

### An eventful summer

The Central Bank of Iceland raised its policy interest rate by 0.5 percentage points early in June. In the wake of this hike, interest rates rose in the interbank market for domestic currency and the króna appreciated. The exchange rate fluctuated when non-residents began issuing bonds denominated in Icelandic krónur. A revised currency basket was announced in July. Iceland Telecom was privatised in the summer in what proved to be a smooth process. The Treasury will use the foreign exchange part of the payment for Iceland Telecom to prepay foreign loans and plans to deploy part of the domestic proceeds on increased currency purchases to retire more foreign debt. Treasury liquidity has been very strong in recent months. Work on developing the Central Bank's RTGS system is in progress and a milestone reform was made in September. Securities markets have been flourishing.

#### Policy rate hike

The Central Bank of Iceland announced a 0.5 percentage-point rise in its policy interest rate on June 3, 2005. This was the ninth hike in just over a year and the Bank has raised its policy rate by a total of 4.2 percentage points since May 11, 2004. Since the Central Bank embarked on its current cycle of interest rate rises, the spread between its overnight loan and current account rates has been systematically narrowed from 4.9 percentage points to 3 percentage points, as one measure designed to sharpen the impact of interest rate policy. Tighter spreads reduce interest rate volatility in the interbank market, enhancing the effectiveness of the policy rate. Alongside the June change in interest rates, the Bank decided to offer certificates of deposit (CDs) in the same format as repos, i.e. at a specified yield with no ceiling on amounts. Yields on CDs were set 0.15 percentage points lower than on repos. The Central Bank holds regular weekly auctions of repos and CDs with a term of one week.

#### Currency appreciation

In the beginning of May the Central Bank announced a discretionary purchase of currency in connection with Treasury plans to retire more foreign debt than had previously been scheduled. One reason for this action was the Treasury's strong liquidity position. The Central Bank purchased a total of 100 million US dollars in the interbank market in several tranches. On May 12 the CPI was published. The change in it seemed to catch the market by surprise and the króna slid by 1.4% that day. The exchange rate index registered 116.81 on May 13. Afterwards the króna began to strengthen and on June 1 the index stood at 110.63. In June the exchange rate index fluctuated in the range 110 to 113, while July was characterised by a slow but quite steady rise. However, trading volume was subdued for a period. The July appreciation of the króna unwound over several days at the beginning of August, but it strengthened again. At the end of August and beginning of September, non-residents made several króna-

Chart 1  
Exchange rate index of the króna  
Daily data January 4 - September 19, 2005



Source: Central Bank of Iceland.

1. This article uses data available on September 19, 2005.

## Non-residents' issues of króna-denominated bonds

### Box 1

At the end of August it was reported that several foreign issuers, including the Republic of Austria, had issued bonds denominated in Icelandic krónur. Although the rates of interest are high by international standards, they are just below Icelandic bond yields. Maturity is 12, 18 or 24 months.

The following is a brief account of the issuance process and the gains for the issuer. The foreign party issues bonds denominated in Icelandic currency at interest rates slightly below those in Iceland. He sells them to buyers who are attracted by the high interest rate and are prepared to take an exchange-rate risk. The issuer is paid in krónur for the bonds and he makes a swap agreement with the lead manager of the offering to hedge against the exchange-rate and interest-rate risk of the króna. The issuer still needs to pay interest in the swap currency, e.g. US dollars or euros. Then the lead manager makes a corresponding swap agreement with an Icelandic bank to eliminate his risk completely. The Icelandic bank prices the swap with respect to the hedging cost, i.e. what it costs to buy Icelandic instruments in the domestic market, for example T-notes maturing in 2007 or the interest-rate cost on a loan in the interbank market for domestic currency. Conceivably, the foreign broker can take the króna risk himself and then hedge the deal by buying Icelandic instruments in the Icelandic market. An Icelandic bank might already own suitable instruments in its portfolio, removing the need to enter the domestic securities market.

The issuer gains from being able to sell high-interest instruments during a period of low interest rates while taking neither exchange-rate risk nor interest-rate risk. On maturity the swap is reversed, the issuer receives krónur plus the spread and uses this to pay the buyer of the bonds.

The buyer of the bonds earns a high rate of interest but takes an exchange-rate risk. He needs to buy krónur for delivery to the issuer of the bonds on the day of purchase, then on maturity he receives krónur that he must sell. Since the trades are made in the Icelandic forex market, they have an exchange-rate effect. There is little point for the buyer to hedge against exchange-rate risk, since this would wipe out the gain on the interest rate. Conceivably, if the exchange rate of the króna develops very unfavourably for the holder of the instruments, he could sell them forward to remove the risk, but would have to accept the loss so far and the spread, as well as forgoing a conceivable gain if the exchange-rate trend unwinds.

The króna appreciates on the initial transactions, i.e. when the buyer acquires Icelandic currency to pay for the bonds. This is reversed on maturity. Hedging measures stimulate demand in the Icelandic securities market, so that yields fall. The small size of the Icelandic securities market limits the available hedging opportunities, which will gradually erode the gains from ongoing transactions of this kind.

denominated bond issues (see Box 1). This led to some currency inflows, the króna appreciated and on September 19 the index touched 105.53. The exchange rate index is shown in Chart 1.

#### **Fluctuating interest rates**

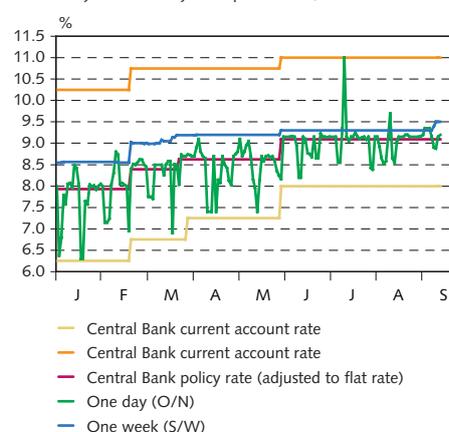
Interest rates at the shortest end of Iceland's interbank market for domestic currency have always been relatively volatile. Sharp fluctuations have generally been connected with the end of the

maintenance period for required reserves when banks have adjusted their positions and defended them with higher rates in order to avoid penalties. Softer fluctuations occur, for example, when banks miscalculate liquidity in circulation, or unexpected developments take place. More often than not, unexpected events are connected with measures or transactions by the Central Bank or the Treasury and have a system-wide impact, but imperfect mediation of liquidity between credit institutions could also play some part. Longer interest rates, e.g. one week or three months, have been astonishingly stable, implying that interbank trading in these maturities is relatively rare and puts little pressure on these rates. Since agents in the interbank market for domestic currency are committed to make indicative bids for these maturities, they are surely serious when they make them. Longer rates are also used as a benchmark in currency swaps, which bolsters their reliability. The spread between long-term and short-term interest rates can indicate the interest-rate path expected by investors. One effect of foreign issues of króna-denominated instruments was a slight drop in one-year interbank market rates, which could be interpreted as a market expectation that the Central Bank would raise its policy rate by correspondingly less. An equally plausible explanation was that the owner of the Icelandic currency after this transaction had hedged the deal by lending it in the one-year market – whereupon the extra supply at that maturity prompted a drop in interest rates, since counterparties did not want hold krónur for so long. Interest rates for several maturities in the interbank market, along with the Central Bank's main rates, are shown in Chart 2 (the Central Bank's policy rate has been converted into flat interest for comparability with other rates in the chart).

Chart 2

Interest rates in the interbank króna market  
and Central Bank policy interest rate

Daily data January 4 - September 19, 2005



Source: Central Bank of Iceland.

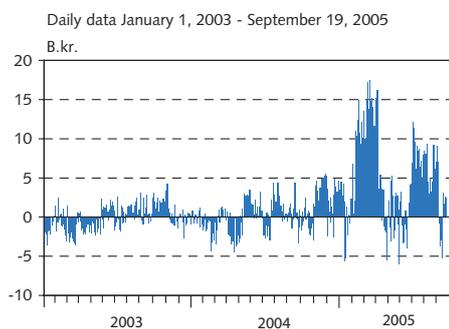
### Revised currency basket

A revised currency basket took effect on July 11. It is revised annually to reflect the composition of Iceland's external trade in goods and services with major trading partner countries in the previous year. Only minor changes were made apart from a shift from euros to US dollars of roughly 1.2 percentage points. The basket is shown in Table 1.

Table 1 New currency basket 2005

Region	Currency	New currency basket (%)	Change on previous basket (percentage points)
USA	USD	23.03	1.19
UK	GBP	12.10	0.21
Canada	CAD	1.10	0.04
Denmark	DKK	8.13	-0.28
Norway	NOK	6.04	0.13
Sweden	SEK	3.87	0.19
Switzerland	CHF	1.21	-0.18
Euro area	EUR	41.14	-1.23
Japan	JPY	3.38	-0.07

Chart 3  
The banks' foreign balance

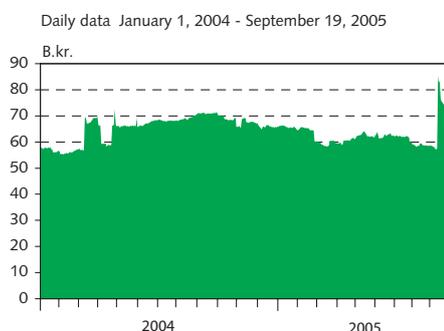


Source: Central Bank of Iceland.

### More flexible foreign balance

The Central Bank's Rules on Foreign Balance stipulate the permissible difference between the foreign-denominated assets and liabilities of banks. The balance is positive if a bank's foreign-denominated assets exceed its foreign-denominated liabilities, and negative in the opposite case. Under the Central Bank's rules, exposure in individual currencies may neither be positive (long) nor negative (short) by more than the equivalent of 30% of equity capital. Further provisions set the maximum difference between individual currencies at 15%, apart from the US dollar and euro, where the limit is 20%. The rules prescribe a formula for calculating the foreign balance, taking into account the current position and future position. The banks have set themselves stricter in-house rules. For some time the banks' foreign assets and liabilities were broadly in balance, but their behaviour has changed this year, as Chart 3 shows. Increasingly, the banks have allowed themselves to build up long positions, even for sustained periods, within the regulatory scope available. This is partly explained by the Icelandic banks' rapid expansion in recent years and the corresponding increase in their capital, but also because they appear to be taking more risks of their own to neutralise out exchange rate fluctuations.

Chart 4  
Foreign reserves of the Central Bank of Iceland



Source: Central Bank of Iceland.

### Foreign reserves and Treasury loan movements

The Central Bank's foreign reserves have fluctuated somewhat during the year due to Treasury loan movements and exchange rate effects. At the end of last year the Central Bank discontinued the currency purchases that it had made with aim of strengthening its foreign reserves, but continued to buy to meet the Treasury's requirements. Treasury debt matures on several dates during the year, causing occasional reductions in reserves, which are built up again by purchases. An appreciation of the domestic currency erodes reserves in króna terms, but leaves the foreign currency value largely unchanged, apart from the impact of cross-currency movements. Only part of the Treasury's foreign exchange proceeds from the privatisation of Iceland Telecom entered the reserves, because the bulk had already been allocated towards prepayment of foreign loans. Prompted by the Treasury's strong króna liquidity, which had been boosted by privatisation proceeds and greater-than-expected revenues, the Minister of Finance decided to retire even more Treasury foreign debt than had originally been planned. The loans in question mature early in 2006, and it was decided to step up currency purchases to the tune of 160 million US dollars this year. Following this decision, the Central Bank will make daily purchases of 2.5 m. US dollars from September 12 until the end of the year, replacing the weekly purchases of 2.5 m. USD made so far this year. Foreign reserves are shown in Chart 4.

### Volatile repo transactions

Central Bank repo transactions have been quite volatile in recent months. Volume dipped to a low of just under 16 b.kr. in May, then jumped to almost 40 b.kr. soon afterwards. Over the summer it swung from 18 b.kr. to 37 b.kr., and after a payment from the new

investors in Iceland Telecom the repo volume soared to 62 b.kr., reflecting this major withdrawal from the credit system to accounts in the Central Bank, which maintains Treasury funds until their disposal. The privatisation of Iceland Telecom caused little disruption in the markets, since bidders were allowed to pay in domestic currency, euros or US dollars at their own choice and did not need to tailor their financing arrangements to predetermined requirements. Large deposits have been maintained on the Treasury's current accounts in the Central Bank all summer, partly due to increased revenues. The strong Treasury cash position reduces liquidity in circulation and thereby bolsters the Central Bank's monetary policy. The reduction in liquidity, which is also connected with higher minimum reserve requirements, has seen a corresponding reduction in the importance of CDs. Required reserves have increased by 31% since the beginning of the year and institutions subject to minimum reserve requirements had to make daily average deposits of almost 15.7 b.kr. in their accounts in the Central Bank in order to fulfil them. In April 2004, the corresponding amount was 10.2 b.kr. Repo and CD transaction volumes are shown in Chart 5.

#### Fall in overnight lending and currency swaps

Use of overnight loan facilities is now negligible and the Central Bank has only provided O/N loans to credit institutions on a handful of occasions since the beginning of June. Total O/N loans over these months amount to around one-quarter of volume over the corresponding period of last year. Factors at work include improved liquidity management by banks and the merger of credit institutions' current accounts and required reserve accounts in the Central Bank. Trading in the interbank market for currency swaps has also shrunk year-on-year. From May 1 to September 9, a total of 19 trades were made to the value of roughly 18 b.kr., compared with 71 transactions for more than 48 b.kr. over the corresponding period in 2004.

#### Locks in the RTGS system

The focus of Central Bank liquidity management has shifted to reflect changes in payment systems in recent years. A study of the netting system and real-time gross settlement (RTGS) system was conducted recently and systematic steps have been taken towards adapting the systems to international best practices. Overdraft amounts were set for RTGS system accounts some time ago and requirements for collateral securities were introduced. Credit institutions have occasionally exceeded their overdraft amounts but this has always been rectified immediately. For smoother operation by the banks and also to enhance system security, since the beginning of this year the Central Bank has allowed banks to raise their intraday overdraft limits, against collateral and for a nominal charge. Banks have taken advantage of this facility several times, but generally their liquidity has been ample to meet requirements. An important step was taken on September 16 when locks were put on the RTGS system, thereby preventing credit institutions from exceeding their overdrafts. This step followed an in-depth examination by banks, the Icelandic

Chart 5  
Outstanding stock of Central Bank  
repos and CDs

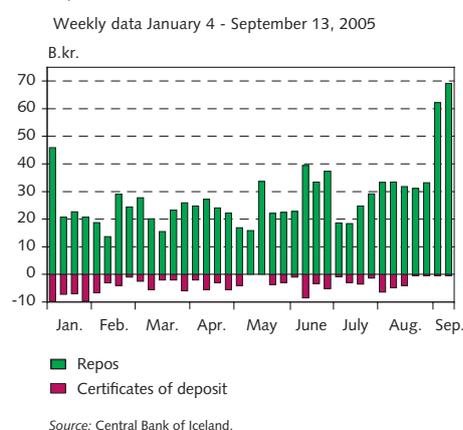


Chart 6  
Yields on Treasury securities

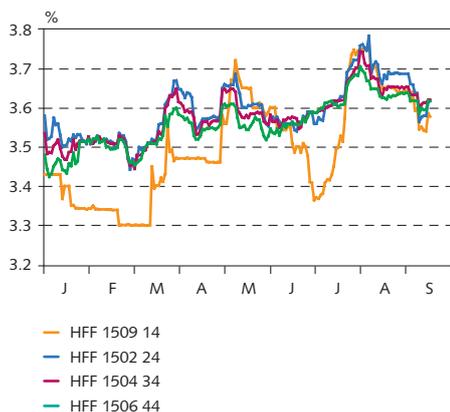
Daily data March 1 - September 19, 2005



Source: Central Bank of Iceland.

Chart 7  
HFF bond yields

Daily data January 1 - September 19, 2005



Source: Central Bank of Iceland.

Chart 8  
The ICEX-15 equity price index

Daily data January 4 - September 19, 2005



Source: Iceland Stock Exchange (ICEX).

Banks' Data Centre (RB), the Icelandic Securities Depository and the Central Bank of Iceland. The examination also rectified a number of shortcomings identified in processes connected with handling and settlement of RTGS accounts.

### Interest-rate differential and interest rate changes

The interest-rate differential between Iceland and its main trading partner countries has widened in terms of three-month Treasury bills (from 6.39 to 6.88 percentage points), but remained virtually unchanged at 6.42 percentage points for three-month interbank market loans over the period from May 2 to September 8. The differential for five-year Treasury notes narrowed over the same period, from 4.53 to 4.17 percentage points. The US Federal Reserve raised its funds rate by 0.25 percentage points at the beginning of July, and by the same amount again at the beginning of August. The funds rate is currently 3.5% and has been raised in regular steps for more than a year. The Bank of England, on the other hand, lowered its repo rate by 0.25 percentage points on August 4. In Sweden, Sveriges Riksbank cut its repo rate by 0.5 percentage points on June 21 to the current 1.5%, while Norges Bank in Norway raised its sight deposit rate by 0.25 percentage points as of July 1.

The euro slid against the US dollar from mid-May to the end of July, then began to climb back but had not recouped all its value by the beginning of September. At the end of July the People's Bank of China announced that it would replace the dollar peg of the renminbi (yuan) with a currency basket. Immediately the following day the renminbi appreciated by 2.1% against the dollar. The new regime is a managed float, whereby the PBC announces the closing price of a traded foreign currency against the renminbi after close of market on each working day, which serves as the central parity for trading on the following working day, allowing a float within a band of 0.3%. Beijing had been under strong pressure to enact this reform.

### Brisk trading in bonds and notes

Yields on government debt instruments experienced two waves of fluctuations within a relatively narrow band from mid-May to the end of August, as shown in Chart 6. The National Debt Management Agency (NDMA) auctioned Treasury notes in series RIKB on July 20 and accepted bids for a nominal value of 3 b.kr. When foreign issues of króna-denominated instruments began at the end of August, demand for these classes grew and yields on the shorter two classes dropped sharply. The Housing Financing Fund (HFF) arranged a closed offering on May 19 in which it sold bonds in the HFF44 class for a nominal value of 10 b.kr. An open offering followed on July 8. Bids totalled 23.5 b.kr., of which 14 b.kr. were accepted, after the HFF had initially announced that it aimed to accept bids for 7 b.kr. Almost 12 b.kr. of this auction was in the HFF14 series, which has now reached 38 b.kr. but is still some way short of a suitable size. The series was included in a market-making agreement made this summer. HFF bond yields decreased from May to mid-June, then began to pick up. Yields in the shortest class stood out from the others with a substantial drop

which is shown in Chart 7. Over July yields on this class climbed and caught up with the others by the end of the month. Since then the classes have moved in tandem, and fallen again somewhat.

### **Steady climb in equity prices**

From the beginning of the year to September 9 the ICEX-15 index rose by more than 41%, as shown in Chart 8. Shares in Landsbanki Íslands have gained most, more than doubling in value. FL Group and Nýherji have increased by roughly 75% and Bakkavör and Straumur Fjárfestingarbanki by almost 62%. Two companies – Atlantic Petroleum of the Faroe Islands and Mosaic Fashions – were listed on ICEX. The Faroese listing is a milestone in ICEX's activities as the first opportunity for Icelandic investors to buy foreign equities on their home exchange.