Financial markets and Central Bank actions[1]

Sharp swings and then calm on the foreign exchange market

On Wednesday May 2 the exchange rate of the króna depreciated by 6%, the greatest slide in a single day in the history of Iceland's interbank forex market. In the next few days the slide was quickly recouped, followed by a period of more than a month when as a rule the króna weakened, although there were sharp swings in both directions. On June 21 the Central Bank intervened in the forex market by selling US dollars for krónur. This action, coupled with the Central Bank's agreement with interbank forex market makers on commissions and a declaration by the government of Iceland that it would borrow abroad to bolster the Bank's foreign reserve, marked a turning point of sorts and restored calm to this market. Interest rates rose somewhat in the wake of higher inflation, although the market clearly appears to regard the jump in prices as short-lived. Central Bank intervention in the forex market led to some tightening of domestic liquidity among financial companies. The bonds market seems to be rallying, but the equity market seems to be at a low.

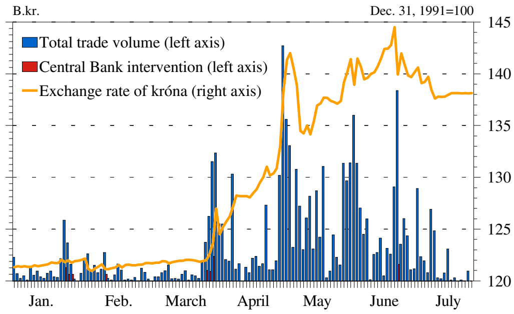
Huge swings in the exchange rate of the króna …

On Wednesday May 2 a spiral formed in the interbank forex market. The króna depreciated by almost 6% and trading for the day amounted to 36 b.kr. However, the market makers' position deteriorated by only just under 3 b.kr., so that trading to the amount 33 b.kr. can be attributed to hedging measures by them. It became clear at once that this was a case of "overshooting." Sharp swings occurred within that day and the following days caused unease among market makers and their customers. The depreciation was recouped in the space of a few days, then a period ensued with fairly large swings in the exchange rate from one day to the next, but on a downward trend. This is clearly shown in Chart 1. Chart 2 shows the exchange rate index within the day at five-minute intervals from April 27 to May 9, and how large the intraday swings were over this period. On June 21 the situation in the forex market was quite uncertain and there was felt to be a pending risk of a rapid slide in the króna, although a change in attitude to the exchange rate developments of the preceding weeks could be discerned. The Central Bank decided to sell dollars to ease the pressure that had built up. This action was very successful and marked a turning point of sorts in exchange rate developments. This was the Central Bank's first for-

Chart 1

Exchange rate of Icelandic króna and volume traded on the foreign currency market

Daily values January 3 - July 23, 2001



1. This article uses data available on July 23, 2001.
2. The events of this day are covered in more detail in Box 1. See also the separate article on foreign exchange markets in this *Monetary Bulletin*.

Wednesday May 2, 2001

Prices in international foreign exchange markets have long been prone to sharp swings, upwards or downwards, generally following reports about the respective countries' economies, although international news often has a great impact too. Iceland's interbank forex market obeys the same laws, as events have borne out. After the replacement of the exchange rate deviation band with inflation targeting on March 27 it was clear that greater interbank forex market fluctuations would result, in line with the experience of other countries.

Wednesday May 2, 2001 witnessed the greatest swing ever seen in the exchange rate of the króna since Iceland launched its forex market in 1993. The following is a brief explanation of what happened then.

At the start of each trading day, the Central Bank's trading desk calls the interbank market makers to find out about their foreign balances and the outlook for the day. Their positions vary depending on volumes of currency inflow and outflow, and fluctuations may take place on a day-to-day basis – some participants have a shortage of currency and others have long positions. On Wednesday May 2 two market makers were short, one was in balance and one had a long position. Overall, there was a considerable shortage in the market. A noticeable feature was that all the market makers planned to start the day by buying currency. In such a situation, a weakening of the króna is inevitable – the only question is by how much. Conversations that morning did not reveal that one of the market makers intended to buy currency to the equivalent of 2 b.kr. in the market to meet repayments on a large loan. Under normal circumstances the market is fairly well equipped to handle such a sum, although such transactions admittedly weaken the króna.

Chart 1

The króna exchange rate index at 5-minute intervals on May 2, 2001

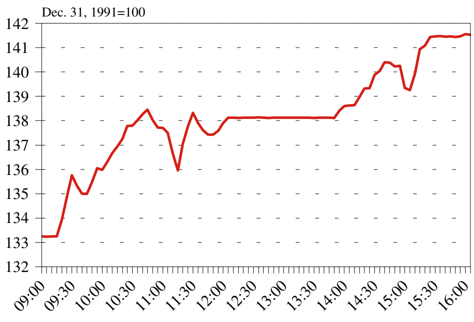


Fig. 1 shows that immediately after the market opened (09:15) the króna weakened rapidly. At the start of the day the exchange rate index stood at 133.2444 points, but by noon it had just passed 138. After a fairly long pause, the second round of weakening began around 14:00. At the end of the day (16:00) the index stood at 141.4645, having risen by almost 6.2% since the market opened. Accordingly, the króna weakened against foreign currencies by just over 5.8%. Trading amounted to 36.3 b.kr., which was also a record. It is difficult to estimate how much of this trading was on account of transactions by customers, but it is clear that a spiral of rapid price changes is caused when market makers go straight to the market to buy currency if others buy from them.[1] According to market makers, their net foreign balance changed by 3.2 b.kr. in the course of the day, meaning that just over 33 b.kr. of trading can be accounted for by their efforts to maintain their positions within limits they had set for themselves.

This was a busy day for the market makers, with orders for currency piling up which they had trouble in meeting due to their own foreign balances and the heavy risk of losses under rapid price changes. Some customers were therefore told that only limited orders to buy currency would be accepted, and others did not get a quote. Instances were also heard where prospective sellers of currency were unable to get their offers through, which obviously could have helped to counter the trend to some extent.

Naturally, the Icelandic economy experienced unrest after this day, and there was much discussion about the impact that the weakening of the króna would have, for example that inflation and foreign debt would increase too. In the view of the Central Bank and others, this sharp weakening was an overshot, i.e.

1. Further coverage of the forex market can be found in the article "The Icelandic foreign exchange market" elsewhere in this *Monetary Bulletin*.

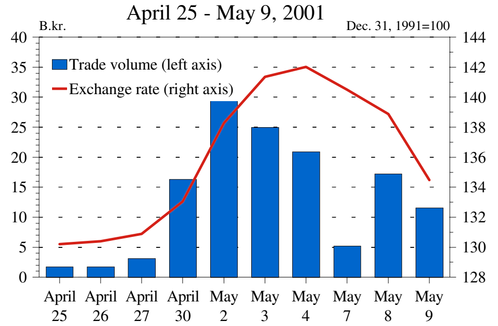
there was no justification for it taking place on such a scale over such a short period. A week later, the exchange rate index had returned to a similar value to when the market opened on May 2, as Fig. 2 shows.

It can also be seen that although the slide was most rapid on May 2, weakening also took place before and after it. After that day trading declined and the króna began to rally, but large swings continued, especially within individual days.

Chart 2

Króna exchange rate index and volume traded on foreign currency market

April 25 - May 9, 2001

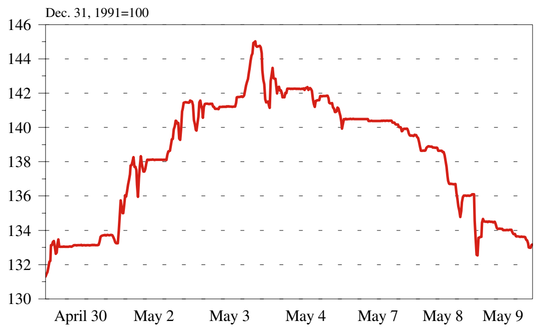


There are several reasons why the Central Bank did not intervene in this sequence of events. Firstly, under the new exchange rate regime the Bank is no longer obliged to defend the króna within a specific deviation band. From the outset the Bank regarded the weakening as an overshot, and expected it to be won back. Intervention in the market was also considered to entail a certain risk, since it could be interpreted as a continuing indirect assurance that sharp swings would not take place without the Central Bank intervening in them, making it a kind of test case for the Bank's steadfastness after the monetary framework was changed. It has since emerged that certain market makers were firmly convinced that the Central Bank would intervene, and acted on this faith. Another factor influencing the Bank's attitude was that four-fifths of its foreign reserve is now funded with short-term borrowing after interventions in the forex market over the past year, so that there was not felt to be any justification for depleting it further unless this would be likely to have a long-term effect. It is fairly familiar for intervention when a currency is under pressure to have only a short-term impact and such action rarely manages to reverse the trend.

mal intervention in the interbank forex market since the króna was floated on March 27.

Chart 2

The króna exchange rate index at 5-minute intervals April 30 - May 9, 2001



... prompted a variety of actions

Informal talks with foreign exchange market makers revealed that the swings in the exchange rate were far greater than they had expected, and that they had lost substantial sums on market making. On their initiative, talks were then launched with the Central Bank on ways to soften fluctuations in the forex market. A working group was assigned the tasks of exploring ways to deepen the market, cushion against swings and make the market making role more attractive. The outcome was that the Central Bank decided to pay a commission to market makers. Trading occurs in the interbank forex market when one market maker accepts a bid from another. The party putting forward a bid that leads to a trade is considered as making the market, while the party accepting the bid is regarded as tapping the market. At the end of each day, the net market made by each participant is calculated. Participants with positive market making receive a commission amounting to 0.2% of their trading. Others receive nothing for the day. Every

New currency basket (%)

Based on foreign trade in 2000

Region	*Currency*	*Exports*	*Imports*	*Average*	*Change from previous basket*
USA	USD	26.13	27.86	26.99	1.73
Britain	GBP	14.92	14.61	14.77	0.40
Canada	CAD	1.76	0.96	1.36	-0.07
Denmark	DKK	8.29	9.07	8.68	-0.21
Norway	NOK	5.94	6.21	6.08	-1.53
Sweden	SEK	2.49	6.40	4.44	0.37
Switzerland	CHF	2.40	0.90	1.65	-0.46
Euro zone	EUR	33.78	29.54	31.66	0.23
Japan	JPY	4.29	4.45	4.37	-0.47
North America		27.89	28.82	28.35	1.66
Europe		67.82	66.73	67.28	-1.19
European Union		59.48	59.62	59.55	0.80
Japan		4.29	4.45	4.37	-0.47
Total		100.00	100.00	100.00	0.00

three months, the total commission payable to all market makers is calculated. The maximum commission is 100 m.kr. for each period and will be shared among participants in proportion to their market making during it. This arrangement will be in effect on a trial basis until the end of the year. Other approaches were mentioned in the group's proposals, namely currency auctions under specific circumstances and also reducing the market makers' obligations and allowing the market to seek equilibrium on its own. The latter course was considered too risky under prevailing conditions, since in the short term it was thought more likely to magnify swings than reduce them. The Central Bank also had talks with the government on borrowing abroad to bolster the Bank's foreign position, since intervention in the forex market in recent years has left its reserve largely funded by foreign short-term borrowing. Subsequently, the government announced that 25 b.kr. would be borrowed abroad to boost the Central Bank's foreign position, part of which will conceivably be allocated to the Bank as a capital contribution with reference to the provisions of the new Central Bank Act.

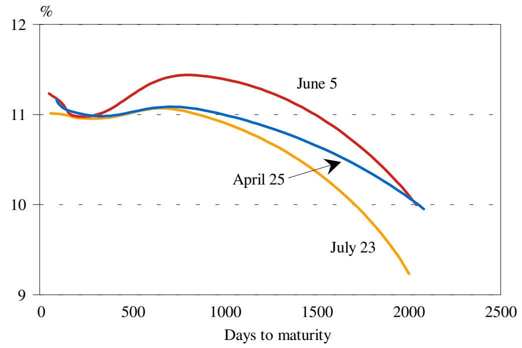
After these measures were announced, calm was restored in the market and it remained quiet for the first three weeks of July. For most of the time the exchange rate index remained close to 138 points and trading volume was low, even zero on some days.

Shorter-term interest rates rose with higher inflation expectations ...

Inevitably, the depreciation had an impact on inflation and interest rates. Inflation expectations rose and have been particularly noticeable on bonds with a maturity of at least three years. The yield on three-month T-bills dropped from 11.8% at the beginning of this year to 11.0% on July 23. The CPI went up by 1.5% in June and 0.8% in July. In June, the CPI increase exceeded the tolerance limits set in the joint declaration made by the Central Bank and government of Iceland on March 27. This jump apparently caught the market somewhat by surprise, because as soon as it became evident that inflation would exceed the tolerance limits, interest rates on short-term instruments went up fairly sharply. This increase was largely recouped, however, as shown in Chart 3.

Chart 3

Yield curve of Treasury bills and Treasury notes



... but longer-term rates have fallen

Yield on government bond categories maturing in 2007 fell from 9.95% to 9.23% from the end of April to mid-July, strongly suggesting a market assessment that the long-term outlook is for a lower rate of inflation than currently being measured.

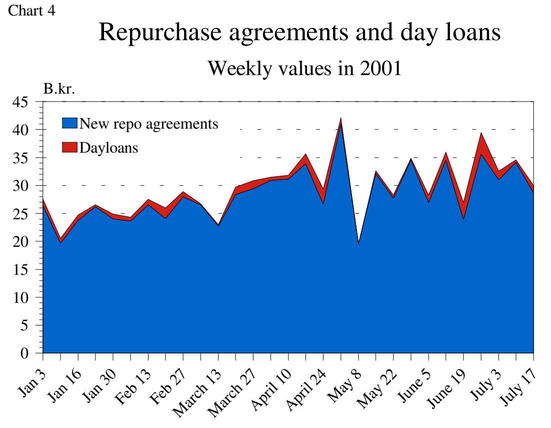
Slight widening in the interest rate differential with abroad

The interest rate differential with abroad widened from 6.6% to 6.8% from the end of April to mid-July. Domestic interest rates measured in terms of the yield on three-month T-bills dropped slightly, from 11.19% to 11.07%, while the weighted average of foreign bills with the same lifetime went down from 4.6% to 4.3%. Part of the reduction in foreign rates is explained by the effect of the cut in the US federal reserve rate by 0.25% at the end of June and a similar reduction in the Central Bank of Europe (CBE) policy rate on May 10. As usual, the Danish Central Bank followed suit and lowered its policy rate by 0.25%. On the other hand, the Swedish Central Bank announced an 0.25% rise at the beginning of July in response to growing inflation expectations and to support the Swedish krona. It intervened in the Swedish foreign exchange market on June 15 and 25 for the same reason. Also, the Central Bank of Canada cut its policy rate by 0.25% on July 17.

Króna in short supply ...

Tighter liquidity became noticeable at credit institutions following the Central Bank's interventions in the forex market in March, because of the considerable amount of Icelandic currency it has bought and the treasury's ample króna position. Credit institutions have used the Central Bank as a liquidity source through repo transactions which reached a historical peak in the beginning of July. The precondition for such transactions, and in fact Central Bank intraday loan facilities too, is that these institutions can put up securities as collateral. As a result of their large repo stock, a shortage of securities that qualify as collateral has been noticed, and it is known that credit institutions have borrowed such securities in order to take part in repurchase transactions with the Central Bank. The Central Bank has examined ways to ease the tight domestic liquidity, but so far has not taken any special action since the consequences could include an increase in lending. Chart 4 shows weekly repo transactions and average turnover of intraday loans.

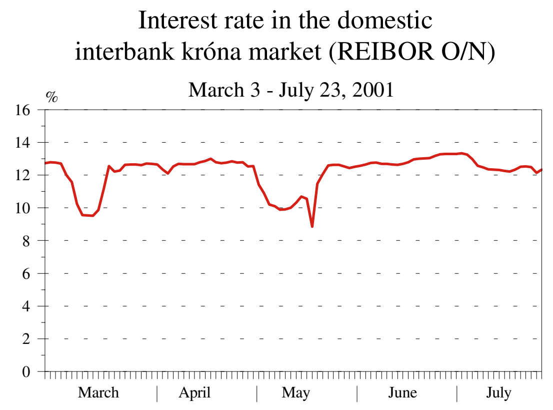
Chart 4



...one consequence of which was higher interest rates in the interbank domestic market

Trading in the interbank domestic currency market has been fairly sluggish, partly as a result of the poor liquidity position of credit institutions, which have made fairly heavy use of their credit lines with each other, while a similar tendency has been noticed in this market to the forex market, where institutions defend their exposures by borrowing from others when loans are taken with them. As before, the bulk of trading in the interbank domestic market is for the shortest lifetime, i.e. overnight (O/N). Chart 5 shows the development of interest rates in the interbank domestic market.

Chart 5



Trading in the bond market has rallied...

The bond market has perked up and trading in government bonds and T-bills increased noticeably in May and June. Housing funding bond turnover also showed some increase. Turnover in most types of bonds grew substantially in the first half of this year compared with the same period in 2000. Trading in

New interest rate legislation

A new Act on Interest Rates and Indexation, no. 38/2001, entered into effect as of July 1 this year, replacing Act no. 25/1987. The following is an outline of some of the changes involved, particularly with respect to penalty interest and the Central Bank's duty to publish interest rates.

The new act grants a certain degree of freedom to negotiate penalty interest. Instead of being unilaterally decided by the Central Bank, penalty interest can now be negotiated, either as a fixed surcharge on a specific base rate or as a fixed rate. Consumer lending penalty rates are not negotiable, however. If no specific agreement is made on penalty interest or surcharges on default, the penalty interest rates decided and published by the Central Bank shall apply. These are, firstly, a base rate for penalty interest equivalent to the interest rate on the most common form of Central Bank short-term lending to credit institutions, and secondly, a surcharge for defaults, which may be in the range 7 to 15 percent. The resulting total represents the penalty interest rates decided by the Central Bank, which are in effect for six months at a time i.e. from January 1 and July 1.

Under the new legislation, the Central Bank ceased its monthly announcements of all general interest terms for commercial banks and savings banks, together with a weighted average rate. Details of average and highest interest rates will therefore no longer be formally published after the act enters into effect. Thus it is important for new loan agreements not to refer to concepts such as average interest rates on bonds, average yield on lending or maximum interest rates allowed by law. Instead, the Central Bank will publish rates based on the lowest interest on new lending by credit institutions. Parties wishing to include variable interest rates in loan agreements can then use these as a reference point, and there are no obstacles to negotiation of specific deviations from them. A report accompanying the bill proposing the new interest rate legislation outlines the reasons for these changes. Since the prior legislation entered into effect, it points out, major changes have taken place in the commercial banks and savings banks' interest rate spectrum, among other things with the introduction of prime lending rate systems. This has greatly complicated the calculation of average interest rates. In addition, the report points out that average interest rates represent an abnormal reference for a large number of loan agreements, since the average is obtained on the basis of low interest for high-rated borrowers with good collateral, high interest for parties with poorer collateral, and the whole spectrum between these two poles. However, there are grounds for urging parties to agree on interest rates among themselves, instead of "instinctively" using the general reference of market interest rates.

As hitherto, the Central Bank will continue to gather detailed data on credit institutions' interest rates. It is also likely to publish various interest rate series in connection with coverage of economic issues. The interest rates that the Central Bank is obliged to publish will appear in the Legal Gazette and on the Bank's website.

A new reference for interest rates in damages claims will be used, instead of the earlier act's yardstick of interest on ordinary savings accounts. Since this form is now obsolete and hardly used, the new act stipulates that interest on damages claims will be equivalent to two-thirds of the lowest interest rate published by the Central Bank each month. This entails a considerable rise in the interest rates applying to damages claims.

Loan agreements made before the law enters into effect, and carrying variable interest based on average or highest rates, are covered by a provisional clause ensuring that the interest rate to use can be identified. If interest is linked to the Central Bank's published average rate, the new published rate shall be used with a supplement amounting to 3.5 percent for non-indexed loans or 2.5 percent for indexed loans. Where terms refer to the highest published rate at any time, the supplement is 4.5 or 3.5 percent on top of the Central Bank's published rate for non-indexed and indexed liabilities respectively.

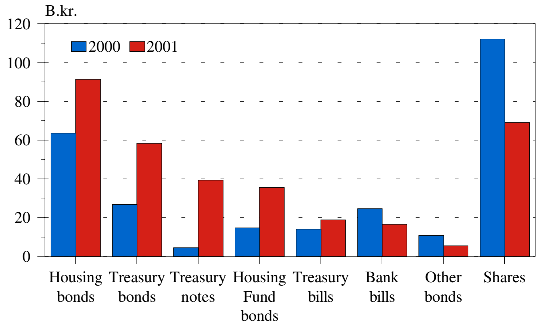
Principles for indexation of savings and credit remain unchanged from earlier legislation. The report accompanying the bill states that official rules on indexation of financial liabilities primarily served the purpose of protecting general savings and credit in

Iceland from being eroded by domestic inflation as it is customarily measured, i.e. as the average change in prices of a wide sample of goods and services. However, this arrangement was not intended to hinder normal capital market evolution. Thus it is specifically stated that derivatives are not subject to the provisions of the act. Furthermore, authorisation is granted for using equity indices as a reference in loan agreements. Agreements on derivatives and equity indices are both innovations in Iceland but long familiar from other countries.

government instruments increased the most, from 4.4 b.kr. to 39.3 b.kr. Treasury bonds more than doubled in volume and housing funding bonds were up by 141%. Housing bond turnover increased by 44% in the first half of this year compared with the same period last year. It should be pointed out, however, that the bonds market was thrown into some upheaval around the middle of last year when market makers ceased to act for treasury bonds and housing bonds. Chart 6 shows a comparison between securities trading on the Iceland Stock Exchange (ICEX) for the first six months of this year and the same period in 2000. In most cases yields have fallen over the past three months, e.g. yields on government bonds maturing in 2005 went down from 5.96% to 5.54% and on housing bonds with a final maturity in 2022 from 5.81 to 5.77. Yields on housing bonds with a final maturity in 2037, however, rose from 5.45% to 5.57%.

Chart 6

Securities trading on Iceland Stock Exchange in first six months of year



... but equity trading has decreased

Equity prices have continued to fall. The ICEX-15 index slid by almost 20% from the beginning of the year to mid-July, and trading decreased by 38% over the first six months of 2001 compared with the same period the year before. A fairly large number of public limited companies have issued profit warnings.