Financial stability

One of the main tasks of the Central Bank of Iceland is to promote an effective and secure financial system, including payments intermediation within Iceland and with other countries. To this end, the Bank makes regular reports on financial stability which are published in Monetary Bulletin. The following article assesses the macroeconomic environment and operations of financial institutions with reference to potential shocks that could threaten financial stability.

Summary of conclusions

Iceland's economy has been characterised by brisk economic growth over the past five years and shown unequivocal signs of overheating for the past two to three years. Individuals, businesses and financial institutions may have based their decisions during the cyclical upswing on excessive optimism about the medium-term growth potential. The rapid growth in domestic demand in recent years has to some extent been based on a weak foundation, as indicated by the current account deficit which measured more than 10% of GDP last year, and by excessive credit growth. The accumulated growth in lending by Deposit Money Banks over the period 1997-2000 ran at 130%, compared with 38% nominal GDP growth from 1996 to 2000. This credit growth to a large extent takes the form of foreign-denominated loans. Moreover, borrowers with no foreign currency revenues have increasingly borrowed in foreign currency. Corporate debt as a proportion of GDP and household debt as a proportion of disposable income increased still further last year to reach record levels.

The rise in equity prices during 1999 and the first months of last year has been fully reversed. Real estate prices, on the other hand, remain high. After substantial rises in recent years, however, there are now signs that residential housing prices are close to their peak. Changes in the prices of commercial real estate appear to have been even more extreme during the upswing. From the beginning of 1998 they have risen by, roughly estimated, 60-80% in excess of the general price level. A sizeable drop in domestic demand could result in a fall in real estate prices which increases the risk of loan losses by credit institutions.

On the positive side, business profitability before net financial expenses has been reasonably strong, and listed companies are forecasting higher profits this year. Another sign of strength, at least in the near term, is that real disposable household income is still on the increase and defaults have been at a historical low. However, there are some indications that defaults have increased in recent months.

Compared with previous years the operating results of the commercial banks and savings banks in 2000 were poor. Profitability fell, their cost ratios rose and their equity ratios dropped, especially when subordinated loans are excluded. The depreciation of the króna in recent months could affect credit institution profitability through increased lending, write-offs and a drop in turnover, and at the same time the commercial banks and savings banks' capital ratios will be brought down when foreign-denominated balance sheet items rise. As pointed out in earlier reports, it is vital for credit institutions to boost their capital ratios, achieve greater operational efficiency and consolidate their revenue base.

A turnaround in the economy could take two forms. Firstly, changes in external conditions could amplify or reduce risks within the financial system. Although the Icelandic economy has been put on a firmer footing by diversification of exports and

Box 1 Examples of banking crises (financial crises) in the last decade

Norway 1990-1991

The first signs appeared in Norway in 1988 when several commercial and savings banks needed the help of their guarantee funds to merge with stronger banks. When these funds were on the point of running out at the end of 1990, a special state guarantee fund was set up which allocated contributions to them and also injected capital into the commercial and savings banks. Then, when the capital adequacy ratios of the three largest banks dropped below the mandatory requirement and it became obvious that new share capital could not be procured in the market, the government intervened and by the end of 1991 had become a majority shareholder in them all: Den norske Bank, Christiania and Focus. At its peak, Norway's financial assistance to its banks was equivalent to 2.6% of GDP, but this was offset by collection of receivables and proceeds from the sale of assets. Banks in Norway produced a profit again in 1993. The Norwegian treasury first sold Focus to Den Danske, and last autumn sold Christiania to Nordea. The state still holds a majority share in Den norske Bank but aims to sell shares this year in order to bring its holding down to 33%.

Sweden 1991-1992

In Sweden, Nordbanken was the first to run into troubles, late in 1991. It was then the country's third-largest bank, and the state held a majority share in it. The Treasury injected extra capital and appointed new management. Around mid-1992 it was clear that the problem had become generic and action was needed to prevent the closure of foreign credit lines and the collapse of the banking system. That autumn the government, with parliamentary backing, announced that all liabilities would be honoured, apart from capital stock. All the banks benefited from this announcement of guarantees, but virtually all the direct financial assistance went towards rescuing the state-owned Nordbanken, taking over Gota Banken and then merging the two. At its peak, Sweden's government assistance for its banks was equivalent to 5.2% of GDP, offset by collection of receivables and proceeds from the sale of assets. Banks began producing an operating profit again in 1994. Privatisation of Nordbanken began in 1995 and the state's entire holding has since been sold.

Finland 1991-1993

In Finland, government action to rescue the banks began late in 1991 with assistance to Skopbank, which was jointly owned by the savings banks. Real estate and shareholdings in other companies were transferred to separate funds. A state guarantee fund was set up in April 1992 and when this was restructured in February 1993, parliament resolved that the government would guarantee payments by Finnish banks. The government had made a prior pledge of subordinated loans to DMBs in proportion to their risk-weighted assets, but these were converted into share capital if no interest was paid for three years or if the capital adequacy ratio dropped below the mandatory minimum. All the commercial banks and savings banks took advantage of this offer. Around the same time, action was taken to address the widespread problems of savings banks. Half of all the savings banks were merged into a single savings bank which was then converted into a limited liability company and taken over by the guarantee fund. Half a year later this merged savings bank was split into four units which were sold to the country's four main bank groups. Finally, the problems of STS bank were tackled by merging it with KOP, in April 1993. At its peak, Finland's financial assistance to its banks was equivalent to 10% of GDP, offset by collection of receivables and proceeds from the sale of assets. The banks continued to produce operating losses until 1996.

Other countries over this period:

Guyana 1993-1995
India 1991-1993
Indonesia 1992-1994, 1997-1998
Italy 1990-1994
Japan 1992-1994 (to some extent ongoing)
Kenya 1993
Malaysia 1997-1998
Mexico 1994(-1995)
Nigeria 1991-1994
Nepal (1988)-1994
Papua New Guinea (1989)-1994
Philippines 1997-1998
Russia 1998
Sri Lanka (1989)-1993
South Korea 1997-1998
Tanzania (1989)-1994
Thailand 1997-1998
Turkey1991, 1994 and 2000
Uganda 1990-1994
Venezuela 1994

improved policy implementation, its open financial system makes it sensitive to changes in external conditions. Upheavals in international financial markets could therefore upset macroeconomic stability, just as easily as swings in foreign trade could. Secondly, conditions could suddenly deteriorate with a readjustment of demand after the overheating of recent years. If such a hard landing goes hand in hand with worsening external conditions, the financial system could face problems.

Credit expansion in the past few years and the excessive current account deficit which has occasioned a considerable currency depreciation in the past few months pose a risk to financial stability, as the Central Bank has warned before. At the same time, the financial system's capacity for withstanding tougher conditions has diminished in various respects, manifested in poorer profitability and lower capital ratios. The nature of financial crises is that they can strike without unmistakeable warning signs, as has happened among Iceland's neighbours and around the world (see Box 1). Numerous international studies have revealed various probable, although not certain, leading indicators of financial crises. Some of them, e.g. a current account deficit, credit expansion and real estate price inflation, which have been linked to financial crises in other countries, have provided clearer warning signs than before. In the absence of further external shocks, however, the position of Iceland's credit institutions is hardly at risk.

Macroprudential indicators

International economic developments have been less favourable in recent times

The risk posed to Iceland's financial system by changes in external conditions can be expected to have increased over the past year. The reason is that, at the same time as the world economic outlook has become more uncertain with a corresponding risk of instability, Iceland's economy has become more vulnerable to such changes, in particular because the sustainability of growth is more dependent on foreign capital inflows than ever before.

When the Central Bank published its first report on financial stability in February last year, there was a general optimism concerning the global economic outlook. Clouds have appeared on the horizon since then. This is particularly the case with two of Iceland's main trading countries, the USA and Japan. In the USA, economic growth suddenly slowed down in Q3 and Q4 of 2000, after one of the longest and most buoyant growth periods for decades. Preceding this turnaround was a sharp drop in share prices, especially in the technology sector. By April, share prices on Nasdaq were more than two-thirds down from their peak just over a year before. This is the largest drop in share prices since Nasdaq was launched, although at the beginning of last year they were exceptionally high. The rise and fall of technology shares must surely be one of the great bubbles of the 20th century. Another aspect of the upswing in the technology sector was overinvestment and an exceptionally sharp drop in financial saving in the USA, which is also apparent from a record deficit on the current account. These conditions pose the risk that economic growth in the USA will be slower for the next few years. The technology bubble was not confined to the USA, although its scope and impact were the most marked there. Markets in Europe and many parts of the world have shown a similar trend, and economic growth has slowed down there too. Economic developments in Japan, however, cause the most concern. The Japanese economy has still not recovered from the repercussions of the asset bubble which burst there more than a decade ago. Recovery has several times failed to get off the ground over the past decade. Last year yet another recovery seemed to be on the horizon, but the contraction in the technology sector now seems to have taken the wind out of the Japanese economy's sails. Japan's problems involve not least the fragile state of its financial system, which has not recuperated adequately from the slump in asset prices at the beginning of the 1990s.

Another development on the international scene which may have some impact on Iceland's economy and financial system is the considerable changes in exchange rates between its main trading countries. The euro continued to slide last year and at its lowest point late in October had lost almost one-third of its original value against the US dollar. Since then the euro has strengthened somewhat, as had long been expected, but has not managed to rally as convincingly as might have been expected. Exchange rate swings on such a scale could exert considerable pres-

sure on the financial systems of countries outside the major currency areas.

The turnabout in foreign markets involves three kinds of risk for the Icelandic financial system. Firstly, companies which have borrowed from Icelandic financial institutions may suffer jolts to their exports, cutting back their liquidity. Secondly, exchange rate swings may jeopardise their ability to repay debt. Finally, the supply of foreign capital could conceivably decrease, due to both the weaker position of foreign credit institutions and a poorer economic outlook in Iceland under tougher external conditions. There were few visible indications that Icelandic companies and financial institutions were suffering from worsening external conditions at the time of writing, but there is reason to monitor closely the impact of exchange rate swings on business profitability in the near term.

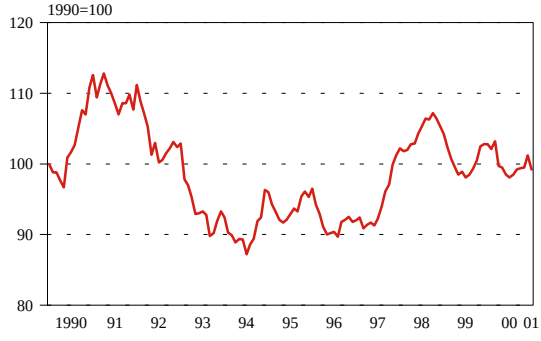
Sluggish exports caused by supply rather than demand problems

The outlook for exports is somewhat poorer in 2001 than it has been in recent years. The National Economic Institute (NEI) forecasts 3.4% export growth. However, the reason lies not in any deterioration in the economic situation in export markets, but rather in the poorer outlook for the fish catch, which is expected to lead to a contraction in exports of marine products. Quota cutbacks during the current fishing year, according to the NEI forecast, will result in a drop of around 4% in catch value and 3.5% in export revenues, both in real terms. Recent studies show that the fishable stocks of main demersal species seem to be in worse shape than had been hoped. Prices of marine products are generally expected to remain fairly stable in the near future. No signs have yet emerged that slower world economic growth has dampened demand for Icelandic export products on a scale that would cause a price slump; for example, the price of fish oil recently rose by around one-fifth. Seafood markets continue to be characterised by robust demand and supply shortages. Signs of weakness are hardly visible, except in the case of the fish meal and oil industry, where tighter rules on dioxin content in their products and tight restrictions on production of animal feed in response to BSE have cut back demand in Europe. Although prices of marine products are invariably subject to uncertainty through various conflicting supply and demand factors, current prices of marine products in foreign currency, which in a historical context cannot be regarded as either abnormally high or low, do not give any grounds for concluding that there is much risk of a major price slump. Export prices of marine products, adjusted for inflation, are hovering around the 5-year average and those of the most important species are somewhat above average.

Chart 1

Real marine product prices in foreign currency

January 1990 - January 2001



Fuel prices have stabilised after massive rises last year

Fuel is one of the most important inputs for many businesses, for example in the fisheries sector. Rising fuel prices in the international markets have in recent times probably been far more consequential for the profitability of many of them than changes in prices of products. A wave of major price rises took place last year, but these were reversed as the year progressed. So far this year, fuel import prices measured in Icelandic currency have been around one-fifth higher than year ago, entirely as a result of the depreciation of the króna. In recent weeks international fuel prices have risen somewhat, petrol by a quarter and gas oil by 10%, but these increases can be expected to be temporary. Forward prices for crude oil suggest, if anything, a downward trend. There are few indications of substantial changes in the price of other commodities, which are low at present and are expected to decline further in the next few months due to slower global economic growth.

Currency developments hit some companies hard last year …

Of all the changes that have occurred in the business operating environment since the beginning of last year, the exchange rate of the króna and the euro-dollar rate were probably among the most important. By the end of April the króna had depreciated by around 20% from its peak last year. In the preceding twelve months the króna had strengthened by around 6%. This development left a firm imprint on business profitability last year, causing sizeable valuation losses for many companies. These become immediately visible in the form of lower registered profit, while exporters' benefits from the weaker exchange rate emerge over a longer period. Excluding valuation losses, their profitability can be seen as satisfactory last year.

Table 1 Company profits

Companies listed on ICEX	*Profit before depreciation and financial items*		*Profit after taxes*	
Ratios of turnover (%)	*1999*	*2000*	*1999*	*2000*
Fisheries (17)	14.7	17.4	2.1	-9.5
Manufacture & production (14)	7.5	12.5	2.3	2.9
Oil distribution (3)	7.8	7.2	4.9	0.8
Marine export industry (2)	2.4	2.2	-0.2	-0.8
Transportation (2)	8.4	4.7	6.4	-0.8
Software industry (6)	8.7	10.2	4.5	6.0
Retail, construction and services (8)	5.6	7.9	3.4	2.9
Total	7.3	7.8	2.9	-0.5

Exchange rate developments have had an impact on businesses, depending upon their fields of activity and indebtedness. Export companies with a moderate level of debt will benefit from the weaker króna, despite considerable valuation losses in the short run. Companies which produce for the domestic market and have borrowed abroad are in a different situation. They benefit less from higher product prices in domestic currency, but are forced to choose between foreign loans that carry substantial exchange rate risk and domestic borrowing at high rates of interest. Information about these companies is more limited, since they are generally smaller and not listed on the stock exchange where they would be obliged to provide more timely information. Thus there is a certain risk that focusing excessively on listed companies paints too favourable a picture of the business sector as a whole.

… but listed companies are forecasting higher operating profits

Be this as it may, operating forecasts from listed companies do not suggest much pessimism so far. These assume that profit before depreciation and financial items will increase by around one-third this year, and that net profits will grow too. Ambitious plans for expansion are noticeable among companies in emerging export sectors, such as pharmaceuticals, medical equipment and fisheries equipment. The weaker króna will spell higher revenues for them as well as for exporters in traditional sectors. However, the fisheries will not be able to take full advantage of this position by increasing their exports, because of limited quotas.

A significant slowdown in growth in some areas …

The outlook is rather bleaker for companies serving the domestic market. There is growing evidence that growth is slowing down. One of the clearest indicators of this is statistics on turnover. In real terms, total turnover during the past two months was slightly down from last year, for example, and VAT receipts for the first quarter of 2001 were marginally lower in real terms than during the same period last year. These figures suggest that firms operating in the domestic market may be facing increasing difficulties. A very sharp turnaround has taken place in imports of motor vehicles. Imports of private cars dropped by 43% during Q1 this year. Imports of other durable goods, which tend to be sensitive to the business cycle, have nonetheless remained high. Thus it is unlikely that problems are beginning to emerge among importers of other goods than motor vehicles.

… but construction and services are still robust …

Although growth has slowed down sharply in various areas, important exceptions remain. Real turnover in the construction industry was 46% higher during the last two months of 2000 than in the same period the previous year, which is explained by several major building projects and good weather. Turnover in

Box 2 Increase in sectoral lending by the credit system, based on constant prices and exchange rates

Iceland's increase in lending in 2000 was divided into central government debt repayments of 18 b.kr. in real terms, or 12%, a rise in local government debt of 4.5 b.kr. or 7%, a rise in corporate debt of 110 b.kr. or 15.5% and growth in debts of households amounting to 66 b.kr. or 12%. Lending by the banking system and investment credit funds and direct foreign borrowing can be specified in more detail. In all, such credit increased by 124 b.kr. over and above changes in the price level and exchange rate last year. Of this figure, debt among manufacturing industries grew the most in real terms, by 31% or 17 b.kr., real debt of companies in the transport sector increased by 27% or 8 b.kr. and that of service companies by 21% or 17 b.kr. Although housing fund lending rose by 29 b.kr. in real terms, the proportional increase was only 9%. Other borrowing by households, however, went up by 39 b.kr., or 35% more than prices and the exchange rate.

Lending by the banking system and investment credit funds, and direct foreign borrowing (less intra-institutional lending), by sector at constant prices and exchange rates

	Position at	*Increase in 2000*	
B.kr.	*year-end 2000*	*B.kr.*	*%*
Central government	109.4	-27.4	-20
Local governments	29.5	2.5	9
Agriculture	27.2	3.1	13
Fisheries	148.1	8.8	6
Commerce	80.3	15.5	24
Manufacturing	71.1	16.9	31
Transport/communications	35.2	7.6	27
Energy	76.2	6.9	10
Housebuilding contractors	11.1	3.4	43
Other contractors	7.1	1.3	22
Services	99.7	17.1	21
Residential housing	338.4	29.1	9
Other borrowing by individuals	151.4	39.2	35
All sectors	1,184.5	124.0	12

The relative importance of foreign-denominated loans by sectors can also be established for lending by the banking system and investment credit funds, and for direct foreign borrowing. In recent years the proportion of foreign-denominated borrowing has remained very high in fisheries, transport and energy, and in most cases is probably connected to foreign-denominated revenues.[1] The weighting of foreign debt has increased substantially in commerce and manufacturing industries, and on a smaller scale in services, as the accompanying table shows. Of these sectors, manufacturing industries which compete with imports have the most capacity for absorbing exchange rate shocks; the position of the others is less certain. Finally, foreign-denominated loans to individuals grew substantially last year, from 6 b.kr. to 17 b.kr. Such borrowing was virtually unheard-of at the beginning of 1998. Apparently, sectors without export revenues or scope for competition have been taking currency risks, which undeniably raises their risk exposure over and above the inherent risk that all debt represents.

Foreign-denominated debt:
Position at year-end 2000 in b.kr. and as ratio of total lending by the banking system and investment credit funds, and foreign borrowing, in 1997 and 2000

	% 1997	*% 2000*	*Position in b.kr. 2000*
Agriculture	6	13	3.5
Fisheries	79	86	127.1
Commerce	20	41	32.9
Manufacturing	31	62	44.3
Residential housing	0	0	0.4
Transport/communications	80	88	31.2
Energy	100	100	75.9
Local governments	35	46	13.4
Housebuilding contractors	3	19	2.1
Other contractors	27	20	1.4
Central government	88	96	104.9
Services	23	36	36.1
Individuals less resid. housing	1	11	17.2
All sectors	38	41	490.4
Business and households	48	56	333.4
Business (excl. miscellaneous)	60	71	316.3

1. The latter two sectors have a high proportion of direct foreign borrowing. In part, power companies face currency risks because of their reliance on domestic revenues, and the same goes for transport companies.

Chart 2

Credit system total credit

Annualised change from previous year, adjusted for changes in prices and exchange rates

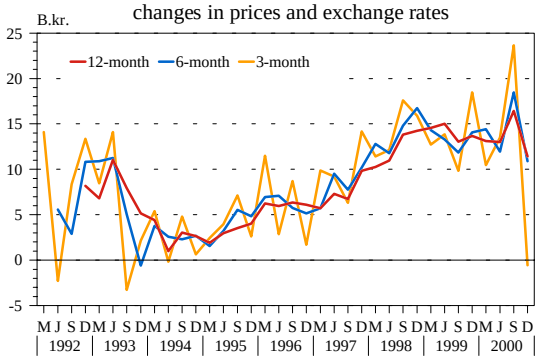
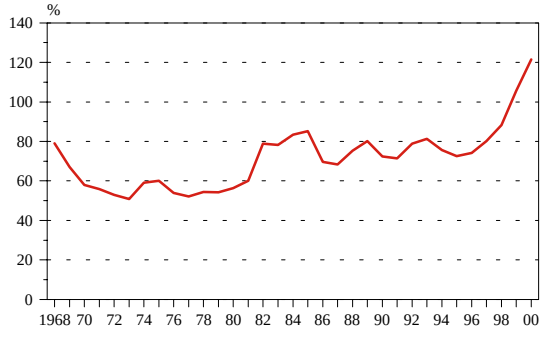


Chart 3

Business sector debt

% of gross domestic product



services, catering and hotels also rose by 7%, although the growth rate has decelerated from the previous year. Since the upswing in construction is to a considerable extent linked to several large-scale projects, there is a certain risk of a recession in the building trade when they are completed. However, construction companies are thought to have a backlog of projects and it cannot be ruled out that other major programmes, for example an expansion at the Nordurál aluminium smelter with accompanying hydropower development projects, will bridge the gap when those currently in progress come to an end.

Credit is still expanding, although some slowdown in growth is noticeable

Although growth in lending by DMBs has slowed down somewhat since its peak of almost 35% in 1999, the 12-month increase until the end of March this year was still more than 23%. Lending by the credit system as a whole increased by just over 18% until the end of 2000.[1] Lending to businesses grew the most, by 23%, while lending to households ran close behind with an increase of just under one-fifth. Compared with the previous year, business credit growth slowed down from 1999, when it grew almost 29%, while lending to households gained ground.

Discerning that underlying credit growth has actually slowed down requires some scrutiny, but some signs are there. Real growth of lending in the credit system was marginally higher in 2000 than the previous year, at 13% against 12% in 1999. Part of this increase is caused by the depreciation of the króna. The share of foreign borrowing in the credit system is just under 30%. If the foreign component in credit growth is valued in terms of constant exchange rate and foreign prices, it grew by 11.5% last year. Box 2 shows a breakdown of lending by segments.

Lending growth appears to have decelerated considerably during Q4 of 2000, as the accompanying chart shows. At constant exchange rate and prices, lending in the credit system remained virtually unchanged from the end of September to the end of the year. Growth has picked up again in the beginning of 2001 and the increase in lending by DMBs and investment credit funds outstripped price and exchange rate changes by 1.6% over the first two months of this year. This corresponds to a 10% increase on an annualised basis. Comparable growth in lending by DMBs from December to the end of March was equivalent to 13.5% per year.

Massive increase in corporate debt in recent years

As a proportion of GDP, corporate debt has never been greater. At the end of last year it was equivalent to 122% of GDP, compared with 74% in 1996. Only once over the past three decades, in 1982, has the ratio of corporate debt to GDP shown such a large annual rise as during the past two years.

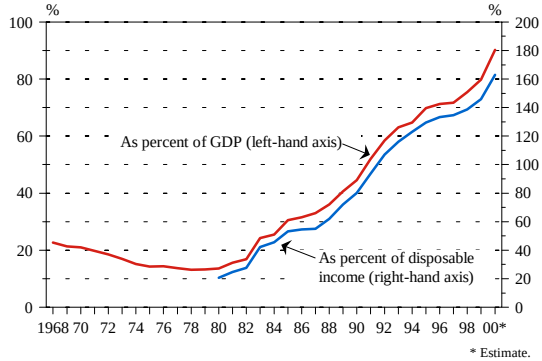
1. Included in the credit system are deposit money banks, investment credit funds, pension funds, leasing companies, securities funds, lending activities of insurance companies and the State, and direct borrowing abroad by Icelandic parties.

Heavy indebtedness exposes households to shocks

Private individuals' debts to the credit system as a whole increased by one-fifth last year, and with DMBs by one-third. Icelandic household debt is among the heaviest in the world and as a proportion of disposable income it has grown steadily since the early 1980s. Last year household debt jumped yet again, from 146% of disposable income to 163%. This ratio is now higher than the peak in Norway before a financial crisis struck there early last decade. However, it should be borne in mind that indexation and the long maturity of loans in Iceland makes a given debt ratio to some extent less risky than would otherwise be the case. Household indebtedness was equivalent to 90% of GDP at the end of last year, 10% more than the year before. By this yardstick too, household debt has reached a record level, nor has it ever before risen so much as a proportion of GDP in a single year.

Chart 4

Household debt



There is preliminary evidence of a slowdown in the rate of household debt expansion during the first months of 2001, since lending to individuals by DMBs and investment credit funds decreased slightly. This can be entirely attributed to less use of overdrafts, which can hardly be fully explained as a seasonal fluctuation.

The debt service burden of individuals has grown sharply in recent years. Rough estimates suggest a considerable increase as a proportion of disposable income in recent years, to approximately double the ratio a decade ago. As the debt service burden varies according to the age and assets of individuals, it may be concluded that the debt service burden of some households has become extremely heavy.

Growing share of household short-term debt increases the risk even further ...

It is noticeable that a larger share of household debt than before is due to consumption loans, which have a shorter maturity than mortgages or student loans. Credit involved here is chequebook overdrafts which amounted to 52.7 b.kr. at the end of this February, hire purchase agreements for durable consumer goods or travel, and credit card instalment purchases. The share of such short-term credit increased at a particularly swift pace over the past two years. This trend hints at a greater risk for the financial system, since the collateral for such credit tends to be less secure than in the case of mortgage debt, or non-existent.

The growing debt service burden of individuals and businesses prompts the question whether the statistics on lending give any indication that debtors are beginning to run into difficulties. This could take the form of, for example, greater use of short-term credit facilities such as bills of exchange and overdrafts, before households adopt more radical measures to cut back their expenses. There is some evidence of this, although it is hardly striking. Individuals' overdrafts and bills of exchange within the banking system more than doubled in real terms from the beginning of 1998 to end-2000. In 2000 they rose by 20 b.kr. to reach 63 b.kr. by year-end. At the end of February they had dropped back to 55 b.kr. These debts showed a large proportional rise, from 8% to 12% of individuals' total debt with DMBs and investment credit funds over the past 38 months. At the same time, corresponding debt of businesses fell proportionally, from 12.5 to 11.5% of corporate debt with the banking system, investment credit funds and abroad, but nonetheless rose from 36 to 70 b.kr.

… especially if the employment situation deteriorates

The indicators of debt service burden discussed above could suggest that servicing the stock of debt already imposes a heavy burden on many households. This burden would become even heavier if the employment situation takes a turn for the worse. Households' capability of meeting their financial obligations is sensitive to the employment situation,

which last year was exceptionally good. However, the recent rate of employment is based on premises which are unsustainable in the long run. It therefore represents a considerable risk for the financial system. Seasonally adjusted employment reached a low of 1.7% towards the end of 2000, but in recent months has been crawling upwards to the range 2.1-2.3%.

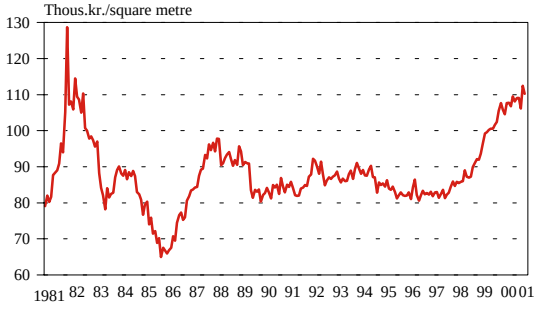
Real estate prices have probably peaked

The rate of increase in residential housing prices appears to have slowed down, abstracting from short-term volatility. The price of an apartments in multi-residential accommodation in the Greater Reykjavík Area rose in real terms by 4% from Q1 of 2000 until the same quarter this year. For the immediately preceding twelve-month period the corresponding rise was 16%, and it was 8% the year before that, i.e. from Q1 of 1998 until Q1 1999. Residential housing prices are now very high in historical terms, or similar to the levels of the early 1980s, and 27% higher in real terms than on average over the period 1992-1997, when they were fairly stable. Coupled with the fact that real disposable income is also at a historical peak, the level of residential housing prices presents a clear risk for the finances of households which have been taking on large-scale housing-related obligations.

Chart 5

Real residential housing prices in Greater Reykjavík Area

Monthly data, March 1981 - March 2001



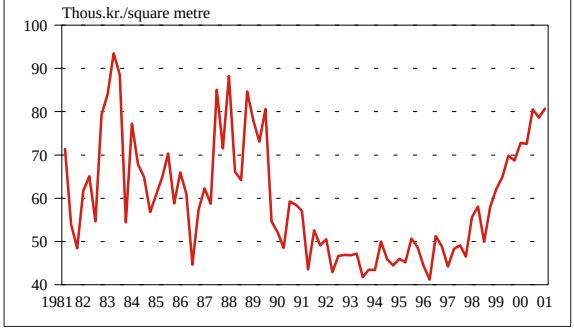
Considerable risk of a drop in commercial real estate prices

Price trends for business premises have apparently been even more extreme than those of residential accommodation during the upswing. Admittedly,

Chart 6

Commercial real estate prices in Greater Reykjavík Area (real terms)

Quarterly data, Q2 1981 - Q1 2001



data on prices of commercial real estate need to be treated with caution, given the relatively few trades that are recorded and the much greater diversity of properties sold than for residential accommodation. Data from the Real Estate Valuation Office, however, seems to invite the conclusion that the rise in commercial real estate prices have outstripped the general price level by 60-80% since the beginning of 1998. For several years prior to that they were steady and low in a historical context. Thus the real value of business premises now appears to be at one of its highest levels, although the qualification should be added that data are extremely sparse until the mid-1990s, which complicates historical comparisons. Over the past two quarters, the increases have apparently stopped, but prices are still exceedingly high. If demand for commercial real estate suffers a sizeable shock, it must be assumed that a slump in prices, even in the range 35-40%, is a possibility. Given the fact that business premises are frequently extensively mortgaged, it must be concluded that this situation poses a risk for financial institutions.

Fishing quota prices going down

Prices of quotas have not followed those of other assets. The price of both permanent and temporary quotas for cod soared around the middle of the 1990s, but has since then remained stable. In recent months permanent quota prices have fallen below the three-year minimum. Quota prices are probably not particularly sensitive to the domestic economic situation as long as fisheries companies remain on a reasonably firm footing. Shocks to the fisheries sector

caused by catch failure or falling prices, however, could have a considerable impact on quota prices with negative repercussions for the financial system, especially if shrinking domestic demand has weakened its capacity for absorbing such shocks.

Drop in share prices could weaken household finances

Until only a few years ago, equity prices would not be expected to have much effect on household and corporate finances. In recent years, however, share ownership by households has increased massively. A rough estimate put their holdings in the range 200-250 b.kr at market value at the end of 1999 (based on nominal value reported on tax returns and stock exchange prices). At the same time, equity prices have been exceptionally volatile. The ICEX Main List, for example, has fallen by more than one-third from its peak last year, wiping 70 b.kr. off the market value of listed shares. Based on the position at the end of 1999, the estimated dent made in household and corporate finances by the fall in equity prices is in the range 80-100 b.kr.. In fact, those assets were also built up over a relatively short time, i.e. 1999 and the first months of last year. Individuals are known to have borrowed or sold other assets in order to invest in equities, which is a very risky venture. Because of how sharp the price peak was, making the drop much softer when measured over a longer timescale, trading volume at such high prices was lower than would normally have been the case. However, trading turnover was also peaking when prices were highest.

The current account deficit is evidence of serious overheating …

Despite a slowdown in growth in various areas, Iceland's economy still shows signs of severe overheating. These are most clearly shown in rapid credit expansion and the current account deficit which amounted to 10.3% of GDP in 2000 and, according to the NEI forecast, will be of similar magnitude in the current year. It is highly unusual for the economy to be in external imbalance on this scale when growth and investment are no greater than expected this year.

The current account deficit calls for an enormous inflow of foreign credit. The composition of this capital inflow is a matter of concern. Less risk is generally seen as accompanying inflows for direct foreign investment, although there may be exceptions, while the greatest risk is attached to a large inflow of short-term borrowing and securities investments. Last year, the net inflow on both securities investments and direct foreign investment turned out to be negative. As far as securities investments are concerned, pension funds' purchases of foreign securities, especially equities, played a large part in this development. Measured as a proportion of GDP, the net flow of foreign direct and portfolio investment was negative by a similar amount to the current account deficit. Thus a capital inflow equivalent to roughly twice the current account deficit, or one-fifth of GDP, was needed to finance the current account deficit and the combined outflow of direct and portfolio investment. Such a huge inflow of borrowed funds is unparalleled in Iceland.

Chart 7

Fish quota prices (real terms)

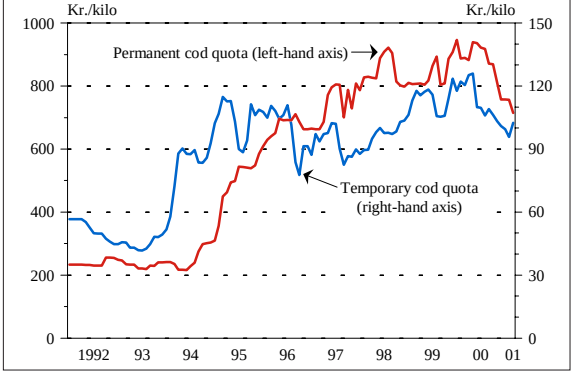
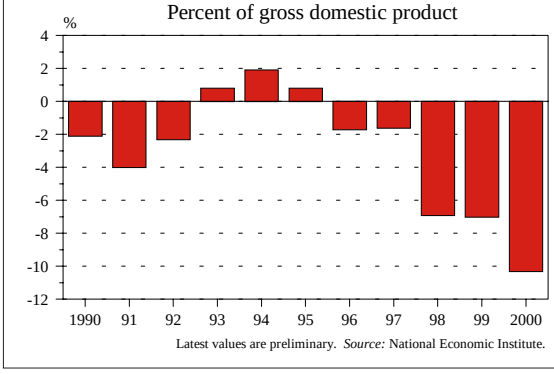


Chart 8

Current account balance 1990-2000

Percent of gross domestic product

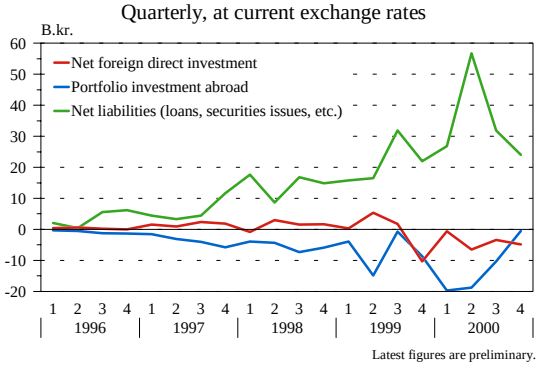


Latest values are preliminary. *Source:* National Economic Institute.

Chart 9

Capital movements 1996 - 2000

Quarterly, at current exchange rates



Latest figures are preliminary.

… and increases the risk that a contraction could threaten financial stability

A current account deficit on the scale of recent years cannot be sustained in the long run. An adjustment of some kind is bound to happen. For the financial system, the largest risk is associated with a sudden reversal as domestic demand that is the root cause of the deficit contracts. Investment could contract abruptly and lead to lower employment, which in turn would affect disposable income and increase uncertainty among households about their financial position. Exchange rate instability is commonly associated with such upheavals, and could produce a substantial turn for the worse in business profitability.

Economic growth in recent years was to a large extent built on a weak foundation. Households increased their spending over and above the increase in their disposable incomes, by cutting back their saving. Eventually the time will come when they need to increase their saving to a normal level, if only to meet their higher debt service burden. If the employment situation worsens significantly, a hard landing is probable, with disposable income possibly shrinking at the same time as the debt service burden increases. Likewise, if many of the recent investment projects are to generate a return, sustained purchasing power is required. This applies especially to expansion of retail space, where investment has been extensive, with a corresponding accumulation of debt.

High residential housing prices make the situation even more sensitive. A contraction could bring down real estate prices to a level where they would no longer cover the collateral which has been put up to secure mortgage repayments. In the past three years, the increase in real residential housing prices has been on a similar scale to that witnessed in much of Scandinavia a decade ago. When shocks struck the economies of the Scandinavian countries following a period of overheating, the real increase in residential housing prices was largely reversed, and in the case of Finland by more than in full. The probability of such a scenario in Iceland is difficult to evaluate, but it is only prudent that credit institutions view such an outcome as a possibility.

Abolition of the intermediate exchange rate objective has reduced the risk that a currency crisis will spark a financial crisis

Excessive current account deficits are commonly associated with exchange rate instability. The risk posed to the financial system by large swings in the exchange rate is discussed in more detail below. In particular, it lies in the inability of businesses, and in some cases individuals, who have taken foreign-denominated loans, to repay their debt if the currency weakens. In the case of foreign currency borrowing in order to purchase real estate, credit institutions face a particularly pronounced risk, since under conditions which lead to a sharp depreciation of the króna, real estate prices are also likely to drop.[2]

On the whole, the reform to the monetary framework (described in a separate article) offers little cushion against the risk posed to the financial system by large exchange rate swings. Judging from the experience of countries which have suffered currency and financial crises in recent years, the largest exchange rate fluctuations have occurred with the failure of a fixed exchange rate regime, when central banks have been forced to stop holding the exchange rate within specific fluctuation limits after severely depleting their currency reserve. After the abolition of the fluctuation limits, there is no need to fear such a scenario. On the other hand, short-term fluctuations in the króna are likely to increase significantly, at least temporarily, which is attributable to less Central

2. For example, if a real estate purchase is financed by $^{8}/_{10}$ with foreign borrowing, a 10% drop in the price of the property and a currency depreciation of around 15% would suffice to bring the value of the real estate below the outstanding balance on the loan.

Bank intervention in a relatively shallow market and the uncertain climate prevailing at the moment. These circumstances call for companies and financial institutions to exercise even more caution in their risk management. On the whole, however, the present arrangement entails less risk for the financial system, since the risk of a currency crisis triggered by an unsuccessful attempt to defend a particular exchange rate is no longer at hand.

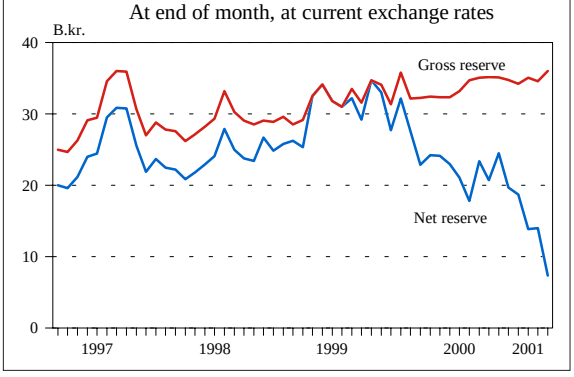
Net foreign reserves have deteriorated considerably recently

The currency reserve serves the function of dampening the impact of foreign currency flows on the exchange rate. If exchange rate stability is the intermediate target of monetary policy, a sizeable currency reserve is a precondition for the credibility of such an arrangement. The changes in the monetary framework at the end of March reduce the importance of this function of the currency reserve to some extent. Earlier rules on the currency reserve, which aimed to maintain a specified minimum reserve relative to the size of foreign trade, are not as critical as before. However, in pursuit of its targets for price and financial stability, the Central Bank may still require adequate reserves to enable the Bank to intervene in the foreign exchange market if it deems this necessary to achieve its goal. Last year the currency reserve deteriorated substantially in terms of its composition. The Central Bank increasingly had to resort to short-term borrowing in order to maintain the size of the reserve as stipulated in its working procedures. This can be clearly seen on the accompanying chart.

Chart 10

Central Bank currency reserve 1997-2001

At end of month, at current exchange rates

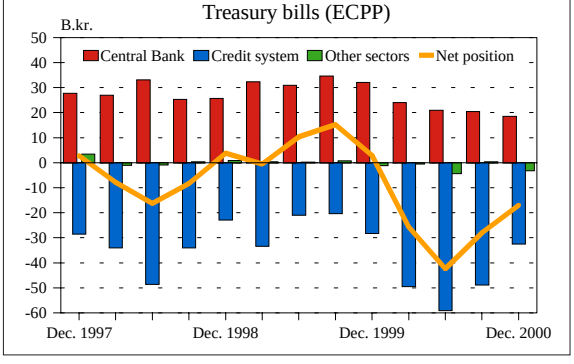


The currency reserve, net of foreign borrowed funds, decreased steadily from late 1999 and by the time the fluctuation limits were abolished, the net position had contracted to only around 7 b.kr. Besides its currency reserve, the Central Bank of Iceland has negotiated access to foreign credit facilities which the Bank can draw on without notice. The amount of these agreements is now around 70 b.kr. and only a small amount has been drawn on.

Chart 11

Net short-term foreign asset position

Short-term assets minus short-term debt excluding Treasury bills (ECPP)



The short-term foreign position can also provide an indication about pending pressure on the exchange rate or currency reserve.[3] Its development suggests that the short-term position was significantly more sensitive last year, especially during Q2 when it was negative by more than 40 b.kr., largely due to the negative position of DMBs. Later in the year the credit institutions improved their position somewhat, from being negative by almost 60 b.kr. at the end of June to negative by almost 30 b.kr. at the end of the year. At the end of June the currency reserve was equivalent to only 56% of the DMBs' short-term position, and their short-term liabilities were 2.4 times the reserve, but have since decreased. The Central Bank's short-term position also weakened during the year, as has already been reported.

3. The foreign short-term position can be defined as Iceland's current foreign assets less current foreign liabilities. Foreign assets are largely in the form of the Central Bank's currency reserve and the current assets of credit institutions and, to a certain extent, of businesses. The stock of T-bills in international markets is not included in this definition, since they are fully backed by untapped credit facilities.

Aggregate microprudential indicators

Profitability drops …

On the whole, profitability[4] was slack at the commercial banks, major savings banks and investment banks[5] in 2000. Return on equity was 9.9%, having dropped from 19.3% the year before. Looking only at the three largest commercial banks[6] this ratio is even lower, or 5% compared with 33.2% at the six largest savings banks and 12.4% at the investment banks.

… with several qualifications …

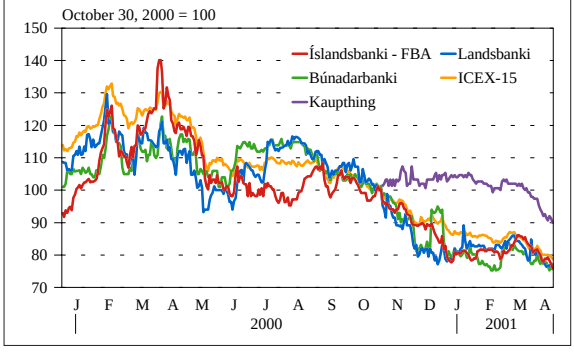
Qualifications need to be made when these institutions' profit figures are compared. Several savings banks sold their shares in Kaupthing and others posted them to their accounts at market value in part or in full. Had this not been done, their profitability would have been close to zero in 2000, and the story is similar for 1999, when their share in Kaupthing's profit was the bulk of their return. Different procedures in accounting for market value of shares in the investment portfolio also need to be borne in mind. Íslandsbanki-FBA included the loss due to falling prices of marketable securities in full, and if both Landsbanki and Búnadarbanki had done the same their pre-tax profits would have been lower. The value of equity holdings in Landsbanki's investment portfolio, however, is not fully realised in its accounts.

… and share prices fall

Lower profitability of financial companies is clearly reflected in the prices of their listed shares. They have all fallen considerably from Q2 of 2000 until today, and their market worth of 90 b.kr. in mid-April 2001 was more than 12% lower than at the beginning of 2000.

Chart 12

Equity market performance of financial sector companies and the ICEX-15



Cost ratio is on the increase …

The financial institutions' cost ratio, i.e. operating expenses as a proportion of net operating revenues, fell in 1999 (to 60.4%) but rose again in 2000 (66.3%). However, the combined cost ratio fell at the six largest savings banks to 48.9% in 2000, from 62.1% in 1999. On the whole, little changes have occurred in the cost ratio over the past five years, because the overall decrease in 1999 and that shown by the savings banks in 2000 can largely be explained by an increase in other revenues rather than by cost restraint.

A look behind the averages makes interesting reading. Íslandsbanki-FBA's cost ratio rose to 64.2%, its highest level since 1996. To some extent this is explained by the costs of their merger, and the unaudited first-quarterly statement published towards the end of April shows that this ratio has dropped slightly. At Landsbanki this ratio has been stable for the past 5 years and is now around 71.5%. The greatest change has taken place at Búnadarbanki, where the cost ratio rose to 84.2%. At Kaupthing, an increase in costs sent the ratio up to 66.9%, while it decreased for four of the six largest savings banks, although this is largely explained by an increase in other revenues.

Payroll and related costs rose by 19% last year among financial institutions as a whole, but Kaupthing stands out for its proportional increase of 78.2% between the years, and its number of full-time positions went up by 56%.

Icelandic financial institutions clearly face a great deal of work in bringing down their cost ratios if they want to be competitive against foreign rivals.

4. The ratio of net profit to the average between equity at the start and end of the period, less profit for the period.
5. i.e. Íslandsbanki-FBA, Landsbanki Íslands, Búnadarbanki Íslands, Icebank and the 6 largest savings banks: Reykjavík and Environs, Hafnarfjördur, Sparisjódur vélstjóra, Keflavík, Kópavogur and Mýrarsýsla. Kaupthing and Frjálsi Investment Bank are the investment banks referred to.
6. In the figures for commercial banks, FBA is included with Íslandsbanki from 1998 onwards, but the Fisheries Investment Fund and Industrial Loan Fund are included before then.

Mergers and operational streamlining must surely be a prime consideration. A Competition Council decision last year prevented a merger between Landsbanki and Búnadarbanki, which would have been a cost-cutting merger and would have resulted in operational streamlining within the Icelandic banking system. Nonetheless, opportunities for gains in operating efficiency still exist and could increase further if draft legislation on the privatisation of Landsbanki and Búnadarbanki, and on the incorporation of savings banks into limited liability companies, becomes law.

… and the revenue base shows fluctuations …

Revenues of financial institutions as a whole increased between 1999 and 2000, although those of Búnadarbanki and Icebank contracted. The ratio of net interest earnings to total revenues increased at Íslandsbanki-FBA (69.0%) and Búnadarbanki (78.9%) while it remained virtually unchanged at Landsbanki (60.5%) in 2000. The reason is that capital gains on financing activities decreased considerably compared with 1999, and as a ratio of net operating revenues they were negative at Landsbanki (-1.1%) and Búnadarbanki (-20.8%) but just above zero at Íslandsbanki-FBA (0.4%). Five of the six largest savings banks and the two investment banks witnessed a drop in the ratio of net interest earnings to total revenues, while the ratio of net fee income rose at the investment banks (87.2%) and other income rose at the savings banks (59.2%).[7] Three of the six largest savings banks and Frjálsi Investment Bank produced a loss on their trading activities, while Kaupthing and Icebank generated a profit on them.

At the commercial banks and savings banks, net interest earnings have been the main source of revenues, along with commissions, while fee income is are the main source at investment banks. Financial institutions therefore need to consolidate these revenue bases and insulate them better against market fluctuations which have an impact on their profits from trading activities. The interest premium on loans to businesses and individuals has risen of late (both on foreign- and domestic-denominated loans). This trend could reflect an increased risk in the corporate operating environment, in the view of credit institutions, or their own tight liquidity, but it also bolsters their revenue base.

Capital adequacy ratio (CAR) …

The capital ratio of the financial institutions as a whole has been declining in recent years. At the end of 2000 it measured 9.9% according to the legal definition[8], down from 10.6% the previous year. Year-end 2000 capital ratios were 8.7% at Landsbanki, 9.7% at Íslandsbanki-FBA, 9.7% at Búnadarbanki, 12.3% at the largest savings banks and 11.6% at the investment banks. The commercial banks failed to reach their target of maintaining capital ratios of 10% and above last year. At the largest savings banks, the capital ratio rose from 1999 (10.8%), but until then it had been on a downward trend and was approaching that of the commercial banks. To a large extent, the turnaround in the savings banks' capital ratios can be attributed to their disposition of their shares in Kaupthing last year.

… and subordinated loans increase

Virtually all financial institutions took subordinated loans in 2000 and their total stock of subordinated loans had reached 20 b.kr. by the end of the year. Subordinated loans are classified as Tier II capital, but Íslandsbanki-FBA is the only financial institution to issue subordinated debt instruments belonging to Tier I (891 b.kr. at the end of 2000, see Box 3). Some 31% of these loans have been procured abroad and on April 3 this year Íslandsbanki-FBA announced a 22 million Europaper subordinated issue. Excluding subordinated loans, the capital ratio has fallen rapidly in recent years. For the financial institutions as a whole it was 6.7% at the end of 2000, but was 8.2% at the end of the previous year – a drop of 1.5 percentage points in a single year. At the three largest commercial banks combined, this ratio was 6.3%. Landsbanki's was 5.7%, Íslandsbanki-FBA's 6.7%, Búnadarbanki's 6.2%, and the largest savings banks had a ratio of 8.7%.

As the capital ratio falls and the financial institu-

7. Other revenues comprise revenues from equities and holdings, net commissions, capital gains on trading activities and sundry operating revenues.

8. The minimum ratio stipulated by law is 8%.

Box 3 New type of subordinated loans

(Capital supplement)

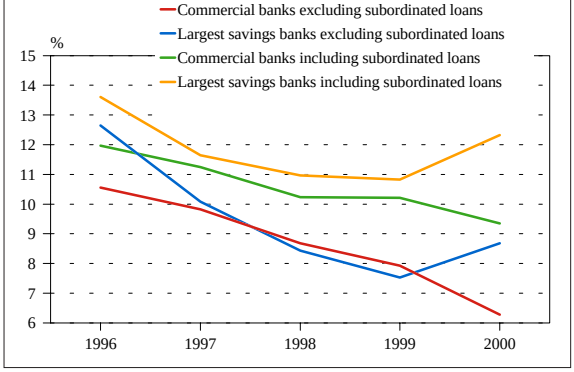
Regulation no. 852 of November 21, 2000, with the subsequent amendment no. 964 of December 20, 2000, authorises the classification of bonds as Tier I Capital, if the following conditions, among others, are fulfilled:

1. No due date is specified on the bond.
2. The issuer may only repay the principal with the approval of the Financial Supervisory Authority and then in the first instance 10 years after its date of issue, provided that the equity will be adequate after repayment, in the view of the FSA.
3. Interest payments will only be permitted within the limits allowed by retained earnings, providing that minimum capital adequacy requirements are also fulfilled when this has been done. Furthermore, the interest carried by the bond may only be reviewed, on a single occasion, 10 years afterwards.
4. If the issuer's equity falls below the minimum capital requirement, the principal can be written down to meet the issuer's operating loss.
5. In calculating equity, the maximum combined total of bonds both for the parent company and group is 15% of Tier I capital.

tions' profitability decreases, terms on subordinated loans to them become tougher, and there are signs that this is beginning to happen in Iceland.

Chart 13

Capital ratios incl./excl. subordinated loans



The main reason for the falling capital ratio is rapid expansion of the financial institutions' balance sheets and declining profitability. There is every reason for concern about this trend. In recent years the fall in capital ratio has been particularly noticeable at the savings banks. Commercial banks have maintained theirs better with subordinated loans, but there is continuously less scope for further issues. Now it is also clear, after the depreciation of the króna this year, that the financial institutions' risk-weighted assets will rise, which by itself will bring down their capital ratios. A ratio which is well above the capital adequacy requirement gives some scope which will certainly be needed if there is a hard landing. It is also worth bearing in mind that the Basel Committee is now working on a review of capital adequacy requirements, as discussed in Box 4. This includes a capital requirement for operational risks which could raise the requirement significantly. New capital adequacy rules are expected to take effect in 2004. In all likelihood these reference points will be made binding under Icelandic law, and it is certain that the rules will have an impact on borrowing overseas by Icelandic credit institutions.

Credit expansion is still brisk …

A large increase in lending is the main reason for the rapid growth in the credit institutions' balance sheets in recent years. From the beginning to the end of 2000, DMB lending increased by 26.4%, or 126 b.kr.[9] The increase the year before that was 23.3%, or 90 b.kr.[10] Commercial banks witnessed higher credit growth than savings banks in 2000, or 28.0% and 21% respectively, but the situation was reversed the year before when savings banks' lending rose by 32.2% but that of commercial banks by 20.6%. During Q1 of 2001, lending increased by just over 4% (or more than 17% on an annualised basis) compared with 7% in Q1 of 2000, which suggests that momentum is starting to slow down, since credit institutions may be finding it more difficult to fund increases in lending.

9. Lending by FBA included at the beginning of the year.
10. Lending by FBA is included in these figures.

Box 4 proposals for a review of capital adequacy rules

On January 16 this year, the Basel Committee on Banking Supervision published the New Basel Capital Accord proposing new capital adequacy rules for credit institutions. Aimed to replace the Basel Capital Accord of 1988, it is expected to be implemented in 2004.

If adopted, the new Accord will be more complex and detailed than 1988 Accord. A more complex framework is considered as a natural reflection of the evolution of credit institutions' activities in recent years, and also represents a response to their demands for a review of the 1988 Accord. An effort has been made to introduce flexible principles that take into account the different characteristics and degrees of risk, and at the same time enable a choice between assessment methods. The scope for employing more risk-sensitive and precise methods for calculating capital requirements is regarded as an encouragement to credit institutions to make ongoing enhancements to their risk assessment procedures and risk management. Furthermore, more sophisticated risk assessment procedures for credit institutions are also seen as contributing to global financial stability.

The proposals consist of three interconnected pillars: minimum capital requirements, internal and external supervisory review and market discipline through increased disclosures by credit institutions.

Regarding *minimum capital requirements*, the effect of new framework on the activities of banks will depend upon the sophistication of their risk assessment methods. Smaller banks will be able to apply the simplest procedures which are based on the standards from 1988 and only slightly more complicated. Banks with more advanced risk management capabilities and also fulfil more stringent supervisory requirements will be able to apply the internal ratings-based approach. This approach leaves it to the discretion of the banks themselves to assess many key factors in credit risk, such as the probability of default of the borrower. New requirements are also introduced for operational risk and the choice of measurement approaches for it. On average, the new standards are not expected either to raise or to lower average capital adequacy requirements for credit institutions at global level. However, those made towards individual institutions may increase or decrease, according to their overall risk profile. Since only a small part of Icelandic credit institution will qualify to use the more complex version of the planned rules, their present capital requirement can be expected to increase on average after the reform.

The proposals underline that the new capital adequacy rules will be followed up with a closer *internal and external supervisory review* of their implementation. Greater responsibility on the part of the credit institutions and more effective official supervision are suggested. It is proposed that credit institutions should adopt methods that enable official supervisory institutions to assess whether each one has the capability and internal procedures to assess capital requirements in accordance with its degree of risk.

The report underlines a stronger role for *market discipline* in credit institutions' activities and in financial markets in general. Financial market participants should thereby be able to assess critical information describing the institutions' capital adequacy and risk profile. This goal should be achieved with effective disclosures of capital structure, risk exposure and capital adequacy.

It should be mentioned that, if accepted, the new Accord will not automatically become legally binding in Iceland. Current rules for Icelandic credit institutions (and securities companies) in this area are based on EEA law which reflects the 1988 Accord, cf. Council Directive 93/6/EEC of 15 March 1993 on the capital adequacy of investment firms and credit institutions, with subsequent amendments. The European Commission has been closely watching the Basel Committee's work and presented proposals for adapting them to the European banking and securities market environment. Both the Basel Committee's proposals and those of the Commission have now been referred for comments to interested parties. New rules in this area are expected to be implemented in Europe in 2004.

… but little sign of loan losses yet …

Despite this increased level of lending and the tighter economic climate in 2000, there is still little sign of loan losses in the annual accounts of the commercial banks and largest savings banks. The ratio of non-performing loans to total lending has fallen in recent years and at the end of 2000 was around 2.0%, as against 5.2% at the end of 1996. This could change in the next few months, however, since businesses and households now have extremely high levels of indebtedness and their payments burden has been increasing somewhat recently.

… while the share of foreign-denominated lending has increased …

The weighting of foreign-denominated loans in DMBs' loan portfolios has increased significantly in recent years. At the end of 2000, some 41.6% of DMB lending was foreign-denominated (just over 250 b.kr.), compared with 36.5% in 1999 and 34.4% in 1998.[11] Clearly, part of the increase in 2000 can be explained by the slide in the króna. To a growing extent, foreign-denominated loans have been granted to borrowers who have no sources of foreign currency revenues and are therefore exposed to pure currency risk. As much as 40-50% of the increase in DMB lending to borrowers with no foreign currency revenues in 2000 is likely to have been foreign-denominated. Reasons include lower foreign interest rates, the strengthening of the króna until the middle of 2000 and relatively easy access by credit institutions to foreign borrowing. Despite lower foreign interest rates, the actual interest payments and amortisation may have risen steeply in króna terms due to the depreciation (as in 2000), leading to a considerable increase in the borrower's repayments burden. However, since long-term borrowing is often involved, it means that large capital losses are posted to the accounts, as many companies experienced last year, due to higher principal in króna terms, but without entailing any actual payment from the borrower's funds. So far this year the króna has depreciated by just over 9.6% (until April 30) and the position of borrowers of foreign loans with no foreign revenues will have deteriorated even further, unless they have hedged against currency risk with derivatives or debt conversions. A risk of loan losses by credit institutions has therefore developed and there is reason for keeping alert. The trend for foreign-denominated borrowing shows some slowdown in growth in recent months, but uncertainty about the króna also plays a part there.

A sectoral breakdown of DMB lending shows that loans to households increased by 27% in 2000 and by 21% in 1999. Investment credit funds also increased their lending to households by 14% in 2000, which is similar to the increase in 1999. Lending to pension fund members also showed considerable growth, by 26.7% in 2000 compared with 13% in 1999. Household indebtedness to DMBs, investment credit funds and pension funds increased by 87 b.kr. in 2000. Icelandic households clearly have extremely high levels of debt.

Corporate debt with DMBs and investment credit funds rose by 88 b.kr. in 2000, or 24.4%, but since part of these liabilities are foreign-denominated, some 6% of the increase can probably be attributed to the slide in the króna.[12] These figures clearly show a major rise in corporate and household debt in 2000 and, combined with the tighter economic climate in Iceland, this could lead to liquidity problems in the future, which would then have a direct impact on the financial system.

The share of domestic funding is declining …

Deposits and securities issues by credit institutions have been growing at a much slower pace than their lending and marketable securities portfolios. From the end of 1996 to the end of 2000, the ratio of deposits to lending at credit institutions dropped from 80% to just over 48%. Over the same period, the ratio of deposits and securities issues to lending and marketable securities portfolios went down from 87% to just under 69%. Nor has domestic funding of lending and securities portfolios matched the growth in lending and market securities at the investment credit funds.

… with a growing share of foreign funding …

Since other sources of funds have often been

11. Including FBA and the Commercial Loan Fund.

12. According to the NEI Economic Indicators (Hagvísar), March 27, 2001.

required, foreign borrowing by DMBs and investment banks grew by 58% in 2000 to pass 370 b.kr. at the end of the year, compared with 170 b.kr. at end-1998. At the end of 2000, over 83% of these loans were long-term. While these institutions only face limited direct currency risk, an indirect risk is created, as discussed above, through foreign relending to borrowers whose income is earned solely in domestic currency.

… and greater Central Bank funding

One channel for credit institutions to fund their activities is through repurchase agreements with the Central Bank. A large increase has taken place in repo transactions in recent months and the outstanding stock at the end of April was more than 60 b.kr., compared with 47 b.kr. at the end of 2000 and 36 b.kr. at the end of 1999. To a large extent this increase has resulted from Central Bank intervention in the foreign exchange market in recent months; since the beginning of this year the Central Bank has purchased 11.8 b.kr. in the market and the treasury has also increased its deposit with the Central Bank. Credit institutions have been able to use repos to fund positions in securities and even short-term lending. The volume of derivatives based on repos has also increased, largely when positions are being taken in anticipation of further reductions in interest rates in the domestic bond market. The reason is that credit institutions are often hampered in using the domestic interbank market by their limited credit lines, so they use repo transactions instead.

Enhanced security in payments intermediation

Two main reforms were made in the field of payments intermediation. One was the establishment of a basic real-time gross settlements (RTGS) system in the second half of December, and the other involved rules set by the Central Bank on access by payments systems to current accounts with the Bank. These reforms are described in Monetary Bulletin 1/2001 and the Central Bank's Annual Report for 2000.

In the Bank's view, these reforms contribute to enhanced security in payments intermediation, both because the RTGS system will eliminate liquidity risk from the mediation of large payments, and by firmly consolidating the legal foundation for payments transactions under the new rules.

Aggregate microprudential indicators 1996-2001

Capital ratios	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*Date:*
Capital adequacy ratio (CAR)[1]							
by legal definition (%)	12.4	11.6	10.4	10.6	9.9	...	.
excluding subordinated loans (%)	11.1	10.2	8.8	8.2	6.7	...	.
CAR A (Tier 1 ratio)							
(%) (excluding investment banks)	11.9	11.0	9.9	9.3	8.0	...	.
Quality of assets							
Credit institutions							
Total lending (b.kr.)[2]	275.3	308.4	385.7	475.8	601.5	626.0	March
Thereof foreign-denominated (%)	29.0	31.8	34.4	36.5	41.6	43.2	March
Sectoral breakdown of lending							
Households (% of total lending)[3]	25.9	26.6	27.9	27.3	27.5	26.3	March
Thereof foreign-denominated (%)	0.3	0.5	1.8	4.8	8.1	8.4	March
Thereof residential housing-related (%)	22.8	21.3	18.7	20.2	18.3	18.1	March
Businesses (% of total lending)	65.5	65.2	64.8	65.7	65.2	66.9	March
Thereof foreign-denominated (%)	43.6	46.8	49.8	50.6	55.6	56.7	March
Fisheries sector (% of total lending)	28.7	29.4	27.7	24.8	22.9	23.6	March
Thereof foreign-denominated (%)	75.7	79.1	83.3	83.9	86.5	88.2	March
Retail and services (% of total lending)	20.8	19.8	24.8	28.6	29.4	30.5	March
Thereof foreign-denominated (%)	14.0	15.2	19.5	29.5	37.0	38.2	March
Manufacturing, transportation, electricity and							
construction sectors (% of total lending)	16.0	16.0	12.3	12.2	12.9	12.7	March
Thereof foreign-denominated (%)	24.5	26.7	35.5	32.4	43.0	42.6	March
Non-interest bearing[4] (% of lending)	5.2	4.1	2.4	2.2	2.0	...	.
Equity as percent of total assets	9.2	8.7	7.4	7.1	6.3	...	.
Borrowers							
Households							
Household debt (% of disposable income)	133.4	134.7	138.7	145.8	163.0	...	.
Businesses							
Debt as ratio of equity							
All listed companies (excluding commercial							
and investment banks)	.	1.0	1.0	1.0	...	...	.
Fisheries	1.4	1.3	1.2	1.4	...	...	.
Retail, construction and services	.	1.4	1.1	1.1	...	...	.
Manufacture and production	0.5	0.4	0.6	0.7	...	...	.
Profitability							
All listed companies (excluding commercial							
and investment banks)	.	8.0	8.2	8.1	-1.7	...	.
Fisheries	14.4	11.6	8.6	3.0	-16.5	...	.
Retail, construction and services	.	9.3	1.2	13.6	10.3	...	.
Manufacturing and production	17.7	10.7	7.2	4.6	6.2	...	.
Management[1]							
Cost ratios							
Operating expenses (% of net operational rev-							
enues)	66.6	65.3	67.1	60.4	66.3	...	.
Labour cost (% of net operational revenues)	33.9	33.6	35.2	31.2	33.2	...	.

Aggregate microprudential indicators 1996-2001, continued

Profits and profitability[1]	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*Date:*
Return on equity	9.5	10.3	13.5	19.3	9.9	...	.
Interest margin (% of total revenue)	62.1	58.9	56.0	52.4	54.3	...	.
Commisions (% of total revenue)	24.8	24.5	23.1	23.1	31.4	...	.
Value adjustment of other financial operations (% of total revenue)	5.3	7.5	15.0	12.0	-1.4	...	.
Dividends from shares, other holdings etc. (% of total revenue)	4.7	6.1	3.9	9.6	5.9	...	.
Other income (% of total revenue)	3.1	3.1	1.9	2.9	9.8	...	.
Liquidity position							
Central Bank funding of financial institutions (b.kr., position at end of year)	...	...	22.8	36.0	46.9	60.6	April 24
Lending as ratio of deposits	1.25	1.29	1.46	1.53	2.07	2.03	March
Liquidity ratio (short-term assets as ratio of debts, (< 1 year)	...	...	...	...	...	1.4	March
Market risk							
Foreign exchange market							
Effective exchange rate of Icelandic króna (% change between years)	-0.6	-1.4	-0.7	-3.0	9.8	9.68	April
Turnover (b.kr.)	...	...	401.8	468.0	768.0	154.1	April
Equity market							
ICEX-15 (% change between years)	59.3	14.7	9.8	47.4	-19.3	-12.8	April
Market capitalisation (b.kr.)[5]	94.8	151.0	231.9	369.8	393.0	...	.
Market capitalisation (% of GDP)[5]	19.5	28.5	39.9	57.6	57.7	...	.
Turnover on ICEX as percent of market capitalisation	6.2	8.8	5.5	10.8	14.2	...	.
Total turnover as percent of market capitalisation	...	15.6	17.2	32.4	50.6	...	.
Product prices							
Marine product prices in real, foreign currency terms (1990=100)	91.9	94.2	104.4	100.5	100.1	99.2	.
Fish quota prices (long-term cod quota), kr./kilo	560	650	758	771	860	700	.
Aluminium prices, US$/ton	1,504	1,592	1,336	1,364	1,551	1,497	.
Real estate market							
Residential housing (January 1996 = 100)	101.0	103.0	109.1	125.1	147.4	...	.
Commercial real estate (real terms, price in fourth quarter of each year)	100.0	95.2	118.6	140.7	160.9	165.1	Q1

1. Commercial banks, six largest savings banks and investment banks.
2. Deposit money banks, adjusted for FBA and Commercial Loan Fund.
3. Item “miscellaneous”, also includes individuals’ private business operations.
4. Commercial banks and six largest savings banks. FBA included as of 1999.
5. Including equity mutual funds.