Financial markets and Central Bank actions[1]

Turnaround in the foreign exchange market – króna strengthens

At first after the Central Bank reduced its policy rate in November the króna continued to slide and reached a historical low on November 28 when the foreign exchange index stood at 151.16 points. After relatively good reports about the merchandise trade balance and the current account balance at the end of November and rumours of a pending agreement between unions and employers to postpone an inflation-triggered review of wage agreements, the króna began to strengthen. From the beginning of the year to November 28 the exchange rate index had risen by 24.6% (i.e. the króna weakened), but went down again by 6.2% until the end of the year. Interbank market trading with foreign currency amounted to more than 1,200 b.kr. in 2001. The Central Bank has not intervened in the forex market since October 12. However, it traded off the market with two market makers in the beginning of December, involving special transactions which could have had undesirable consequences for the exchange rate had they been conducted through the market. A market for FX swap agreements was established towards the end of November and met with a good response. It may have played some part in easing the tight liquidity which had been felt by occasional banks. Central Bank repos have been at the highest levels ever and the outstanding repo stock peaked at almost 85 b.kr. in the second half of January. High interest rates have prevailed in the interbank domestic currency market, but the downward yield curve indicates expectations that inflation is slowing down. Inflation expectations that can be read from bond yields also suggest greater confidence that the Central Bank's inflation target will be attained. The equity market has been perking up after large price slides in recent times.

Interest rate cut and exchange rate slide...

On November 8 the Central Bank announced an 0.8 percentage point cut in its policy rate. Subsequently, deposit money banks (DMBs) lowered interest rates on their non-indexed deposits and lending by the same amount. This was the Central Bank's second interest rate cut during the year; the first, amounting to 0.5 percentage points, was made on March 28. The króna slid at first following the interest rate cut. The exchange rate index peaked on November 28 at 151.16 points, although it went even higher in some cases within the course of a single day. However, there were signs that the króna was not far from reaching its weakest point, with the lowest real exchange rate for decades and good progress apparently being made on privatisation plans. Word also spread that unions and employers were interested in discussing a conceivable postponement of the wage agreement review scheduled for February 2002. In addition, reports came in of good profitability by companies in export sectors and elsewhere, which seemed to have successfully adapted their operations to tough external conditions, even though their financial results were still in the red due to the currency slide and other factors. On November 29, positive merchandise trade balance figures were announced. Foreign exchange market participants were quick to

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

respond and the index went down 1.6% then and the following day. This strengthening was levelled out in part over the following days, however, and the index was registered at 149.8 on December 7.

... then a turnaround

Early in December, labour market participants agreed to postpone the wage agreement review and, following a declaration by the government supporting this action along with promises of concessions, a three-month period of grace took effect. The reference point in this accord was that wage agreements would not be revoked if the consumer price index stood no higher than 222.5 points in May 2002. These events, coupled with news of a surplus on the merchandise account in October and a decrease in the current account deficit during the third quarter, represented a turning point in the foreign exchange market. Another decisive factor was the government's declaration that it would schedule treasury borrowing in such a way as to support the króna. Supply of foreign currency increased greatly and the exchange rate index began to drop rapidly on December 10. The króna strengthened every day almost continuously until into the New Year. The index reached its lowest point on January 4, 2002, at 139.68, while it stood at 141.8 points on the last day of the year.

The new fluctuation range stayed quite stable despite unexpected news

Since the middle of December the exchange rate index has fluctuated between the values 139 and 142. Occasionally it has dipped below 139 within a day or crept above 142 temporarily. The market has calmed down quite a bit and there have been relatively gentle swings on account of individual trades. On the morning of January 14, 2002 the CPI for January was published and turned out considerably higher than had been forecast. This caused a short-lived tremor which nonetheless proved smaller than might have been expected. The market makers' positive currency balance that morning was conceivably a factor at work. It appears that the currency flow was in reasonable balance, which calmed the market down. Speculators have entered the field but seem to be taking a more cautious approach than often before and stake lower sums at a time. In the second half of January the króna strengthened once again and the index stood at 139.36 on January 22. Chart 1 shows the development of the foreign exchange index and forex market trading.

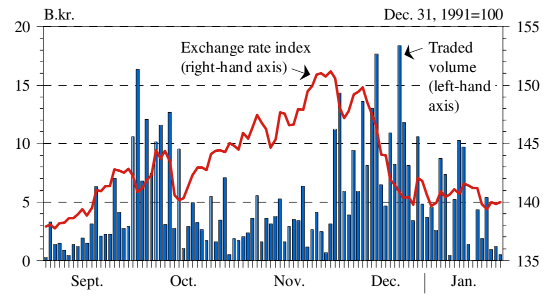
A new market ...

A new interbank market for FX swap agreements began operation on November 26. This market is still an informal one but preparations are under way for setting formal rules on its activities. FX swaps involve an agreement between two parties to exchange different currencies, which is reversed on maturity. The contract price is determined by the spread between interest rates in interbank markets for the respective currencies and by the length of the contract. Interest rates in the Icelandic interbank

Chart 1

Trading in the interbank forex market and the exchange rate of foreign currency vis-à-vis króna

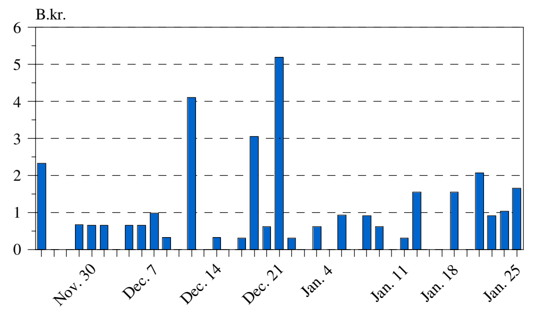
September 3, 2001 - January 25, 2002 (daily values)



Source: Central Bank of Iceland.

Chart 2

Daily traded volume on the interbank market with FX swaps Nov. 26, 2001 - Jan. 25, 2002



Source: Central Bank of Iceland.

market for domestic currency are somewhat higher than those in interbank markets for dollars, meaning that the recipient of Icelandic currency needs to make higher interest repayments. This market can reduce volatility of interest rates and exchange rates by increasing turnover. FX swaps are neutral with respect to the currency balance of parties to them, since the sale of one currency is matched by a forward purchase of another, and vice versa. They are also one of the channels available for improving liquidity, e.g. in Icelandic currency. Thus a participant needing króna who has fully utilised credit lines elsewhere can make such an agreement entailing a completely different and far smaller risk than direct borrowing in the króna market, since both parties have indirect pledges in the form of the other currency. The only risk involved is therefore that of price changes and the principal is never jeopardised. Trading for the first two months in the new market amounted to 29 b.kr. based on spot rates of contracts. Of this figure, Central Bank trading amounted to 4 b.kr. Chart 2 shows trading in the interbank market with FX swaps during its first two months of operations.

... and new trading methods soften swings

In recent months the Central Bank has transacted with foreign exchange market makers by making interventions, i.e. the Bank has phoned all market makers at as close as possible to the same time, requested a bid and traded. The Bank has intervened in the market when it has considered that market developments at any time were out of step with the fundamentals, or to prevent a spiral when one appears to be pending or to have begun. Interventions sometimes led to sharp changes in the exchange rate of the króna. There were considered to be grounds for examining whether other approaches might be better suited in certain cases, for example when the market is very volatile or special transactions are pending. The outcome was that the Central Bank offered foreign exchange market makers the option of direct trading when special or unusual transactions were involved, which would be notified to the market afterwards. The Central Bank assesses each request on a case-by-case basis on a number of criteria, including market conditions, transaction amounts and the nature of the underlying business. Two transactions took place in December on the basis of these new off-market trading arrangements. One involved trading with one of the market makers to the amount of approximately 1 b.kr., and the other when the Bank conducted transactions to the amount of 4 b.kr. with Búnadarbanki Íslands hf. in connection with its merger with Gilding Investments. In the latter case currency was needed to bridge the difference between foreign-denominated assets and liabilities, which meant that after the merger Búnadarbanki would not have fulfilled the currency balance requirement. In connection with these transactions the Central Bank made four FX swaps with Búnadarbanki, each to the amount of approx. 1 b.kr., maturing at monthly intervals after the day of trade.

Tight liquidity should not be a problem ...

Tight liquidity appears to be confined to certain institutions, because some have ample liquidity positions and have been able to profit from them for some while. Institutions with tight liquidity do not seem to have resorted to all measures at their disposal for easing liquidity problems. The Central Bank has not seen grounds for action even though it has been approached with requests to that effect. The currency swap market has made things rather easier for these institutions by giving those with active credit lines in foreign currencies an opportunity to make temporary swaps of foreign and Icelandic currency. Terms in this market reflect those in the interbank market for domestic currency, making interest rate information for longer than one week much more reliable than before. Interest rates in the króna market are the main indicator of tight liquidity among individual participants.

.... with easy access to krónur in the Central Bank

Seen on a longer view, for the full span of the Central Bank's interventions (i.e. since the beginning of June 2000), an examination of the main factors affecting the liquidity position produces interesting results, as shown in Table 1. It turns out that the króna position is rather better than when interventions began, so that credit institutions have been able to procure liquid funds from the Central Bank through repos, instead of the Central Bank and treasury mopping up liquidity in the market by other means. Moreover, credit institutions have access to overnight lending which

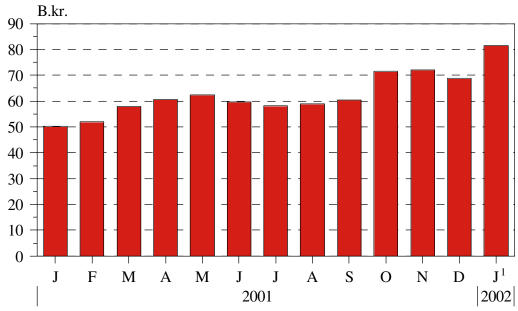
Table 1 Central Bank operations and changes in treasury position affect liquidity

B.kr.	Change in the period June 2000 - January 2002
Change in outstanding repo stock	53.3
Central Bank net purchases of foreign currency	-43.4
Change in required reserves	-7.1
Change in treasury position	-1.3
Change in króna liquidity	1.5

increases their scope even further. Thus a certain degree of balance still seems to prevail, since a large increase in liquidity would suggest a greater flow out of the Central Bank which could fuel inflation in the course of time. However, the transmission mechanism may be flawed and steps towards corrective action have already been taken, including the establishment of a currency swap market. Tight liquidity at individual institutions may partly be attributed to the fact that their lending has grown more than elsewhere, and that they have not managed to increase their deposits to the same degree as other institutions. In addition, the institutions in question have not chosen to increase their securities issues or boost their equity on the scale needed to make up the difference, leaving them in a tight position. Chart 3 shows the position of Central Bank repos from the beginning of 2001.

Chart 3

Outstanding stock of repurchase agreements at end of month January 2001 - January 2002



1. January 22. *Source:* Central Bank of Iceland.

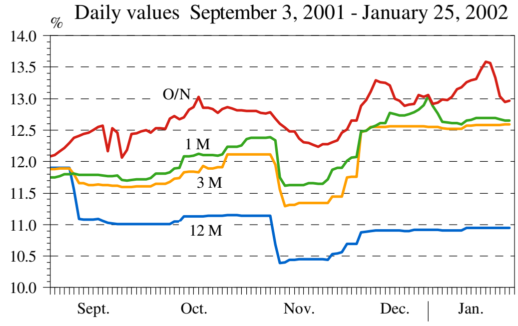
Interest rates have gone up in the domestic currency market...

From the beginning of November and well into January, interest rates went up somewhat on overnight lending in the interbank domestic currency market. A reduction was noticed when the Central Bank cut its policy rate on November 8, but this proved short-lived. This is shown on Chart 4. A drop appeared on January 24, when interest rates went down to 12.95%. A few days earlier they had been 13.6%. However, the rise in the second half of 2001 was not as sharp as that the year before: interest rates on overnight loans in the interbank market went up by 2.6 percentage points from the beginning of September 2000 to the end of that year, compared with a rise of one percentage point over the same period in 2001. The higher rate lasted for somewhat longer at the beginning of 2002, partly sustained by the good treasury position in the middle of January due to exceptionally high collections of levies. A persistent liquidity shortage among individual credit institutions is the main explanation for the rise in interest rates, together with the fact that credit lines between market participants may be fully utilised.

Chart 4

Interest rate in the domestic interbank króna market (REIBOR)

Daily values September 3, 2001 - January 25, 2002



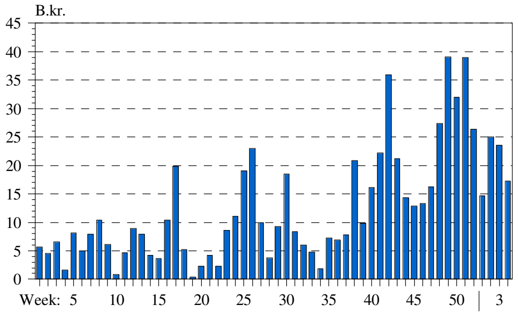
Source: Central Bank of Iceland.

... and use of overnight lending has increased

Another form that tight liquidity takes is the significant increase in the use of overnight loan facilities in the Central Bank in recent months. In 2000 the average balance of overnight loans was 1.2 b.kr. From the beginning of 2001 to the end of August the average balance rose to 1.7 b.kr., whereupon it soared rapidly and was more than 4.5 b.kr. from September to the

Chart 5

The overnight lending balance
January 2001 - January 2002 (weekly values)



Source: Central Bank of Iceland.

end of the year. Chart 5 illustrates this development. Individual credit institutions' use of overnight lending varies and bears little relation to their size. It is clear that Central Bank facilities for credit institutions are in some cases used to finance lending beyond normal levels, which may suggest that the Bank's interest rates are too low, or that the profitability of lending which is financed with Central Bank credit is more attractive than has previously been thought.

Many central banks have lowered their interest rates to spur growth

A number of interest rate changes have been made by central banks in other countries, in most cases reductions. The Federal Reserve lowered the US policy rate by 0.25% on December 12, and last year by a total of 4.75 percentage points in 11 interest cuts in all. The European Central Bank, and the Central Bank of Denmark which generally follows its interest rate changes closely, cut their rates on November 8 by half a percentage point. The Bank of England did the same. The Central Bank of Canada likewise cut its policy rate by half a percentage point on November 27, and so did Switzerland on December 7 and Norway on December 13. In virtually all cases central banks cut interest rates to spur growth without inflation proving to be a problem, since it is low. The situation in Iceland is the complete opposite, because the economy has been overheating and inflation has gone out of control. The interest rate differential between Iceland and neighbouring countries is now around 7%, measured in terms of three-month T-bills. The differential in the interbank market is 9.3%.

All quiet on the bonds market ...

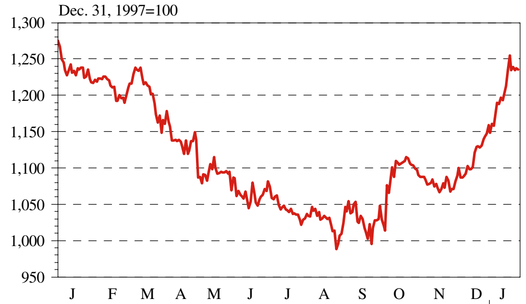
Interest rates on indexed bonds went down immediately after the Central Bank policy rate cut, but then began climbing again. The yield on housing bonds towards the end of January was similar to that in the beginning of November, while yields on government bonds had dropped by about 0.2 percentage points. Interest rates on non-indexed bonds also fell sharply following the Central Bank cut, but rose again. From November until near the end of January, however, the yield on government paper maturing in 2003 fell by roughly half a percentage point, but on bonds maturing in 2007 by only 0.1 percentage point. Issues of housing bonds ran high made last year, but slowed down in December.

... but the equity market has come back to life

A major turnaround has taken place in the equity market. Trading has increased and prices have risen in most cases. In the course of 2001 the ICEX-15 index fell by 11%. Since the beginning of November, however, the index has gone up by more than 13%. The fisheries and pharmaceuticals indices have risen during this period by over 16%, while the IT and construction industry indices have fallen by 2% to 3%. The upswing in fisheries company prices is prompted by improved profits as a result of the lower exchange rate in recent times, as well as high product prices and good fishing catches. Chart 6 shows the ICEX-15 price trend since the beginning of 2001.

Chart 6

The ICEX-15 equity price index
Jan. 3, 2001 - Jan. 25, 2002 (daily values)



Source: Iceland Stock Exchange (ICEX).

Foreign exchange market highlights 2001

Foreign exchange index

The foreign exchange index stood at 120.8381 points at the end of 2000 but 141.7985 points at the end of 2001. The index therefore rose by 17.35% over the year, meaning that the króna weakened by 14.78%. It peaked at 151.1638 points on November 28 but buttomed at 120.9555 points on February 5.

Turnover in the foreign exchange market

Turnover in the foreign exchange market amounted to 1,218 b.kr. in 2001, compared with 768 b.kr. the previous year. The table shows average daily turnover for various periods during the year. Inflation targeting was adopted on March 28 and commissions for foreign exchange market making on July 1. Some tremors were felt in the forex market following the terrorist attacks on the USA on September 11.

Table 1 Average turnover per day in 2001, by period

From	*To*	*Turnover (m.kr.)*	*Period length (days)*	*Average daily turnover (m.kr.)*	*Change in exchange rate index (%)*
Jan. 3	March 27	116,677	61	1,913	1.91
March 28	June 29	550,015	60	9,167	10.73
July 1	Sept. 11	120,817	51	2,369	-0.11
Sept. 12	Dec. 31	431,731	76	5,681	2.05
March 28	Dec. 31	1,101,368	187	5,890	11.67
July 1	Dec. 31	551,353	127	4,341	1.93
Jan. 1	Dec. 31	1,218,045	248	4,911	16.89

The table shows how average daily turnover increased after inflation targeting was introduced, then dropped when the commission system went into effect. However, it is disputable whether the introduction of inflation targeting served to quell the market, or whether summer vacations, the commission system or announcements on treasury foreign borrowing at the end of June had some effect. After the events of September 11, trading picked up considerably. The most trading on a single day was on May 2. Trading volume then amounted to 36.3 b.kr., the largest turnover in a single day in the history of Iceland's foreign exchange market.

Commission

A commission system was introduced on July 1, whereby market makers are paid commission on a quarterly basis. Maximum commission paid to market makers as a whole is 100 m.kr. per quarter. The commission is paid for presenting bids in dollars to buy or sell, which other market makers consider lucrative to accept. Thus the system is supposed to discourage market entrants who aim to take advantage of arbitrage opportunities, thereby reducing the probability of spirals. Total calculated commission exceeded 100 m.kr. in both Q3 and Q4 of 2001, so the maximum amount was shared out proportionately among market participants. Calculated total commission for the second half of the year was almost 357 m.kr.

Exchange rate volatility

Exchange rate volatility shows the standard deviation in day-on-day changes in the exchange rate index. Volatility became far more pronounced after inflation

Table 2 Exchange rate volatility

Selected periods in 2001

	Standard deviation
January 1 - March 27	0.20%
March 28 - June 30	1.14%
July 1 - September 11	0.41%
September 12 - December 31	0.71%

In the 3 past years

	Standard deviation
1999	0.17%
2000	0.35%
2001	0.72%

targeting was introduced and dwindled again after July 1, although not back to its former level. This trend is fairly consistently mapped against forex market turnover. Volatility has doubled between the years for the past three years.

Interventions

The Central Bank intervened in the foreign exchange market 14 times in the course of 2001, selling currency to the total amount of 24.4 b.kr. In addition to direct intervention, the Bank traded off-market with two market makers for a total of 5.1 b.kr. in December. The Bank's total sales of dollars to market makers therefore amounted to 30 b.kr. during the year. The largest intervention was on March 27, with the sale of US$ 42 million to market makers.

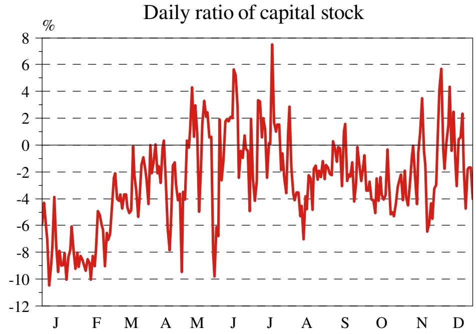
Table 3 Central Bank sales in the forex market

	Million krónur	*Million USD*
January 24	2,060	24
January 25	1,039	12
January 26	1,031	12
February 9	1,033	12
March 23	1,592	18
March 26	1,464	16.5
March 27	3,768	42
June 21	2,545	24
September 28	1,063	10.5
October 1	1,207	12
October 3	1,199	12
October 8	3,390	33
October 10	1,834	18
October 12	1,208	12
December 7	1,088	10
December 12	4,017	38.5
Total	29,538	306.5

Chart 1

Market makers' total foreign balance in 2001

Daily ratio of capital stock



Source: Central Bank of Iceland.

Foreign balance

Market makers are obliged to maintain a broad balance between their foreign-denominated assets and liabilities. The ratio of foreign balance to capital stock must be within 30% in either direction. In spite of this rule, market makers still enjoy considerable scope. However, they are long way from taking advantage of it. Chart 1 shows the development of foreign balance as a proportion of capital stock in 2001.