

Financial markets and Central Bank measures¹

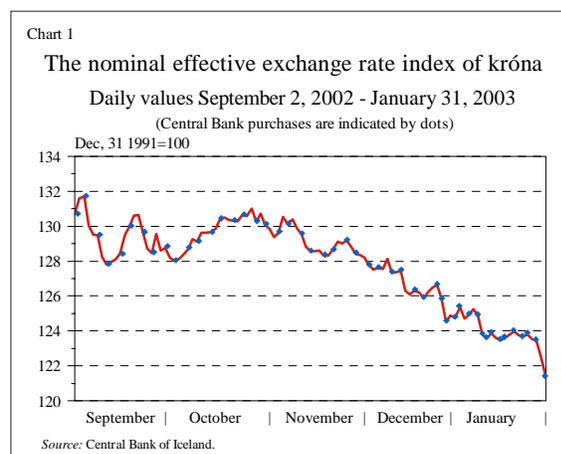
The króna strengthens

The exchange rate of the króna has continued to strengthen in spite of the fact that the Central Bank made two cuts in its policy interest rate at the end of 2002 and also purchased currency in the market, both on a regular basis and in one large transaction in January. The Central Bank ceased payment of commissions to market makers in the foreign exchange market at the end of the year and countered the effect of this move with a change in its rules. Interest rates on non-indexed loans went down after the policy rate cut, and also on inflation-indexed lending, but to a lesser extent. The banks' liquidity position was good until the end of 2002, but it has come under some pressure since the beginning of this year. The interest rate differential with abroad has narrowed in recent months, mainly because of lower domestic interest rates. Equity and bond trading on Iceland Stock Exchange was brisk in 2002 and equity prices showed a considerable rise around the end of the year. Brisk trading took place in January as well.

The króna strengthened ...

A sizeable currency inflow and expectations about power-intensive industrial projects in the next few years caused a considerable strengthening of the króna. While the precise reasons for the inflow are uncertain, it is known that major loan movements took place and also that speculators are back in the field, although they are acting more cautiously than often before. Since the beginning of November to the end of January the króna strengthened by 6.6%. The exchange rate index stood at 121.36 at the end of January 2003, a similar value to the middle of February 2001. The weakening of the US dollar caused its exchange rate to drop below 80 króna on January 13, for the first time since August 2000. At its peak, the dollar exchange rate was 110.39 króna on November 23, 2001. Chart 1 shows the exchange rate index trend since the beginning of September, with the days marked in when the Central Bank bought currency. Turnover in the forex market has

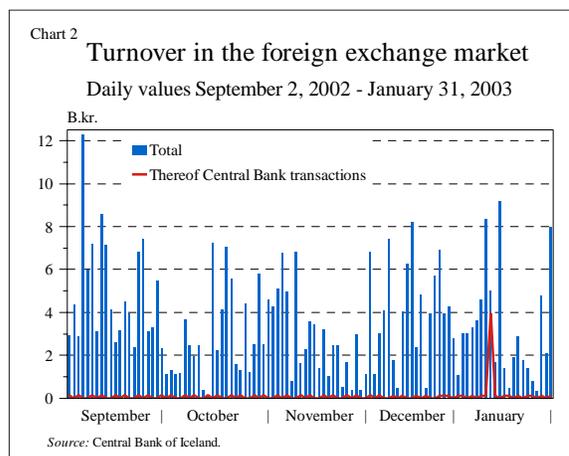
1. This article uses data available on January 31, 2003.



fluctuated, but the average daily figure was 3.6 b.kr. over the period from September 1 until the end of January, which is close to last year's daily average. As Chart 2 shows, trading has been prone to sharp swings, and excluding the large-scale purchase made on January 14 it is clear that Central Bank buying has accounted for only an insubstantial proportion of market turnover.

... despite Central Bank foreign exchange purchases...

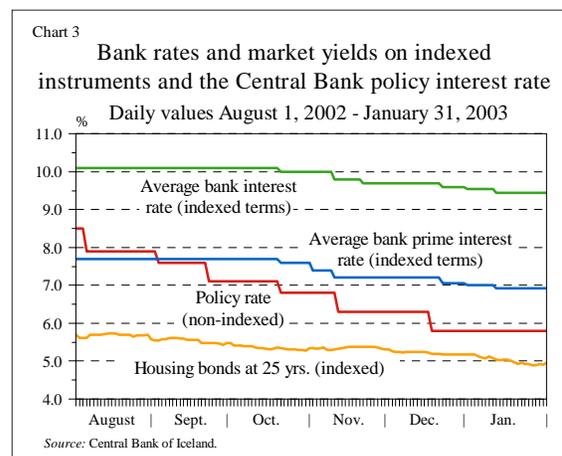
The Central Bank has been buying 1½ million US dollars in the market twice a week, and three times a week since January 10. At the beginning of February the Bank decided to make daily currency purchases. The aim is to reduce short-term financing of the foreign reserve. On January 14 the Bank received an offer to purchase US\$ 50 million, which it accepted. This trade was in line with the Bank's declaration in August last year that it was prepared to make large-scale purchases in special cases in order to reduce short-term financing of the foreign reserve. Half the proposed amount has been purchased, namely 10 b.kr. of 20 b.kr. Even though such purchases may have some impact on the exchange rate of the króna, this is not their purpose and the Bank does not regard them as intervention in forex market, since they have little to do with monetary policy and large-scale transactions will only be made on the initiative of market makers, not the Central Bank itself. Regular purchasing has had a negligible effect on the exchange rate in each case, as the Bank had expected, although the announcement of planned purchases at the end of August conceivably had some impact. It was apparent that the January 14 transaction had little effect on the exchange rate, suggesting that forex market participants did not regard it as a traditional intervention measure.



... and interest rate cuts

The Central Bank announced a cut in its policy interest rate of 0.5 percentage points on November 6 and

again by a further 0.5 percentage points on December 12, 2002. These cuts reflected the Bank's assessment of macroeconomic conditions and price developments. In its November inflation forecast, the Central Bank had not taken hydropower and power-intensive construction projects into account, since it considered that a fair amount of scope was available to respond with monetary policy measures if these projects were decided. Commercial banks and savings banks announced reductions in their non-indexed interest rates in the wake of the Central Bank's decision. In mid-November, the second half of December and January this year, the commercial banks and savings banks also announced a reduction in indexed interest rates, which have gone down by 0.5 to 0.55 percentage points since the beginning of November while the Central Bank policy rate has decreased by 1 percentage point over the same period. Chart 3 shows the development of average interest rates on inflation-indexed bank lending since the beginning of 2002 and the indexed yield trend for active classes of housing bonds, which have gone down by 0.38 percentage points since the beginning of November. Since the beginning of 2002, the banks' interest rates have decreased by 0.75-0.79 percentage points and those on the class of housing bonds used in the comparison by 0.91 percentage points. The Central Bank's policy rate went down by 4.3 percentage points over the same period, however.



Changes in the foreign exchange market framework

In the Central Bank's view, the commission paid to market makers, which is described in the box

Foreign exchange market highlights 2002 at the end of this article, hardly had any measurable effect. The Bank considered that the less volatile exchange rate was due to the turnaround in the current account deficit and lower foreign investment level rather than being the result of the commission. In talks held in June 2001 on measures to soften exchange rate volatility, market makers pointed out two ways that Iceland's forex market differed from those in other countries, i.e. its rules obliging market makers to trade on request five minutes after a previous trade, and rules on the spread in trades. In the Central Bank's view it was untimely to lift these restrictions then, owing to pressures in the market. At the end of December 2002, however, the Bank's Board of Governors removed these two stipulations from the forex market rules, which it now regards as being, in principle, comparable with rules or prevailing customs in foreign markets. Market makers' subsequent behaviour does not indicate that this change had much of a disruptive effect; at least, the spread is unchanged and swings are similar. It should be remembered that exchange rate volatility tends to be most pronounced when currency demand and supply are imbalanced, but even when such a situation arose at the end of January, no major changes were discernible in the market makers' behaviour.

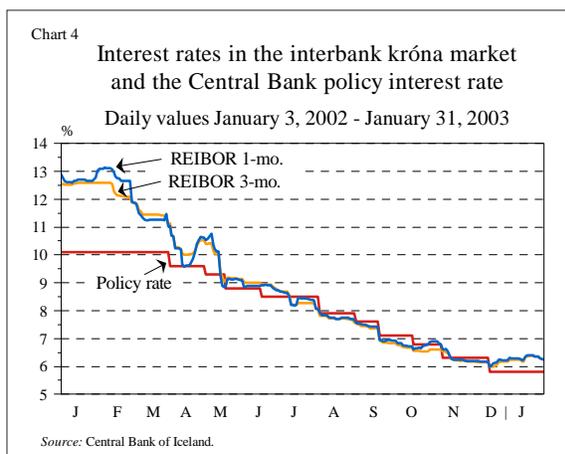
Little need for Central Bank facilities ...

More disciplined liquidity management has been apparent among the main credit institutions recently. Use of Central Bank overnight loan facilities has

declined and there is much less need for them in order to complete settlements in payment systems. It cannot be ruled out that the changes to the payment intermediation system described later in this section is a factor at work here. In spite of better management and unrestricted access to repos, interest rates in the interbank market for domestic currency have been exceptionally high in January, and little can be offered in the way of explanation. Some participants are apparently short on liquidity but others seem to be in ample positions and for some reason the balance cannot be improved. Different assessments of the outlook may be a factor at work, and tighter scope of required reserves may also have an indirect effect. As Chart 4 shows, interest rates in the króna market have generally kept pace with Central Bank interest rate changes since mid-May 2002.

... but changes were made to payment intermediation arrangements at the end of the year

Just before the end of last year agreements were made with credit institutions which have access to payment systems in Iceland. These agreements are consistent with the Central Bank's policy of bringing payment systems into harmony with international standards in this field as laid down in the 10 Core Principles published by BIS. Alongside these agreements with credit institutions, collateral securities were agreed for settlements in the two payment systems, the netting system (NS) and Central Bank's real-time gross settlements (RTGS) system. Collateral in the NS is based on agreements among the parties involved concerning reciprocal limits for settlement amounts and ensures that settlements will be finalised up to the specified ceiling. This would enable a settlement to be completed even in the event of a failure to pay by the party with the greatest debt, which is consistent with the fifth Core Principle. In the Central Bank's RTGS system, sufficient collateral is made available to allow the bulk of daily transactions in the system to be completed without special action being taken. The RTGS system differs from the NS insofar as transactions are not made if they would leave the account negative afterwards. If the account position plus the overdraft facility which is equal to the amount of the collateral security does not allow the transaction to be completed, additional collateral needs to be put up so that this can be done.



Initially, the Central Bank decided to allow parties to the RTGS system to deposit part of their required reserve in a special reserve account as security for settlement. Unlike required reserves in general, funds in special reserve accounts may not be disposed of at will. Bonds may also be presented as further collateral. Roughly half the required reserve at present is therefore in special deposit accounts that are not available for credit institutions to use to level out swings, which is one purpose of keeping required reserves. As a result, scope for levelling out swings is roughly half the normal level and participants can be expected to take some time to bring their liquidity management fully under control. Since the need for collateral security is calculated on the basis of the swings experienced by each individual participant in the system, they all benefit from improving their liquidity management to dampen volatility, and this arrangement can be expected to influence the behaviour of participants in the króna market and use of Central Bank overnight lending facilities.

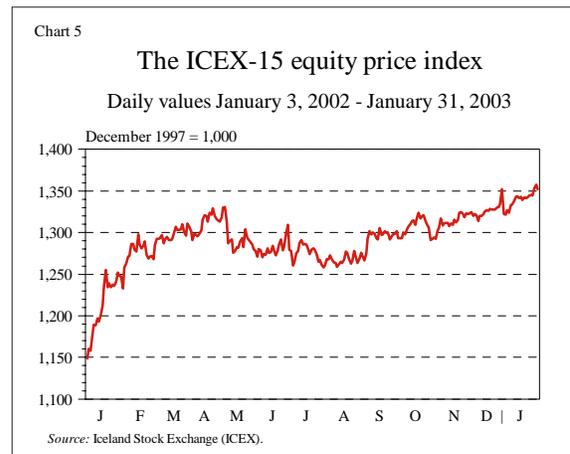
The interest rate differential has narrowed

Falling interest rates in Iceland have been closing up the differential with abroad in recent months. In the beginning of November 2002 the interest rate differential on treasury notes was 3.61 percentage points but at the end of January 2003 it was down to 3.26 percentage points. By comparison, the interest rate differential in the beginning of June 2002 was 5.52 percentage points. The Federal Reserve cut its interest rates by 0.5 percentage points on November 6, 2002 and the European Central Bank and central banks of Denmark and Sweden lowered theirs by the same amount on the following December 5. The Central Bank of Norway lowered its rate by 0.5 percentage points on December 11, 2002 and by a fur-

ther 0.5 percentage points on January 22. The policy rate in Norway is now 6% after this cut, although it should be pointed out that it is based on the central bank's deposit rate, not the lending rate as in most other parts of the world.

Record year on Iceland Stock Exchange

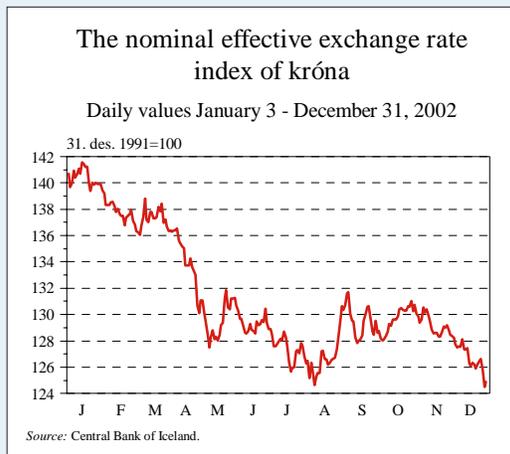
Trading on Iceland Stock Exchange in 2002 amounted to ISK 1,133 b.kr., as against ISK 749 b.kr. in 2001. Equity trading was ISK 321 b.kr. while trading in bonds and notes amounted to ISK 812 b.kr. The ICEX-15 index rose by 16.7% during the year. Equity trading volume in January was close to last year's monthly average and the ICEX-15 index value was roughly the same at the end of January as at end-2002, or 1,352. Bond turnover in January was more than one-third greater than the monthly average last year. In January ICEX installed a new monitoring system which enables very close monitoring of trading.



Foreign exchange market highlights 2002

Exchange rate developments

The exchange rate of the króna strengthened in 2002. The exchange rate index was registered at 141.7985 at the end of 2001 but 124.8994 on December 31, 2002. The index went down by 11.92%, which corresponds to a strengthening of the króna by 13.53%.



Turnover and trading

Total turnover in the forex market in 2002 was 834,444 m.kr. Of this figure, the Central Bank bought US dollars for 4,528 m.kr., giving it a 0.54% share of total market turnover. Market turnover in 2002 was somewhat lower than in 2001, down by 383 b.kr., but was 66 b.kr. greater than in 2000.

The highest monthly turnover was in September at almost 104 b.kr. Monthly turnover was lowest in June at just over 37 b.kr. On a single day, the most turnover was on April 24, at 16 b.kr. No trading took place in the forex market on six days during the year, once because of a breakdown in the submarine telephone cable.

Exchange rate volatility

The table below shows exchange rate volatility over the past three years, as the calculated standard deviation in day-on-day changes in the exchange rate index, US dollar and euro. As may be expected, the sharpest swings were in 2001, while last year was less volatile. Nonetheless, the exchange rate was more volatile than in 2000.

Table 1 Exchange rate volatility 2000-2002

Standard deviation (%)	US dollar	Euro	Exchange rate index
2000	0.57	0.50	0.35
2001	0.84	0.77	0.72
2002	0.56	0.54	0.46

Commission system

The Central Bank introduced a commission system for market makers on July 1, 2001 in response to pronounced volatility in the forex market. Although the swings died down, it is unlikely that this was solely thanks to the commission system. Under the initial agreement market makers received a 0.2% commission on their positive market making up to a total of 100 m.kr. per quarter. If the calculated total commission exceeded 100 m.kr. it was divided among the market makers on a proportional basis. The agreement was revised at the end of 2001 and again in March 2002. When the Central Bank introduced the commission arrangement it announced that it was an experiment and regarded it as a temporary measure. In June 2002 the Central Bank decided to discontinue commission payments¹ to market makers by phasing them down to zero on January 1, 2003. The Central Bank paid 200 m.kr. in commission to market makers in 2001 and 354 m.kr. for 2002, or a total of 554 m.kr.

Central Bank transactions with foreign exchange market makers

The Central Bank did not intervene directly in foreign exchange market trading during 2002, i.e. with the aim of influencing the exchange rate of the króna by buying currency from or selling it to all market makers. In *Monetary Bulletin* 2002/3 the Central Bank said that conditions were in place for moderate purchases of currency in order to boost its foreign position. These

1. A letter dated June 18 was sent to CEOs of bank and other companies involved in the forex market informing them of the Central Bank's unilateral decision.

remarks aroused interest among market makers, who interpreted the phrase “moderate purchases” in different ways. After considering a number of possibilities and talking to the market makers the Central Bank issued a press release on August 27 announcing its plans to purchase 1.5 m. US dollars 2-3 times a week for a total of 20 b.kr. from September 1 to the end of 2003. Regular purchases are made just before the market opens. The Bank also offered to buy higher amounts at the request of market makers on an ad hoc basis. Despite the Bank’s talks with market makers who were thereby aware of what was pending, the króna weakened on August 28. This weakening can be attributed to the press release, since there was a break-

down in the submarine telephone cable that day and no trading took place in the forex market. The Central Bank made its first purchase of 1.5 m. US dollars from market makers on the morning of September 2 and continued to do so every Monday and Wednesday until the end of the year. Once the Bank purchased from a market maker on a Friday, during the Christmas break when the market was closed on the Wednesday. The Central Bank bought 1.5 m. US dollars 35 times, making a total of 52.5 m. US dollars or the equivalent of 4.5 b.kr. During the year, on August 27, the Bank made its first forward sale of currency. The contract was made in four currencies and involved three different lengths of time.