

Tremors in the markets

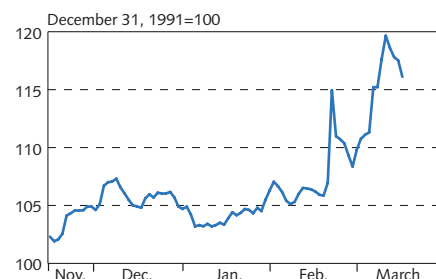
A tremor went through the FX market on February 21 after Fitch Ratings downgraded the outlook for the Treasury from stable to negative. However, the ratings themselves were affirmed. On March 8 the market experienced more turbulence after an international bank published its analysis of the Icelandic banking sector. The króna slid quite sharply, but later partially recovered. Equity prices fell at the same time. The Central Bank raised its policy interest rate by 0.25 percentage points on December 2, 2005 and again by the same amount on January 26, 2006. Interest rates went up in the interbank market for krónur, especially at the longer end, following the exchange rate volatility in February and March. Yields on the Housing Financing Fund's HFF bonds spiked at the beginning of the year, then slipped back after Moody's assigned a provisional rating to Kaupthing Bank's proposed issuance of covered bonds. Residents' investments in foreign portfolio securities have remained robust but offshore issuance of króna-denominated Eurobonds has slowed noticeably. Several central banks raised their policy interest rates, leaving the interest-rate differential with abroad almost unchanged since mid-November in spite of two policy hikes by the Central Bank of Iceland.

Changed outlook

The exchange rate index of the króna fluctuated in the range 107 to 103 from the end of November to February 20. A short-lived weakening of the króna took place following the Central Bank of Iceland's policy rate hike on December 2. At the end of the year and beginning of January the króna picked up somewhat, then gradually began to slide. Early in February came a short period of unease. On February 21, Fitch Ratings announced that it had downgraded the outlook for the Treasury's ratings from steady to negative, although it affirmed them all. This news caused a tremor in the FX market and the króna depreciated by 1.3% immediately after the announcement. By the end of the day the exchange rate index had risen to 110.2 from 105.55, which represents a 4.4% depreciation of the króna. For most of the following day the króna continued to slide – the index peaked at 115.2 in mid-morning, then began to fall again. The total increase in the index over the day was 2%. The following days the index went down quite calmly, then rose again to hit 111.3 on March 7, as shown in Chart 1.

Domestic economic developments have long been the chief driver behind movements in the króna. Iceland's small economy with relatively little appeal for foreign investors has tended to shelter the domestic capital market from international events. This is changing, however. Both residents and non-residents have been exploiting interest rate developments on a growing scale. The króna is one of many high-interest currencies that have tempted speculators, who often trade using calculated currency basket models to reap gains above the market average. Large movements, such as the slip in the króna in the wake of the Fitch Ratings report in February, can generate hefty losses, and the model then insists on offloading other currencies to recoup them. The result is market contagion – and indeed, the international financial press reported that the slide in the króna had impacted cur-

Chart 1
Exchange rate index of the króna
Daily data November 16, 2005 - March 17, 2006



Source: Central Bank of Iceland.

1. This article uses data available on March 17, 2006.

rencies in countries from Hungary to Brazil. Investors have doubtless reassessed their positions as a result, and some will even have ceased trading in krónur.

Negative messages

On March 8, a major international financial company published a fairly negative analysis of the position of Icelandic banks. Other analysts followed suit, and the international media began to focus more closely on the Icelandic banking sector. This caused the króna to depreciate fairly sharply, with the exchange rate index rising from 111.9 to 116.2 between opening and closing of the market on March 8. The following day the króna fluctuated modestly and ended marginally stronger. On March 10 it weakened fairly sharply at the start of the day when the exchange rate index went up by 2.5% in roughly one hour, then settled down in the range 117-118.2 for the rest of the day. Monday March 13 saw yet another dip immediately after the market opened for trading and the index rose by 1.9% in the space of 25 minutes. The index passed 120 but ended the day at 119.6, having risen by more than 13% since February 21. When trading opened on March 14 the index went down and it hovered around 117.6-118.8 for the rest of the day. The sharpest tremors were over and more modest fluctuations were witnessed over the next days.

On March 16, Standard & Poor's announced that it affirmed Iceland's sovereign rating and unchanged stable outlook. At the end of March 17 the index was registered at 117.6. It is clear from these swings that the market is sensitive and quick to respond to surprise news, which creates an obvious risk of overshoots. Turnover in the FX market over the first 2½ months of 2006 was 803 b.kr., compared with almost 2,100 b.kr. over the whole of 2005.

Box 1 Foreign exchange market highlights 2005

Appreciation of the króna

The króna appreciated over the period 2002-2006, as shown in Table 1. Central Bank turnover in the FX market was somewhat down in 2005 from the year before, and was confined to purchases on behalf of the Treasury. From the beginning of the year the Bank made weekly purchases of 2.5 million USD, and in May it bought an additional 100 million USD in five tranches of 20 million USD each. In September the Central Bank stepped up its currency purchases to 2.5 million USD daily until the end of the year.

The exchange rate index reached a trough of 100.5898 on November 4, which is also the lowest index value since 1992. The highest registered value for the year was 116.8131 on May 13.

Table 1. FX market highlights 2002-2005

	Turnover (m.kr.)	Central Bank turnover (m.kr.)	Average daily turnover (m.kr.)	Exchange rate index			Euro/króna at end of year	USD/króna at end of year
				End of year	Change over year (%)	Appreciation/ depreciation (%)		
2002	834,444	4,528	3,378	124.8994	-11.92	13.53	84.71	80.77
2003	1,185,566	43,208	4,781	123.4179	-1.19	1.20	89.76	71.16
2004	948,249	27,228	3,763	113.0158	-8.43	9.20	83.51	61.19
2005	2,077,467	24,648	8,310	104.9002	-7.18	7.74	74.70	63.13

In December, market makers unilaterally raised their reference amounts for FX trades from 2.5 to 3.0 million USD.

Turnover and volatility

Total turnover in the FX market in 2005 was 2,077 b.kr., an increase of 1,129 b.kr. year-on-year and 859 b.kr. more than in the previous record year of 2001. Turnover soared from August to the end of the year, in tandem with offshore issuance of króna-denominated Eurobonds.

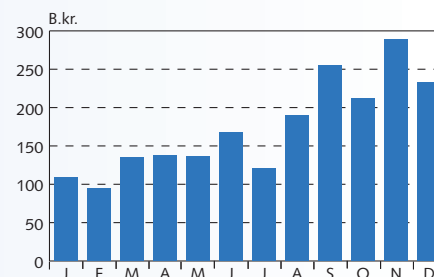
Table 2 shows the standard deviation of day-on-day changes in foreign currencies against the króna for the past four years. Volatility measured in these terms increased substantially from 2004 to 2005. Over the period August 25-December 30, i.e. after the launch of króna-denominated Eurobonds, the króna was more volatile against the euro than over the year as a whole, but less volatile against the US dollar.

Table 2. Exchange rate volatility 2002-2005

	Standard deviation of day-on-day changes against the króna		
	Exchange rate index	Euro	USD
2002	0.46	0.54	0.56
2003	0.50	0.56	0.69
2004	0.35	0.39	0.58
2005	0.57	0.58	0.73
2005 ¹	0.60	0.64	0.71

1. From August 25 to December 30.

Chart 1
Monthly turnover on the FX market 2005



Source: Central Bank of Iceland.

Chart 2
Exchange rate index 2005
Daily data January 4 - December 30, 2005



Source: Central Bank of Iceland.

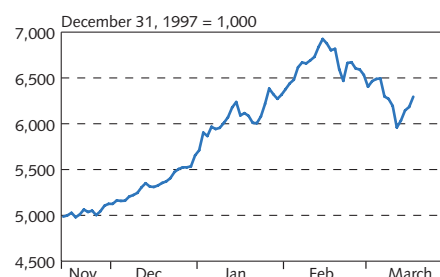
“Adjustment” of equity prices

Volatility in the FX market was mirrored in the equity market. This is a fairly new phenomenon, because ever since its inception the Icelandic equity market has tended to obey its own laws. Now it seems to be more susceptible to external influences. The ICEX-15 index peaked in mid-February at a value of almost 7,000, as shown in Chart 2. By then it had risen by 25% since the last day of 2005. At the end of February 22 it had dropped by 6.6% and at the end of trading on March 13 it dipped below 6,000, having shed almost 14% since peaking on February 15. The index climbed back to 6,273.45 at the end of March 17. Shares in the financial and investment sector slid the most. Nonetheless, ICEX-15 had still gained 13.35% since the beginning of the year.

Two Central Bank policy rate hikes

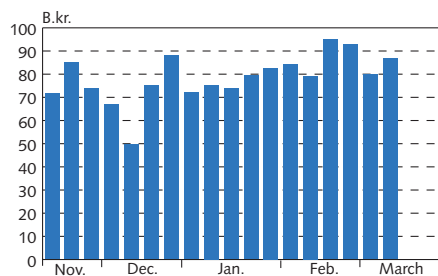
The Central Bank raised its policy interest rate by 0.25 percentage points on December 2, 2005. Interest rates in the interbank market for krónur rose somewhat as a result, although not in all cases matching the policy rate hike. Overnight rates in the króna market were volatile and demand for Central Bank repos was brisk, as shown in Chart 3. However, in the auction on December 13 the repo stock decreased

Chart 2
The ICEX-15 equity price index
Daily data November 16, 2005 - March 17, 2006



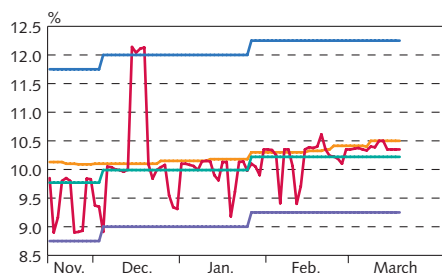
Source: Iceland Stock Exchange.

Chart 3
Outstanding stock of Central Bank repos
Weekly data November 15, 2005 - March 14, 2006



Source: Central Bank of Iceland.

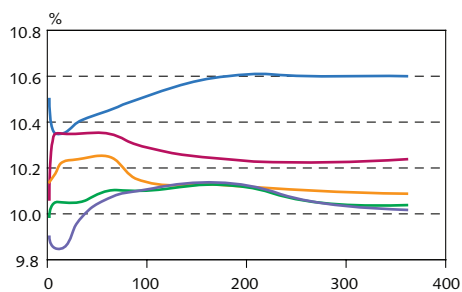
Chart 4
Interest rates in the interbank market and
Central Bank policy rate
Daily data November 16, 2005 - March 17, 2006



— Central Bank overnight rate
— One-day interbank market rate (O/N)
— Central Bank policy rate (adjusted to flat rate)
— Three-month interbank market rate (3M)
— Central Bank current account rate

Source: Central Bank of Iceland.

Chart 5
Yield curve in the króna interbank market



— 10.3.2006
— 9.2.2006
— 10.1.2006
— 9.12.2005
— 9.11.2005

Source: Central Bank of Iceland.

by 17 b.kr. Soon afterwards, interest rates in the króna market shot up close to the Central Bank's overnight lending rate, implying that the banks had miscalculated their liquidity requirement quite severely. The due date for withholding taxes is the 15th of each month and an unusually high amount appears to have fallen due in December. Interest rates remained high right up until the next repo auction. In future, events of this kind may prompt the Central Bank to arrange extra repo auctions to dampen unnecessary interest rate volatility in the interbank market.

The Treasury's deposit in the Central Bank has been exceptionally large recently. In the second half of November, the average daily balance was often close to 20 b.kr., while in February it approached 50 b.kr. for several days, and in mid-March it was 37 b.kr. Over and above this balance on its current account, the Treasury also keeps the part of its proceeds from the privatisation of Iceland Telecom that was paid in domestic currency – amounting to 32 b.kr. – in restricted deposit accounts in the Central Bank. Withdrawal from these accounts is restricted to specific dates in the next few years, in connection with pre-announced projects for which these funds have already been earmarked.

On January 26, a new arrangement for Central Bank interest rate announcements went into effect, coinciding with a policy rate hike of 0.25 percentage points. The interest rate change was announced in a press release in the morning and a press conference was held soon afterwards to explain the reasons. Since the impact on the interbank market for krónur did not match the policy rate hike in full, it is probable that expectations of an increase had already been embedded in market rates towards the end of December, thereby softening the impact of the policy rate change itself. The development of interbank market and main Central Bank interest rates is shown in Chart 4. In the wake of the unease in the FX market in the latter half of February and first part of March, króna market rates rose, especially at the longer end. Turnover in the interbank market for krónur over the first 2½ months of the year was down by one-quarter year-on-year.

The yield curve of interest rates shifted significantly from November to mid-March. It now trends upward from one week to half a year and then flattens, while previously it trended downwards to half a year and was flat after that. The yield curve is shown in Chart 5. It indicates growing expectations of rising inflation.

Minimum reserve requirement and foreign reserves

For financial institutions, the reserve base with the Central Bank is 2% of their deposits and issued market securities with a maturity of less than two years. Repurchase agreements are not included in the reserve base. The reserve requirement has grown rapidly over the past few months. At the beginning of 2005 it amounted to 12 b.kr. and by mid-year it had risen to close to 14 b.kr. At the end of the year it was just over 17 b.kr. and in February it was approaching 18 b.kr. One effect of the increase is that financial institutions increasingly need to tap the Central Bank for liquidity, which enhances the effectiveness of its monetary policy.

In September 2005, the Central Bank stepped up its regular currency purchases on behalf of the Treasury in the FX market, in order to build up reserves for planned repayment of foreign debt in 2006. At the end of 2005 the Central Bank's foreign reserves stood at 67.3 b.kr., of which the Treasury owned 9.1 b.kr. The depreciation of the króna since February left the reserves at 79 b.kr. in the middle of March, 13 b.kr. of which belonged to the Treasury. In April a 22 b.kr. foreign loan will fall due and the Treasury will repay it using its accumulated currency deposits, together with short-term borrowing. The short-term loan will then be gradually repaid in the course of the year with currency from the Central Bank's regular purchases in the domestic interbank market, in line with plans described in Monetary Bulletin 2005/4, i.e. 5 million US dollars per week.

Swift movements in HFF bond yields

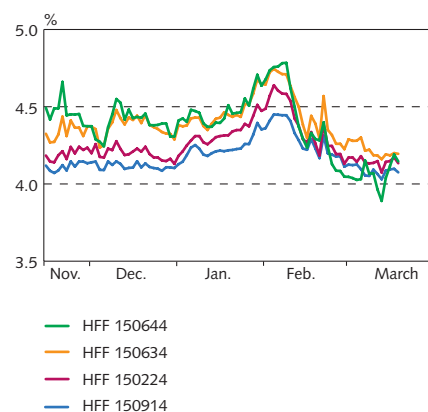
Housing Financing Fund (HFF) bond yields have been volatile since the trough they reached in mid-September. The wide divergence between series is also striking. For example, the yield on HFF 150914 rose to 4.78% on February 8, well outstripping the other series, but it then fell by more than they did, to 3.89% on March 13. As a shorter series it clearly carries less trading risk, but this pattern has not applied absolutely, as Chart 6 shows. HFF bonds were auctioned in July, then not again until November 22, when the yield rose by 0.45 percentage points to 4.60%. A new non-prepayable series was offered then carrying a yield of 4.35%. Debtors may still prepay these loans on payment of a premium representing the difference between their discounted value and the market value of HFF bonds of a comparable length. At an auction on December 22, the HFF accepted bids of 3.1 b.kr. for the longest series, HFF 150644, at a yield of 4.11%. This resulted in a 0.10% increase in the HFF's mortgage lending rate. The HFF used a new arrangement for the auction, holding it outside normal trading hours, which appears to have worked well. At another auction on March 7, the HFF accepted bids amounting to 4.4 b.kr. for the shortest series, HFF 150914, at a yield of 4.09%, and duly lowered its mortgage lending rate by 0.05%. On February 7, reports of the rating assigned to Kaupthing Bank's proposed covered bonds had a sizeable impact on HFF bond yields.

Mortgage lending has slowed down and the contraction in HFF bond issues may spur demand for these bonds. Moody's provisional rating for Kaupthing Bank's proposed mortgage-covered bonds has probably had an impact on market expectations regarding HFF bond supply. New lending by the HFF over the period December 2005 to February 2006 amounted to 10.6 b.kr., compared with 14.45 b.kr. a year before – a contraction of 26%. The banks' mortgage lending has also shrunk sharply. Prepayment of older HFF mortgage loans has slowed down.

Flaws in nominal interest rate formation

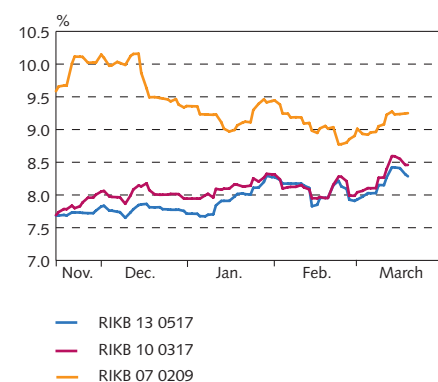
In December, the National Debt Management Agency (NDMA) announced proposed changes to Treasury issuance arrangements, aimed

Chart 6
HFF bond real yields
Daily data November 16, 2005 - March 17, 2006



Source: Central Bank of Iceland.

Chart 7
Treasury note yields
Daily data November 16, 2005 - March 17, 2006



Source: Central Bank of Iceland.

at strengthening its benchmark T-note series maturing in 2010 and 2013, along with plans to issue only T-bills with a maturity of one month instead of the previous three months. One bond series due for redemption next year will be bought back. Although these changes were designed to strengthen price formation at the longer end and deepen the market, they were not entirely successful and created a vacuum across an important part of the term structure which clearly needs to be filled if market distortions are to be avoided. Nominal yields rose only slightly in December, despite the Central Bank's policy rate hike, and fell somewhat on the shortest maturities. Again, the policy rate increase in January had little effect, fuelling suspicions that price formation in these series is out of step with normal laws of the market. This could lead to problems in pricing and distort risk evaluation. The development of Treasury note yields is shown in Chart 7.

Heavy foreign portfolio investment

Icelandic residents have been vigorous in their foreign portfolio investments. In 2005, net foreign portfolio investment amounted to 123 b.kr. The pattern continued in January with net investment of 33 b.kr. Pension funds are prominent players in these investments, with such large amounts of disposable funds that they have problems in establishing a suitable portfolio composition in the domestic market. Non-residents invested 18 b.kr. in Icelandic securities in 2005, compared with 33 b.kr. the previous year. Most recently, króna-denominated Eurobond issuance has been slowing down. In mid-March, the issued stock stood at 219 b.kr., up from 149 b.kr. at the beginning of the year.

Central banks raise their policy rates

Several central banks have raised their policy interest rates in recent months. Table 1 shows hikes by the main central banks since the end of October. Higher international policy rates have prevented the Central Bank of Iceland's own policy rate rises from widening the interest-rate differential with abroad, which was 7% in both mid-November and mid-March.

Table 1. Changes in policy interest rates in selected countries since November 15, 2005

	Change	Current rate
Norway	+0.25	2.50
New Zealand	+0.25	7.25
US	+0.50	4.50
ECB	+0.50	2.50
Sweden	+0.50	2.00
Iceland	+0.50	10.75
Canada	+0.75	3.75