Financial markets and Central Bank actions[1]

Interest rate reductions and stronger króna

The exchange rate of the króna has strengthened even further since the beginning of the summer. Many reasons lie behind this development, the main ones being a smaller current account deficit, lower inflation, expectations that an aluminium smelter will be built, and the conceivable privatisation of a large share in Landsbanki to a group of investors. The Central Bank has twice cut its policy interest rate and the credit institutions' easier króna position has led to a considerable turnaround in interest rates on shorter-term liabilities. The need for Central Bank facilities has decreased and trading has been brisk in the new currency swaps market. Major upheavals have taken place in other countries, in both equity markets and foreign exchange markets. Icelandic equity prices have been rising and various bond rates have gone down in recent months. The yield on Housing Bonds has not fallen much, however, since supply of these instruments outstrips demand at the moment.

Further strengthening of the króna ...

The strengthening of the króna has eased little in recent weeks. From the beginning of the year to July 22 its exchange rate appreciated by 10.3%. The basic factor behind this appreciation is probably the turnaround that has taken place in external trade. Combined with a sizeable inflow of borrowed funds from abroad, this undoubtedly explains most of the appreciation. The foreign exchange market is very volatile and reacts swiftly to various events or probable events that may affect it. One example was the news that several individuals had sent a request to the Minister of Commerce to purchase a large shareholding in Landsbanki, which would have been paid for with foreign currency. The market responded quickly and the króna strengthened markedly as a result. The króna did not depreciate correspondingly when the bid was withdrawn. Stronger expectations about the conceivable construction of an aluminium smelter in east Iceland may have outweighed the negative impact, besides which it is unclear how the bank privatisation process will end. More factors have had a positive impact on the exchange rate of the króna over the past three months. The consumer price index has gone up by much less than was generally expected, so that inflation is less of a concern in the short term. Foreign trade has been unexpectedly favourable and fish catches have been good, especially pelagic species. Quota proposals for the next fishing year were mostly in line with expectations and had little effect on the exchange rate.

Table 1 Appreciation of several currencies against the US dollar in the period May 1 - July 22, 2002

Currency	*Appreciation (%)*
CAD	0.3
SEK	8.3
GBP	8.3
ISK	10.2
JPY	10.5
DKK	11.8
EUR	12.0
CHF	12.3
NOK	12.3

Source: Central Bank of Iceland.

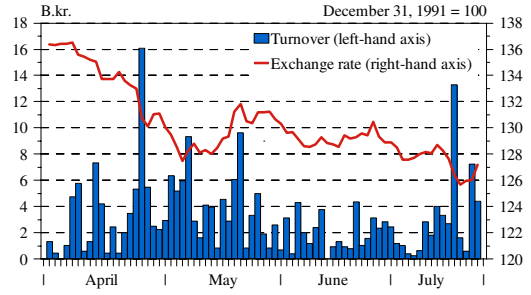
1. This article uses data available on July 22, apart from Chart 3 which is based on data from July 23.

... and unrest on foreign markets

Forex markets have been fairly volatile, with the biggest event occurring when the euro moved to parity with the US dollar in mid-July, for the first time since February 2000. The Japanese Central Bank has intervened in foreign exchange market developments at least seven times with the aim of weakening the yen against the dollar. It is estimated that the Central Bank of Japan deployed the equivalent of 30 billion US dollars in these interventions. The US dollar is now weaker against many currencies than it has been for a long while. Table 1 shows its depreciation against several currencies since the beginning of May. Chart 1 shows the exchange rate appreciation along with turnover in the forex market. A low in trading can be seen in June. On July 16 there was heavy trading in the forex market and the index dropped by 1.25% from the opening to the closure of the market. The main reasons were speculation and foreign loan movements.

Chart 1

The exchange rate index of króna and turnover in the forex market
April 2 - July 22, 2002 (daily data)



Source: Central Bank of Iceland.

Changes in the foreign exchange market

The Central Bank of Iceland decided in June to phase out the commissions to foreign exchange market makers which were introduced on a trial basis in July last year (see *Monetary Bulletin* 2001/3). Commissions will be abolished in full at the end of this year. In the Board of Governors' view, commissions have now largely compensated forex market makers for the damage they incurred following changes to the monetary policy framework in April last year. Smaller swings in forex markets are attributable to other factors than commissions, and especially to the changes that have taken place in currency flows to and from Iceland over the period they have been in effect. It is more natural for the market to evolve towards the norm in comparable markets. Forex market makers were therefore invited to talks about reforms to rules aimed at bringing the market closer into line with the most common arrangements. On July 1, the exchange rate of the former currencies of EU countries that had adopted the euro ceased to be officially recorded. On July 5 a new currency basket went into effect, shown in Table 2.

Table 2 New currency basket 2002

Region	*Currency*	*New basket (%)*	*Change on previous basket (%)*
USA	USD	24.83	-2.16
UK	GBP	12.78	-1.99
Canada	CAD	1.23	-0.13
Denmark	DKK	8.16	-0.52
Norway	NOK	6.78	0.70
Sweden	SEK	3.48	-0.96
Switzerland	CHF	2.01	0.36
Euro area	EUR	37.08	5.42
Japan	JPY	3.65	-0.72

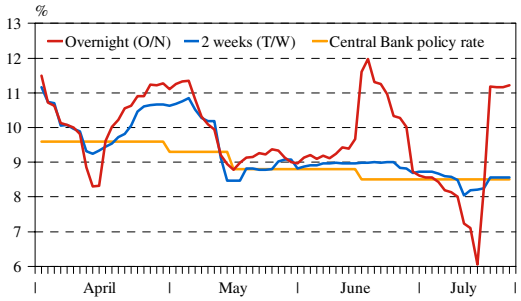
Source: Central Bank of Iceland.

The policy interest rate was cut twice, ...

On May 16 2002, the Central Bank announced a cut in its policy interest rate amounting to half a percentage point and effective from May 21, after the CPI benchmark set by the employers' federation and unions in the general market was met that month. The policy rate was then cut again by 0.3 percentage points with an announcement on June 18, when new price figures were published showing beyond doubt that inflation was on a rapid downward path. The Bank's policy rate is therefore 8.5% at the time of writing. Interest rates in the two-week interbank market for krónur have moved closer to the Central Bank policy rate, as shown in Chart 2. O/N rates, by contrast, have fluctuated much more, and the largest swings are generally associated with the end of the period for calculating required deposit, as is widely the case. Interest rate levels imply an increase in liquidity, which is consistent with other indicators such

Chart 2

Interest rates in the interbank market for krónur and the policy interest rate
April 2 - July 22, 2002 (daily data)



Source: Central Bank of Iceland.

as demand for repos and Central Bank overnight loans.

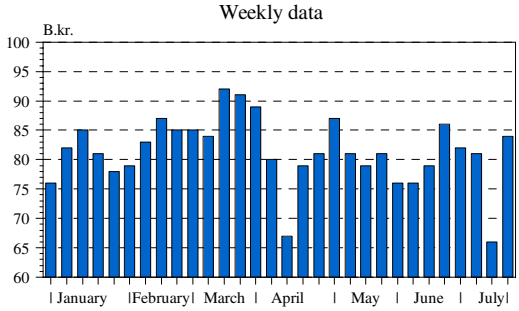
... repo transaction volume dropped sharply ...

On July 16 the outstanding repo stock fell by more than 15 b.kr. between the weeks, the greatest drop since the beginning of 2000 when credit institutions returned more than 16 b.kr. following a large-scale accumulation of liquidity in preparation for conceivable Y2K problems. The repo stock can be expected to grow again, since no fundamental changes have taken place to liquidity formation in the economy. The development of repos is shown on Chart 3. Interest rates in the króna market rose slightly as a result, but remained around or below the Central Bank policy rate, implying that liquidity was not seriously tight. The banks' liquidity shortage was to some extent the familiar custom for tight liquidity to develop among credit institutions towards the end of a required reserve maintenance period, forcing them to seek other funding in the market or Central Bank facilities in order to fulfil statutory requirements. Hence the price of finance – i.e. interest rates – often rises towards the end of the required reserve maintenance period, which is the 20th day of each month. Other factors also exert an influence, e.g. cash flows to and from the treasury, because at the beginning of each month it pays out wages which increase liquidity in circulation and around the middle of the month is the due date for taxes, which reduces it. At two-month intervals value-added tax falls due and also mops up liquidity in the market. All these factors plus other events such as privatisation, forex trading and major loan movements have an effect on liquidity, making it often a complex business for credit institutions to manage their short-term financing. The treasury's sale of a 20% shareholding in Landsbanki this June had an indirect impact on the liquidity position because institutions handling privatisation sales customarily do not reimburse the treasury with the proceeds from them until a month later. It is not certain that this was obvious to all institutions; some may have expected liquidity to tighten by the equivalent of the sales value of the shareholding in Landsbanki and taken appropriate measures. In the event they may have found themselves with excess liquidity and therefore deployed it in required reserves accounts, fulfilling the reserve requirement in advance which leads to lower interest

Chart 3

Outstanding stock of repurchase agreements at end of month January 3 - July 23, 2002

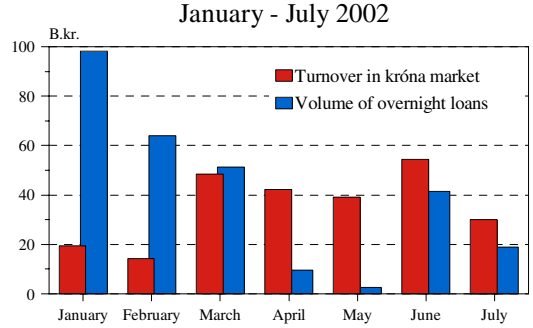
Weekly data



Source: Central Bank of Iceland.

Chart 4

Turnover in the interbank market for krónur and the volume of overnight loans
January - July 2002



Source: Central Bank of Iceland.

rates in the króna market and less need for Central Bank facilities (repos).

... and overnight loans are used little

Use of overnight loans has shrunk substantially as liquidity has eased. Overnight loans have been used on a considerable scale on occasional days, but negative positions in netting system settlements are now becoming exceptional, which suggests that the credit institutions' liquidity management has improved. Turnover in the interbank market for krónur has perked up slightly after a dull spell in the first months of this year. So far this year turnover in the interbank market for krónur is 35% greater than the same time in 2001. Chart 4 shows turnover in the market for krónur and monthly volume of overnight loans so far this year. Turnover in the interbank market for currency swaps has grown rapidly and total turnover since its establishment has now exceeded 130 b.kr. Some 430 contracts have been made since its establishment, with the most common term one week (160 contracts) although a sizeable number have been made for one month (106) and only slightly fewer for two weeks (86). By far the most common contract amount is 3 million US dollars.

Interest rate differential has narrowed

The interest rate differential with abroad, measured as the difference between interest rates on foreign bonds weighted against the currency basket and Icelandic bonds of the same lifetime, has narrowed significantly in recent months. The same applies to the differential between interest rates on three-month interbank market instruments. This is shown in Chart 5. The main reason is falling interest rates in Iceland. The Swiss National Bank raised its policy rate by 0.5 percentage points in the beginning of May and the Norwegian Central Bank likewise in the beginning of July. The Bank of Canada raised its policy rate by 0.25 percentage points in the beginning of June and again by the same amount in mid-July. The Norwegian policy rate is the rate of interest on deposits, since there seems to be little need for central bank lending to commercial banks in that coun-

Table 3 Equity price developments 2002

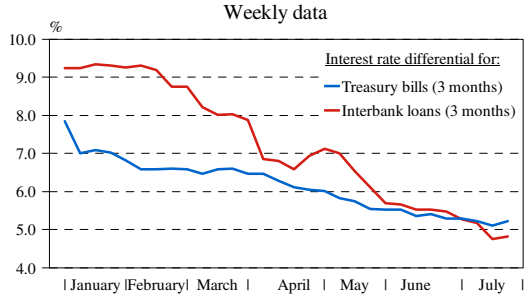
Country	*Index*	*Percent change in the period Dec. 31, 2001 - July 22, 2002*
Iceland	ICEX-15	11
Japan	Nikkei 225	-6
Denmark	KFX	-19
Norway	OBI	-20
USA	DJIA	-23
UK	FTSE 100	-25
Germany	DAX	-29
France	CAC	-31
USA	NASDAQ	-35
Sweden	OMX	-37
Finland	HEX	-38

Sources: Iceland Stock Exchange, Reuters.

Chart 5

Interest rate differential between domestic and foreign interest rates[1] January 1 - July 22, 2002

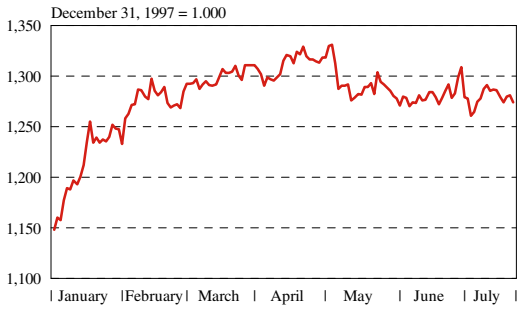
Weekly data



1. A trade-weighted basket of trading partner countries (the currency basket).
Source: Central Bank of Iceland.

Chart 6

The ICEX-15 equity price index January 1 - July 22, 2002 (daily data)



Source: Iceland Stock Exchange.

try. The policy rate is now 7%, while the Norwegian Central Bank's lending rate is 9%.

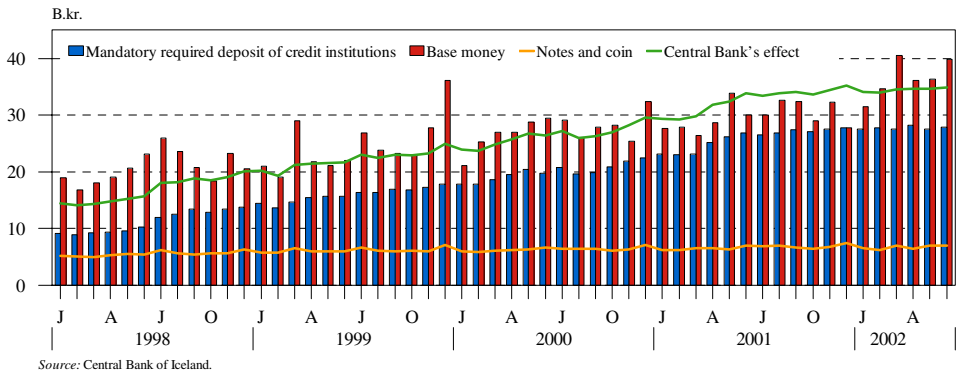
Equity prices in Iceland have not fallen much despite a slide in foreign equity markets

Foreign markets have been very turbulent, not least equity markets. The main US equity indices have slumped in the past few months, for example the Dow Jones Industrial Average has dropped by almost 23% from the beginning of May and equity indices have gone down in many parts of Europe too. The Nikkei has fallen by much less than most other indices so far this year, however. Table 3 shows equity index changes in selected countries (see further the discussion of foreign equity markets on pp. 14-15). Despite this great turbulence, Iceland's equity market has largely remained stable. A minor decrease occurred in the beginning of May, but since then prices have shown relatively little fluctuation, as Chart 6 shows. Since the beginning of the year, the ICEX-15 Index has gone up by almost 12%. Although accounting scandals undoubtedly play a part in the downturn on US exchanges, the main reason is probably that equity prices were simply far too

Box 1 Base money and the impact of central banks

Monetary economics posits a strong correlation between money supply and prices, i.e. increased money supply goes hand in hand with increased inflation. However, this is a long-term relationship and in spite of various attempts it has proved difficult to take advantage of it in monetary policy implementation in the real world. The impact of central banks on this correlation is mainly measured through base money, which comprises notes and coin in circulation and credit institutions' deposits with a central bank. Base money is often referred to as "high-power money" by virtue of the multiplier effect that changes in it have. The main drawback with using base money as a measurement, however, is that the measurement is generally made at a single point in time, more often than not at the end of each month. Swings in required reserves and deposits can therefore distort this measurement. Probably a more accurate criterion of a central bank's influence can be obtained by looking at the mandatory required reserves rather than the account position on any given day. The accompanying chart shows base money as measured by the Central Bank of Iceland since the beginning of 1998, compared with the mandatory required reserves for each month and notes and coin in circulation at the end of it. Base money fluctuates much more than the Central Bank's effect, making it worth considering whether to reassess base money and incorporate only notes and coin in circulation and the mandatory required reserves, as the chart does. This would make the Central Bank's involvement clearer and more logical, although the value of using this criterion might still be questionable.

Base money and mandatory required deposit January 1998 - June 2002



Source: Central Bank of Iceland.

high and way above sensible limits, e.g. the P/E ratio of 15 which is frequently used as a reference.

New T-bond issue

In May a new issue of treasury bonds was introduced, maturing in 2013. It is non-indexed but differs from earlier issues in that it has fixed annual interest dates and carries a 7.25% coupon. Also, the actual/actual interest rule is used to calculate the bond price, an innovation in Republic of Iceland issues which hitherto have been zero-coupon bullet bonds. The first auction produced bids for almost sevenfold the 3 b.kr. that were offered. Average yield in the first auction was 7.97%. A nominal total of 6.5 b.kr. has now been sold in this issue.

Box 2 Changes in Central Bank rules

On May 29, changes were made in a number of rules set by the Central Bank. Largely they involved the elimination of shortcomings that had emerged in earlier rules. The accompanying table shows the main changes entailed for each separate rule. In addition, one effect of the change made to the rule for calculating interest rates in rules on transactions involving required reserves of financial institutions is to abolish the "interest-free days" on the thirtieth day of each month which has thirty-one days. Interest on February 28 and 29 will also only be equivalent to a single day's interest, instead of the triple or double weighting it had under the old rules.

Rules on required reserves

Earlier rules	*Revised rules*
1. A maximum imposed on how much the required reserve could increase between periods. (Could apply when the required reserves ratios were raised and when new credit institutions which are subject to reserve requirements were added or they grew due to a merger or takeover). (para. 2 Art. 3).	1. Removed. If the required reserve ratio is raised or new institutions are subjected to reserve requirements, the Central Bank may judge them on a case-by-case basis and decide an adjustment process if this is deemed necessary (see also item 3 below).
2. Despite the ceiling set for the amount by which the required reserves could be raised, a minimum was also set for the amount it would have to increase if the institution in question failed to fulfil the requirement under item 1 above. (para. 3 Art. 3).	2. Removed. Concomitant with para. 2 Art. 3. (see item 1 above).
3. The Central Bank Board of Governors was authorised to raise/lower the required reserves ratio by one percentage point. (para. 4 Art. 3).	3. Removed. If the required reserves ratio is changed, the rules will be amended and reissued. (Previously, ministerial approval was needed to raise or lower the ratio but under the new Central Bank Act, the Board of Governors determines it).
4. Required reserves amount was calculated from disposable funds in the preceding month. (para. 1. Art. 6).	4. Required reserves amount is calculated from average disposable funds at the end of the preceding two months.

5. Required reserves were calculated as a 30-day average. As a result, when the required reserve maintenance period was 31 days, the account deposit on the 30th was not included in the average and February 28 had a triple weighting (double in leap years).	5. Day rules for Central Bank transactions with credit institutions which are subject to reserve requirements have been changed from 30/360 to actual/360. One result is that the average is based on the actual number of days in the required reserve period.
6. An institution which is subject to reserve requirements was authorised to handle the requirement of another. (Art. 8).	6. Paragraph added limiting this authorisation to Icebank in its intermediary role for the savings banks. (para. 3 Art. 8).
7.	7. Separate required reserve account. Financial institutions are offered the option of using part of the amount in required reserves as collateral in the netting payment system, instead of securities. Rules concerning payment intermediation are being drawn up.

Rules on foreign balance

Earlier rules	*Revised rules*
1. A US $ balance could be positive or negative by 20% but the maximum for other currencies was 15%. (para. 2. Art. 4).	1. The euro balance may also be positive or negative by 20%.

Rules on transactions with the Central Bank by credit institutions which are subject to reserve requirements

Earlier rules	*Revised rules*
1.	1. Repos. A 7-point framework has been drawn up describing the bonds that qualify for Central Bank repo transactions.
2. Requests for O/N loans must be received by 15:00 hrs. and collateral accepted by 16:00 hrs.	2. Requests for O/N loans must be received by 17:15 hrs. and collateral accepted by 17:45 hrs.
3. General interest rule was 30/360 except for overdraft transactions and O/N loans where the rule was actual/360.	3. General interest rule is actual/360.

Rules on liquidity

Earlier rules	*Revised rules*
1.	1. Several points added to provide a better picture of the breakdown of liquidity between domestic and foreign positions.
2. A savings bank's main current account with Icebank and deposits related to Icebank's inter-	2. A savings bank's main current account with Icebank and deposits related to Icebank's inter-

mediary role in required reserves were valued as 90% assets of the savings bank.	mediary role in required reserves are now valued as 100% assets of the savings bank.
3. Icebank's claims on savings banks related to its intermediary role in Central Bank repo transactions were valued as 90% assets (had been accounted for as 100% assets, but this was not correct according to the rules).	3. Icebank's claims on savings banks related to its intermediary role in Central Bank repo transactions are now valued as 100% assets.
4. Liabilities on account of the unused remainder of a contractual rollover loan/credit line weighed 25% regardless of whether a credit institution or other institution was involved. This could result in credit institutions making agreements among themselves to "create" liquidity (with 80-100% weighting on the asset side).	4. Liabilities on account of the unused remainder of a credit institution's contractual rollover loan/credit line are given the same weighting as on the asset side (80% for loans in krónur and 100% in foreign currency). In the case of other institutions than credit institutions (non-financial companies and individuals) the weighting is 25%.
5. The principal of forward securities contracts had a 90% weighting on the asset side and 100% on the liabilities side, ignoring currency forwards and options.	5. Gain or loss on all off-balance sheet contracts is now calculated and entered as a claim (90% weighting) or liability (100% weighting).
6.	6. A new article was added (now Art. 7) requiring the principal/payment flow of off-balance sheet contracts to be stated in terms of time zones in liquidity surveys, even though these amounts are not used in calculation of the liquidity ratio.