-Sept. 2001*	*Oct.-Dec. 2001*	*2001*[1]	*2002*[1]
Borrowing requirement								
Current account balance (1)	-40.1	-42.7	-67.1	-23.0	-37.1	-6.5	-43.6	-33.0
Net direct investment (2)	5.4	-2.9	-18.0	-7.6	-12.2	0.0	-12.2	-8.8
Net portfolio investment (3)[2]	-21.5	-28.1	-49.2	-0.5	-5.9	0.0	-5.9	-2.8
Net venture capital	-16.2	-31.1	-67.2	-8.1	-18.1	0.0	-18.1	-11.5
Basic balance (4)=(1)+(2)+(3)	-56.2	-73.8	-134.3	-31.1	-55.2	-6.5	-61.7	-44.5
Borrowing								
Credit institutions (5)	35.0	46.7	70.0	11.2	9.1	13.9	23.0	40.7
Other private borrowers (6)[3]	24.8	39.2	40.3	15.2	20.7	-2.7	18.0	12.8
Private sector, total (7)=(5)+(6)	59.8	85.9	110.3	26.4	29.8	11.2	41.0	53.5
Public sector foreign financing requirement (8)=-(4)-(7)	-3.6	-12.1	24.0	4.7	25.4	-4.7	20.7	-9.0
Public sector borrowing (9)	-3.5	5.6	16.0	3.8	12.5	27.0	39.5	...
Central Bank (10)	1.6	-5.4	15.9	0.7	7.4	-11.1	-3.7	...
Net currency outflow (11)=(8)-(9)-(10)	-1.6	-12.3	-7.8	0.2	5.5	-20.6	-15.1	...
Central Bank's net sale of currency in the interbank market	-17.0	-12.0	13.9	4.9	15.6	13.9	29.5	...
Change in foreign assets of pension funds[4]	50.7	19.5	20.8	-7.9	-16.7	...	...	...
Gross domestic product	577.4	622.7	671.9	503.9	558.7	186.2	745.0	786.5
Percent of GDP								
Basic balance (4)=(1)+(2)+(3)	-9.7	-11.9	-20.0	-6.2	-9.9	-3.5	-8.3	-5.7
Public sector borrowing requirement (8)=(4)-(7)	-0.6	-1.9	3.6	0.9	4.5	-2.5	2.8	-1.1
Net currency outflow (11)=(8)-(9)-(10)	-0.3	-2.0	-1.2	0.0	1.0	-11.1	-2.0	...
Central Bank's net sale of currency in the interbank market	-2.9	-1.9	2.1	1.0	2.8	7.5	4.0	...
Change in foreign assets of pension funds	8.8	3.1	3.1	-1.6	-3.0	...	...	...

1. Estimate/forecast. Update of NEI forecast incorporating most recent data on merchandise trade balance. 2. Net purchases of foreign securities. 3. In 2002, estimated borrowing by municipal authorities is included with the private sector. Thus the public sector foreign financing requirement then refers only to the central government. 4. At average exchange rates at each time.

during the first 11 months of 2001 was only 1½% more than during the same period a year before. Prices of marine products had risen by 4% in excess of the appreciation of foreign currencies vis-à-vis the króna. The situation was different for aluminium exports, where volume was up by 17% from last year but prices had dropped considerably.

The Central Bank has reassessed the current account deficit last year in view of the latest figures and the outlook for 2002. Broadly speaking the Bank's estimates are based on the NEI December forecast but incorporates data not available at that time, such as the merchandise balance in November and decisions to increase fishing quotas. The outcome is that last year's current account deficit may have been just over 43 b.kr. instead of almost 50 b.kr. as the NEI forecast in December, and on a cautious estimate will be 33 b.kr. this year instead of over 38 b.kr. Accordingly, the deficit will be just over 4% of GDP this year.

...and the outlook is for smooth financing of the deficit this year

Towards the end of last year, clear signs emerged that the foreign exchange market was in better balance than earlier in the year, after the substantial strengthening of the króna in December. Among other things this was the result of a smaller current account deficit, as the merchandise balance trend in October and November indicates, but also reflect the fact that the deficit was apparently more easily financed. Although data on capital movements during the last quarter are not yet available, there are strong indications that portfolio investment was in reasonable balance during the last months of the year, as they were during the third quarter. Foreign direct investment by residents appears to have been financed with foreign credit, and hence should not have had a major impact on the forex market and exchange rate developments. Investment by pension funds in foreign securities seems by and large to have halted. Another crucial factor is that deposit money banks (DMBs) appear to have procured considerable amounts of foreign borrowed funds.

Given that the current account deficit will remain sizeable both this year and next, albeit decreasing, it is important to identify whether a temporary turnaround in capital movements is involved or whether private sector borrowing this year will be sufficient to finance the deficit at a stable exchange rate. To assess this outlook, the Central Bank conducted a survey of planned foreign borrowing in 2002 by DMBs and other major players. The banks expect to be net borrowers abroad to the tune of 41 b.kr. during the year. Of this figure, it is estimated that at least 2½ b.kr. will be lent to foreign parties and 11½ b.kr. allocated to other foreign investment, leaving 27 b.kr. which can be expected to represent a net currency inflow. Adding to this sum plans by municipal authorities, the largest power company and public sector investment funds for total net borrowing of 13 b.kr., financing of the current account deficit seems to be forthcoming. These plans do not include any revenues earned from conceivable privatisation to foreign buyers. Thus there appear to be strong grounds for an appreciation of the króna this year, irrespective of whether there is a special foreign borrowing operation by the treasury (see discussion in Box 3).

This scenario calls for several qualifications, however. Firstly, borrowing plans are subject to change. Secondly, plans for more borrowing this year than last year, if realised, could reflect a larger current account deficit than assumed above, because of an exchange rate appreciation or directly through more imports which are funded with foreign credit. Thirdly, trading in foreign securities is assumed here to be more or less in balance. If that does not happen, the foreign borrowing requirement could be greater. Nonetheless, if financing of the current account deficit is as smooth as suggested by the above figures, facilitating an appreciation of the króna, there is a good reason to expect an inflow of portfolio capital. In that case investors should find it beneficial to increase the share of domestic securities in their portfolios, since with the real exchange rate of the króna at a historical low it is likely to rise again in the long term, either by means of nominal appreciation or a higher rate of inflation than among trading partner countries. Indexed domestic securities will be an attractive asset regardless of along which of the two paths the real exchange rate returns to its long-term equilibrium.

Strong production in export sectors while turnover in domestic sectors is beginning to decline

Last year's fish catch turned out to be good, with an estimated export value of 120 b.kr., up 27% from the previous year. To a large degree this growth is explained by a rise of roughly 20% in the export-weighted price of foreign currency, while prices in export markets also rose somewhat, the use of raw materials became more efficient and value added in production increased. In volume terms, marine exports increased by an estimated 2%, mainly accounted for by land-frozen products (frozen herring), salted herring, fish meal and fish oil. This year's prospects are favourable despite some reduction in the cod quota during the current fishing year (September 1, 2001 to August 31, 2002) which will begin to be felt this calendar year. The markets are buoyant for almost all products. Prices are fairly high and there are no signs of a change in the offing. Quotas for capelin and demersal species have recently been increased, which could spell an 8 to 10 b.kr. increase in export value. Aluminium production increased considerably last year, probably in the range 15% to 17%. A further 7% increase is foreseeable this year due to expansion of the Nordural plant. Prices moved down, however, and were recently 5% below the average for last year. It is thought probable that aluminium prices will rally towards the end of this year.

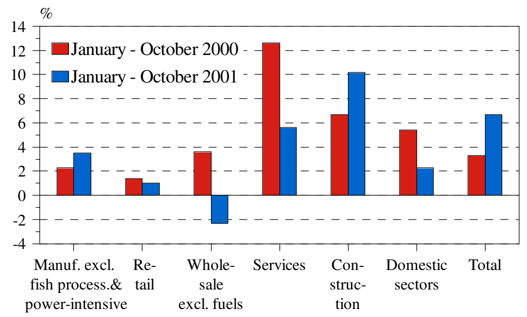
Turnover changes differ sharply depending on sector

The growth of turnover followed two divergent patterns last year. It grew substantially in the export sector and import-competing industries, while stagnation or even contraction characterised most domestic sectors (wholesale, retail, services, catering and accommodation, construction). Several sectors stand out in terms of growth of turnover during the first 10 months of last year. In the food and beverages industry, which accounts for 14% of the total, turnover expanded almost 11% in real terms. Transport and travel agency operations showed the largest increase at 27% in real terms. Considerable real growth also took place in construction, but slowed down rapidly towards the end of the year. Motor vehicle sales contracted by 26% in real terms and turnover in wholesaling increased by only 4.5% in real terms. Retail growth (excluding motor vehicles) was slim at only 1% in real terms and turnover in the domestic sector as a whole grew by 2%.

The contraction and stagnation in domestic sectors is more visible in the figures for September-October 2000 and 2001. Between these periods, retail turnover contracted by 0.6% and wholesale by 3.5%, while the growth in construction was a mere 2% in real terms. In the domestic sector as a whole turnover remained stagnant between these two periods. Nonetheless, total turnover grew by 7.2%, the lion's share accounted for by a 34% growth in turnover in the export sector and some import-competing industries such as food and beverages. It should be mentioned that the growth measured in these sectors is to a large extent explained by the fact that real-term values are calculated on the basis of the CPI, without adjustment for the exchange rate changes that have raised the revenues of exporters and import-competing companies in króna terms.

Chart 8

Turnover based on VAT-records 2000-2001



Sources: National Economic Institute, Central Bank of Iceland.

Profitability of listed companies has picked up

In general, companies listed on Iceland Stock Exchange produced good profitability and operating results last year, and in fact much better than the outlook and forecasts suggested for most of the time. Operations showed a major improvement as the year wore on. However, there are marked differences between the performance of individual sectors and it is clear that some of them have faced serious troubles in recent times.

Major changes in the operating environment of businesses left a clear imprint on profitability. The average price of foreign currency was almost one-

Table 5 Company profits 2000-2002[1]

Profit before depreciation and financial items (EBITDA) and profit after tax as percent of turnover

	EBITDA/turnover[2]			*Profit after tax/turnover*[2]		
		Estimate	*Projections*		*Estimate*	*Projections*
%	*2000*	*2001*	*2002*	*2000*	*2001*	*2002*
Fisheries sector (8)	17.5	27.0	26.8	-8.0	0.8	7.7
Manufacture and production (7)	15.5	17.7	20.6	6.6	9.8	9.9
Oil distribution (3)	7.3	10.0	8.7	0.8	3.5	3.0
Transportation (2)	3.4	2.6	7.6	-0.8	-5.3	-2.7
Information technology (6)	22.0	18.8	25.1	6.4	-2.3	6.7
Retail and services (2)	6.3	5.9	5.6	2.6	2.6	4.5
Construction (1)	8.2	11.2	10.0	2.1	0.5	1.0
Exporters (2)	2.2	3.3	3.3	-0.8	1.0	1.2
Total	8.4	10.2	11.6	0.5	1.3	3.8

1. Numbers in brackets indicate number of companies. 2. Paired comparison. In 2001 and 2002 averages of forecasters' estimates and projections are shown.

fifth higher than in 2000. This resulted in substantial exchange rate losses on foreign loans, leading to significant operating losses after tax for most of the year. These were then won back with the strengthening of the króna towards the end of 2001. On the other hand, export companies' revenues soared in króna terms, as clearly shown in the increased gross profit of most listed companies. Interest on króna-denominated loans has been high lately but has not represented a significant burden for listed companies, whose borrowing is overwhelmingly denominated in foreign currencies. Considerable wage increases took place during the year, averaging 8%-10%. Fuel prices fell significantly in the second half and were 15% lower on average than the year before. The reduction in the corporate income tax rate from 30% to 18% as of the beginning of this year will have an impact on last year's operating results for many businesses, in the form of calculated accounting entries due to the lowering of deferred income tax payments on their balance sheets.

Sales turnover of listed companies increased substantially between the years. Reasons include restructuring, product development and greater added value, as well as acquisitions and mergers with other companies, in Iceland and abroad. Turnover of listed companies is estimated to have increased by one-quarter last year and by 8%-10% in real terms, deflated with the exchange rate and CPI.

According to profitability estimates for last year made by a sample of 31 companies listed on ICEX, gross profit as a proportion of turnover increased considerably between the years, from 8.4% in 2000 to 10.2% last year. Profit after tax is estimated to have almost tripled, increasing as a proportion of turnover from 0.5% in 2000 to 1.3% in 2001. The sharpest turnaround was among fisheries companies, where the gross profit ratio rose from 17.5% in 2000 to 27% last year and profit after tax as a proportion of turnover from -8% to 0.8%. Major improvements also took place in operations of manufacturing, pharmaceuticals and oil companies.

In their operating forecasts for the current year, listed companies expect some slowdown in turnover growth. A 17% year-on-year increase is expected, compared with 25% the previous year. High gross profit is expected to continue in most sectors, remaining unchanged for fisheries companies but increasing among companies in manufacturing, pharmaceuticals and transport. Overall, the gross profit ratio is forecast at approximately 12%, compared with 10% last year. Financial expenses are expected to drop sharply due to lower exchange losses on foreign borrowing. Profit after tax is expected to be triple that of last year. This forecast takes into account the effects of the lower corporate income tax rate, which is identified as generating one-fifth of the increase in profits after tax.

The fiscal stance eased last year but will tighten again if plans hold good

The supplementary budget for 2001 and treasury budget for 2002 were approved by parliament in December. According to the supplementary budget, treasury revenues in 2001 amounted to 254 b.kr. and outlays to 234 b.kr., leaving a surplus of 20 b.kr. However, this figure includes an assumption of 22 b.kr. in receipts from privatisation, which largely went unrealised during the year. Excluding extraordinary but known deviations in revenues and outlays, the supplementary budget aimed for similar revenues in nominal terms to the budget targets (without privatisation receipts), despite higher inflation. By similar standards, outlays overshot the budget totals by 12-13 b.kr. and the fiscal result was correspondingly poorer. Revenues from direct taxes and wage-related taxes rose much more than had been expected, by 14% instead of 6%. Revenues from taxes on expenditure, on the other hand, show a decline of 1% instead of the targeted 5% increase. This outcome is explained by a contraction in national expenditure at the same time as wages and production showed continued strength. By far the greatest spending overshot was on regular operating outlays. The surplus on operations and net lending for the year was estimated at 39 b.kr. in the budget, but at -6 b.kr. in the supplementary budget and has worsened somewhat since then because of postponement of privatisation measures and delayed loan collections.

Table 6 Treasury finances overview

B.kr.	*2000 Account*	*2001 Budget*	*2001 Supplem. budget[1]*	*2002 Budget*
Revenues, total	224.7	253.1	254.2	257.9
Expenditure, total	229.0	219.2	234.1	239.4
Financial balance	-4.3	33.9	20.1	18.5
Core revenues[2]	220.9	237.5	232.7	242.4
Core expenditures[3]	202.1	217.9	229.9	240.8
Core balance	18.8	19.7	2.8	1.6
% of GDP				
Revenues, total	33.4	34.8	34.1	32.8
Expenditure, total	34.1	30.1	31.4	30.4
Financial balance	-0.6	4.7	2.7	2.4
Core revenues	32.9	32.7	31.2	30.8
Core expenditures	30.1	29.9	30.9	30.6
Core balance	2.8	2.7	0.4	0.2

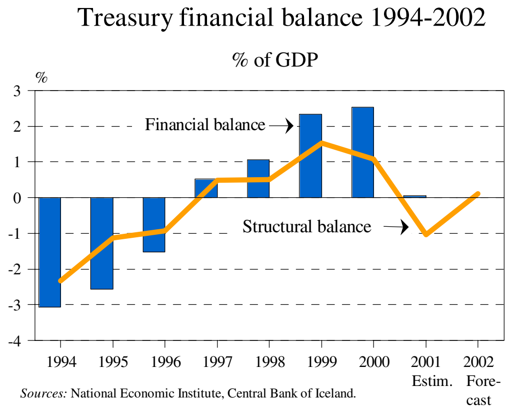
1. Supplementary budget included. 2. Regular revenues exclude privatisation receipts and recognised deviations. 3. Excluding extraordinary tax-claim write-offs and pension charges.

The budget for 2002 was passed with 258 b.kr. revenues, 239 b.kr. outlays and a 19 b.kr. surplus. Privatisation receipts of 16 b.kr. were assumed, with the addition of up to 20 b.kr. if plans to sell shares in Iceland Telecom and the state-owned commercial banks before the end of the year are realised. Revenues excluding privatisation profits are scheduled to rise by just over 4% in nominal terms, while outlays excluding extraordinary tax-claim write-offs and pension charges should rise by just under 5%. Taxes on personal income and wages should rise by 8-9% as against a 5% rise in taxes on expenditures. Both are on the optimistic side given the macroeconomic outlook, while a sizable decline in revenues from taxes on wealth and corporate incomes is in harmony with planned tax cuts and the economic slowdown. Outlays excluding extraordinary items rise by just under 5%, which is equivalent to a 1% reduction in real terms based on public consumption prices. Regular operating expenses and transfer payments increase by 2-3% in real terms, while investment and interest expenses are scheduled to fall by a real 10-11%. Interest payments are likely to be higher than planned, however, due to the delays in privatisation.

The budget assumes a total inflow of 42 b.kr. from sales of assets and a net borrowing requirement of a negative 38 b.kr., i.e. a sizeable surplus on operations and asset movements. Successful sale of assets not sold in 2001 would thus guarantee Treasury liquidity during the year.

The Central Bank has in the recent past tried to make a cyclical assessment of the fiscal position using standard fiscal series from the National Economic Institute which adjust for changes in the way the budget is presented. The Bank has estimated how figures published in the autumn should change because of changes made to the draft budget and supplementary budget on their way to passage. On the basis of the latest macroeconomic statistics, the output gap is estimated at 4% of GDP in 2000 and 3% last year, and will be close to zero this year. The treasury surplus declined from 2½% of GDP in 2000

Chart 9



Sources: National Economic Institute, Central Bank of Iceland.

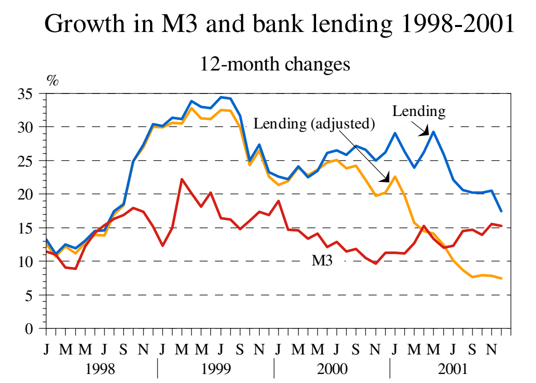
to virtually nothing last year. Only one-fifth of this can be attributed to the narrowing output gap, while the cyclically adjusted result turned from 1% of GDP to -1%. The target of an unchanged result this year corresponds to swinging the cyclically adjusted figure from -1% of GDP into balance. It should be pointed out that this cyclical adjustment does not take into account the fact that, during the current cycle, national expenditure has fluctuated much more than production. This is significant as it is clear that last year's decline in consumption is the main reason for the treasury's lower revenues. If consumption continues to shrink relative to production, little will remain of the fundamental fiscal improvement which is estimated here at 1% from last year.

Credit growth slowed last year but sizeable growth in broad money is still going on

After considerable growth until the middle of 2001, lending by DMBs began to slow down, especially when the effect of automatic exchange rate and price adjustments is excluded. In December, lending decreased in nominal terms by just under 1% from the preceding month, while the twelve-month increase was 17½%, compared with over 26% at the same time a year before. Excluding exchange rate and price adjustments of foreign currency or inflation-indexed debt, lending increased by just under 1% in December from the preceding month. Calculated in these terms, twelve-month lending growth was 7½% compared with more than 20% the same time a year before. This is a sizeable turnabout, and indicates that domestic demand is approaching sustainable balance. However, DMB credit growth could apparently be picking up again, since lending measured in these terms increased by an annualised figure of almost 9% during the last three months of the year, compared with a 1½% contraction during the preceding quarter. Developments in the first months of this year will reveal whether this is a temporary swing or not.

Lending by other financial institutions has to some extent compensated for the lower DMB credit growth. For the credit system as a whole, lending increased by more than 17½% from the end of September 2000 to the same time in 2001, and by 5½% excluding exchange rate and price adjustments. During the first nine months of the year the annualised increase in real terms was just under 7½% compared with 16½% during the first nine months of 2000. Pension funds' lending to their members has grown substantially. In November this was up by more than 31% from the same time the year before, corresponding to an increase of more than 21% at constant prices. Lending by investment credit funds grew by 18% over the 12 months until the end of November, or over 9% in real terms. Housing Financing Fund lending in November was up by 15½% from the same time a year before, or almost 7% in real terms. In total, lending by these three institutions increased by 18½% from September 2000 to the same time in 2001, or by more than 9% at constant prices. It is therefore clear that other financial institutions than banks have increased their share in lending activities.

Chart 10



Source: Central Bank of Iceland.

Growth in broad money (M3) also declined until the middle of last year and seemed to be heading for a rate which could be compatible with the Central Bank's inflation target. During the second half of the year, however, 12-month M3 growth gained momentum again and had reached 15½% in December, corresponding to 6½% in real terms, almost the same growth as a year before. M3 has likewise grown as a proportion of GDP after declining in 2000. The ratio was more than 44% during Q3/2001, having increased by 2 percentage points from a year before and almost half a percentage point from the previous quarter. Such growth indicates an underlying increase in nominal GDP which is too high to be compatible with a low inflation target in the long run.

Central Bank base money decreased last year

Central Bank credit to DMBs expanded significantly last year, especially through an increase in the repo stock. Thus the Central Bank seems to be playing a greater role in financing new DMB lending, compared with the preceding year or so. To a large extent the burgeoning repo stock can be traced to Central Bank interventions in the foreign exchange market which mopped up liquidity in the interbank market. Financial institutions have striven to meet this króna outflow with liquid funds from repurchase agreements. In addition, the treasury's position has been good. The recent increase in repos has to some extent normal explanations and needs not reflect an easing of the monetary stance.

In evaluating the Central Bank's contribution to liquidity formation in the financial system it is not enough to look at its outstanding repo stock with financial institutions. Another factor to consider is the development of base money, which comprises notes and coin in circulation and the institutions' reserves in the Central Bank. Base money represents the Central Bank's financial obligations towards financial institutions and the general public.

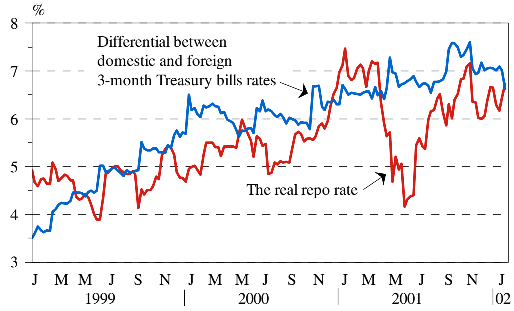
Growth of base money is prone to fairly large swings and is considerably influenced by seasonal demand factors, which make interpretation of temporary fluctuations doubtful. However, a clear drop in base money growth could be discerned in the second half of 2000 and it even contracted for a while despite sizeable expansion in the repo stock. In the second half of 2001 base money growth appeared to be gaining momentum again, although it was still some way below the earlier peak. The ratio of base money to GDP also seemed to be rising again. During the last quarter of the year, however, growth of base money slowed down again and in fact it decreased in real terms from the last quarter of 2000. In 2001 base money decreased by a total of 4½ b.kr. and credit institutions have complained of strapped liquidity. This issue is discussed in more detail in the next article.

Monetary stance

The Central Bank's policy rate in real terms at the end of January was 6½%, based on inflation expectations measured as the spread between non-indexed and indexed T-bonds, and had gone down somewhat since the last issue of Monetary Bulletin in November, when it measured 7%. Thus the monetary stance measured in these terms appears to have eased somewhat since the last quarter, although by less than the scale of the Bank's interest rate cut in November. The short-term and long-term differential with abroad has also narrowed by just under 0.4 percentage points. On the other hand, the króna has strengthened by more than 3% since the last inflation forecast was made.

Chart 11

Weekly short-term real interest rate and the differential between domestic and foreign rates 1999-2002



Sources: Reuters, Central Bank of Iceland.

Indexed long-term interest rates now stand at a comparable level to the end of October, while non-indexed two-year rates have come down, as reflected in the lower inflation premium pointed out above. Non-indexed five-year rates, however, remain virtually unchanged. Thus the negative trend at the longer end of the yield curve has been evened out to some extent. The same applies to the indexed yield curve and the shorter end of the non-indexed one, although the change is smaller in that case. Market participants are still of the opinion that nominal and real interest rates will come down in the fairly near future.

Equity prices are rallying once more after dire returns last year. Since the Bank's last inflation forecast was published the ICEX-15 index has risen by more than 13% and it is up by 6½% so far this year. In part the recent rise in equity prices probably reflects greater optimism about domestic economic developments. The Central Bank's policy rate cut in November can also be expected to have had an impact.

Inflation in Iceland ranks with the highest rates known among countries implementing a similar or the same sort of monetary policy. Despite repeated references to high interest rates in Iceland, however, the Central Bank's policy rate is by no means out of step with those in other countries, especially after taking into account the high level of inflation – in real terms the policy rate measured against twelve-month inflation is very low by international comparison. Stronger indications have emerged about easing pressures and better balance in the economy. Although the Bank forecasts rapid disinflation as the year progresses, the probability of attaining its inflation target in 2003 has dwindled, judging from the fundamentals underlying the new forecast. On the other hand, there is some likelihood that the króna will strengthen from its present level, thereby increasing the probability that the inflation target will be achieved. A definite risk also still remains that disinflation will take place at a slower rate than implied in the forecast, if the fundamentals do not improve. If this happens, there will be more risk of high inflation expectations becoming entrenched, making it correspondingly more difficult to bring down inflation itself. Developments over the coming weeks will determine how quickly the fundamentals for a further interest rate cut are created.

Box 4 Inflation and interest rates in selected countries

Countries with formal inflation targets

Country	*Inflation (%)*	*Inflation target (%)*	*Central Bank policy rate (%)*	*Latest change in the policy rate (%)*	*Date of latest change in the policy rate*	*Policy rate in real terms (%)*
Australia	2.5	2-3	4.25	-0.25	Dec. 5 2001	1.8
Brazil	7.5	3½ (±2½)	19.00	0.75	July 18 2001	11.5
UK	1.8	2½	4.00	-0.50	Nov. 8 2001	2.2
Chile	2.6	2-4	6.50	-0.20	August 9 2001	3.9
Iceland	9.4	2½ (1-4½)	10.10	-0.80	Nov. 8 2001	0.7
Israel	1.4	2-3	3.80	-2.00	Dec. 25 2001	2.4
Canada	1.7	1-3	2.25	-0.50	Nov. 27 2001	0.6
Norway	2.1	2½ (±1)	8.50	-0.50	Dec. 13 2001	6.4
New Zealand	2.4	0-3	4.75	-0.50	Nov. 14 2001	2.4
Poland	3.6	5 (±1)	11.50	-1.50	Nov. 28 2001	7.9
South Africa	4.3	3-6	10.50	1.00	Jan. 15 2002	6.2
Switzerland	0.3	0-2	1.25-2.25	-0.50	Dec. 7 2001	1.5
Sweden	2.7	2 (±1)	3.75	-0.50	Sept. 19 2001	1.1
Czech Republic	4.1	3-5	4.75	-0.50	Nov. 30 2001	0.7
Thailand	1.2	0-3	2.25	-0.25	Dec. 25 2001	1.1
Average	3.2	.	6.5	-0.45		3.3
Other industrialised countries						
USA	2.1	.	1.75	-0.25	Dec. 11 2001	-0.4
Japan	-0.8	.	0.10	-0.15	Sept. 18 2001	0.9
Euro area	2.1	0-2	3.25	-0.50	Nov. 8 2001	1.2
Denmark	2.0	.	3.60	-0.50	Nov. 8 2001	1.6
Average of all countries	2.8	.	6.7	-0.39		2.6

Inflation is calculated on the basis of the twelve-month change in the index on which the respective country's monetary policy is based, or in the CPI, as appropriate. The most recent available measurements are stated. Policy rates in real terms are calculated from past inflation. Until August 9 the Central Bank of Chile targeted real interest rates. Changes in policy rates in real terms before then are calculated on the basis of the inflation rate. For Switzerland, the mean value of the policy rate spread is used. The table shows inflation targets for 2002 or long-term targets in countries where these have already taken effect. Iceland's long-term target is 2½% (±1½%), to be attained in 2003. The long-term target for Poland is an inflation rate of less than 4%, to be attained in 2003. The inflation target for the Czech Republic decreases linearly and should end up at 2%-4% in 2005. Mexico is not included in the table despite having an inflation target, since its central bank does not have a proper policy rate target, but bases its monetary policy instead on a target of liquidity in circulation.