



FINANCIAL STABILITY

2013 • 1

Contents

- 3 Foreword by the Governor**
The interaction of the settlements of the failed banks' estates, a stiff repayment schedule for foreign debt in the next few years and removal of capital controls remains the principal risk factor.
Box: Financial System: outlook and main risks 5
- 7 I Economic environment**
Recovery slows
Box: Corporate bond issuance 15
- 17 II External position**
Capital flows and underlying position
Box: Central Bank's foreign currency auctions 27
- 29 III Financial market entities**
Housing Financing Fund (HFF) in a difficult position and pension funds need more investment options
Box: Housing Financing Fund 35
- 39 IV Assets of DMBs and borrowers' situation**
Improvement in corporate and household financial situation slows
*Boxes: Housing mortgages: Non-indexed vs. indexed 56
Debt, income and debt service based on tax returns 59*
- 65 V Funding and liquid funds**
Revised liquidity rules set higher requirements for liquid funds
Box: New liquidity rules 69
- 73 VI Operations and equity**
Uncertain operating environment calls for strong equity
*Boxes: Indexation imbalance 79
Countercyclical capital buffer 82*
- 87 VII Settlement of the failed banks' estates**
Impact of the winding-up of Glitnir, Kaupthing and LBI on the economy
*Boxes: Claims on the failed banks, distributions and the amount of outstanding claims 95
Smaller financial undertakings in winding-up proceedings 97
Appendices: Nordic comparison 99
FSI core indicators for the three largest commercial banks 101*

Financial stability means that the financial system is equipped to withstand shocks to the economy and financial markets, to mediate credit and payments, and to redistribute risks appropriately.

The purpose of the Central Bank of Iceland's *Financial Stability* report is:

- to promote informed dialogue on financial stability, i.e. its strengths and weaknesses, the macroeconomic and operational risks that it may face, and efforts to strengthen its resilience;
- to provide an analysis that is useful for financial market participants in their own risk management;
- to focus the Central Bank's work and contingency planning;
- to explain how the Central Bank carries out the mandatory tasks assigned to it with respect to an effective and sound financial system.

Published by:

The Central Bank of Iceland, Kalkofnsvegur 1, 150 Reykjavík, Iceland

Tel: (+354) 569 9600, fax: (+354) 569 9605

E-mail: sedlabanki@sedlabanki.is

Website: www.sedlabanki.is

Editorial staff:

Sigríður Benediktsdóttir, Chairman

Bryndís Ásbjarnardóttir

Gerður Ísberg

Guðmundur Kr. Tómasson

Harpa Jónsdóttir

Jónas Þórðarson

Rannveig Sigurðardóttir

Sturla Pálsson

Tómas Örn Kristinsson

Þorsteinn Þorgeirsson

Þórarinn G. Pétursson

Vol. 13 30 April 2013

Printing: Oddi ehf.

ISSN 1670-584X, print

ISSN 1670-8156, online

Material may be reproduced from *Financial Stability* but an acknowledgement of source is kindly requested.

Icelandic letters:

ð/Ð (pronounced like th in English this)

þ/Þ (pronounced like th in English think)

In *Financial Stability*, ð is transliterated as *d* and þ as *th* in personal names, for consistency with international references, but otherwise the Icelandic letters are retained.

Foreword by the Governor

The interaction of the settlements of the failed banks' estates, a stiff repayment schedule for foreign debt in the next few years and removal of capital controls remains the principal risk factor

The Central Bank's report on *Financial Stability* is published semi-annually. The spring issue is generally more comprehensive than the issue appearing in the autumn, with greater effort devoted to the analysis of risks in the financial system and its interplay with the real economy. It is therefore proper to compare the current situation with that of around one year ago, revealing that according to many important indicators, risks to financial stability have declined. The economic recovery has progressed, the resilience of the financial system has grown and the nation's external position has improved.

Despite slowing somewhat during the latter half of 2012 and the early months of this year, the economic recovery has continued. Real disposable income is higher and the employment situation better than it was around this time last year. Inflation has also decreased substantially. At the same time, corporate and household debt has continued to decrease and progress has been made in debt restructuring by banks and other lenders. The results of this, coupled with the continuing improvement in the economy, are evident in the lower level of household and corporate non-performing loans. Non-performing loans at the three largest commercial banks have dropped in the course of last year from 23% of total lending to 15%, and are expected to fall still further this year.

The commercial banks' capital ratios rose from 22% to 25% during the past year, their liquidity is good and the FX imbalances in their balance sheets have been reduced substantially. As a result, all of the commercial banks now operate without exemptions from the Central Bank's rules on FX balances for the first time since the banking collapse in the autumn of 2008.

With regard to the country's external position, it could be mentioned that risk premia on Icelandic obligations has decreased at the same time as the sovereign rating has improved, most recently following the conclusion of the EFTA Court in the Icesave case. The Treasury's access to foreign credit markets was confirmed once more around the middle of last year, and the first signs of foreign capital markets opening up to domestic commercial banks are visible.

These positive developments, however, by no means invite a reduction in vigilance towards the significant risks which still exist in the financial system. Three factors predominate in this regard.

Firstly, the position of corporates and households is to some degree still fragile. Although indebtedness has fallen, it is still high in both an historical and international context. While non-performing loan ratios have fallen at the commercial banks and the Housing Financing Fund in recent months, the number of individuals on the default register has increased. Some uncertainty also remains as to the success of restructuring corporate debt. This will naturally depend on the future evolution of domestic and international economic conditions, but in many instances the continuing high indebtedness of some undertakings, even after restructuring, leaves them scant leeway to meet challenges.

A second reason for continuing vigilance is that, even if the conditions of financial institutions have improved and are by some measures rather good, it would be imprudent to over-estimate their resilience. Revaluations of loans have been a major factor in the new banks' performance. Their underlying performance is therefore less impressive, and profits could be negatively affected by swings in valuations. In addition, a 25% capital ratio and a leverage ratio of just under five times equity is not as far removed from the norm as is occasionally contended. A solid capital base is important in order for the banks to be able to deal with the fluctuations in performance which may lie ahead, due to changes in the valuation of their assets and liabilities, an uncertain economic outlook and the risks arising from removal of capital controls. By the same token, lifting of controls could significantly weaken the banks' liquidity. In the international arena, banks' capital ratios are rising and in many countries minimum capital requirements are being discussed which are considerably higher than the minimum benchmarks proposed in Basel III. In Switzerland, for example, systemically important banks will be required to maintain at least a capital ratio of 19%, the same

ratio as was proposed for UK deposit banks in the Vickers report. Neither of these countries faces the uncertainty arising from lifting capital controls. As described in Chapter VI of this issue of *Financial Stability*, the average capital ratio of European banks of a similar size to the Icelandic banks was close to 19%, and is on the rise. The capital position of the Icelandic banks therefore allows less scope for dividend payments than might appear at first glance. It is vital that substantial dividends do not undermine financial undertakings' resilience in the face of the risk which currently exists and could materialise in coming quarters.

The third and most significant reason for continuing watchfulness is that the risk factor which has been by far the most significant recently still remains, and its potential materialisation has moved closer in time although there is still considerable scope to take action. This risk factor arises from the possible negative interaction of the settlements of the failed banks' estates, the relatively heavy repayment schedule of foreign debt in the next few years and the lifting of capital controls. In the worst case, this could cause major pressure on the exchange rate of the króna, significantly erode the liquidity of financial undertakings and make the Treasury's domestic financing considerably more costly.

Briefly speaking, the problem arises from the fact that at the current exchange rate the foreseeable underlying current account surplus in the coming years is insufficient to finance scheduled repayments on foreign loans. As a result, the Icelandic economy will not generate enough foreign currency at the current exchange rate to allow the króna-denominated assets of the former banks' estates to be distributed to foreign creditors, even if these were priced very low in foreign currencies. In 2014-2017 estimated repayments by domestic parties, other than the Treasury and the Central Bank, on foreign loans will on average amount to around 5½% of GDP per year. By comparison, the underlying current account surplus, i.e. what was actually available of the nation's earnings to pay off its debts, amounted to just over 3% of GDP in 2012. The difficulty could increase as, other things remaining equal, the outlook is for this surplus to decrease in coming years, as gross national savings will not keep pace with increasing investment.

Increased exports and national savings would therefore be welcomed to boost the current account surplus, but are unlikely to prove sufficient, making it evident that refinancing of this debt is crucial to avoid significant pressure on the exchange rate. This would mean that the debts would be paid off over a longer period, either by reaching agreements with current creditors or with new loans with longer maturities. Similarly, it is clear that foreign currency, to convert the old banks' króna-denominated assets and non-residents' existing impatient króna assets and allow them an exit, will not be available from the nation's foreign currency earnings, and will require other inflows of foreign currency. Rapid exit of these assets, e.g. in connection with compositions, cannot occur unless the pricing and the króna conversion rate against foreign currencies entail a significant decrease from the current valuation of these assets in foreign currencies, based on their book value and the onshore króna exchange rate. An efficacious resolution of this issue could make the subsequent removal of capital controls considerably easier.

This report contains an updated analysis of the nation's balance of payments difficulties in connection with non-residents' króna positions and the risk their existence and exit present to financial stability. The analysis follows up on a detailed analysis of the nation's underlying external position and balance of payments, which appeared in a Special Publication of the Central Bank last March. Actions to resolve this problem have been roughly outlined, and were related above. This report, however, is neither intended to present a detailed road map nor a revised programme for removal of capital controls. In recent months the Central Bank has been at work on this task, but actions concerning the former banks' estates cannot be implemented without a prior consultation process, according to the Act on Foreign Currency, and any revised programme for removal of capital controls requires government approval.

In a small, open economy like that of Iceland, the relationship between financial and macroeconomic stability is generally a close one. As a result economic policy, and not least fiscal policy, can strongly impact financial system stability. Following the recently concluded national elections, uncertainty is naturally somewhat higher than usual as to what shape this policy will take in coming quarters. The assessment of financial stability presented in this report is therefore subject to reservations in this regard.



Risk in the financial system has declined in the past year, according to some financial indicators. Restructuring of household and corporate debt moved forward and non-performing loans at the three largest commercial banks fell from 23% to 15% in 2012. Corporate indebtedness dropped by 30% of GDP, while household debt relative to GDP was virtually unchanged. After a final conclusion in Iceland's favour was reached in the Icesave dispute, the country's sovereign rating has been edging upwards. Credit spreads on 5Y and 10Y foreign-denominated treasury obligations have declined by almost 200 bp in the last 12 months, to 190 bp and 210 bp respectively. At the beginning of this year Arion Bank issued a bond in Norway for the equivalent of over 11 b.kr.; the yield on the issue was, however, rather high.

Financial undertakings' resilience has increased. The capital ratios of the commercial banks rose from 22% to 25% in 2012, and non-performing loans have declined. Commercial banks' short-term liquidity is strong. Their foreign currency balance has improved and, for the first time since the autumn of 2008, all the commercial banks are operating without exemptions from the rules on foreign exchange balance. A high proportion of non-performing loans, large-scale loan revaluations and capital controls necessitate strong resilience on the part of financial undertakings.

The economic recovery in Iceland has slowed, and the outlook has deteriorated somewhat. Product prices have decreased on the country's major export markets, especially in Europe. Average export prices for marine products have fallen and aluminium prices have also been low. Private sector investment remains low and planned investments are limited.

Currently the main risks to financial stability stem from the settlements of DMBs in winding-up proceedings, the capital controls and their liberalisation, refinancing risk, the situation of the Housing Financing Fund (HFF) and political risk. It is important for financial stability that political decisions concerning the financial system and the relaxing of controls are well thought out, and taken with due consideration for stability in the economy.

HFF's position is weak

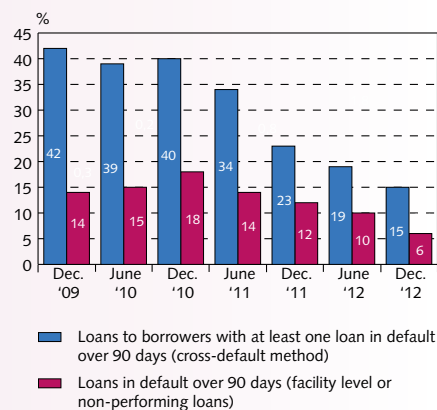
The Housing Financing Fund is weak and there is a risk that the Treasury will have to absorb further losses due to the Fund. Since 2008, HFF's accumulated losses total 52 b.kr.; equity contributions made by the Treasury since 2010 amount to 46 b.kr. HFF's imputed interest margin on its borrowing and lending is insufficient to cover its cost of operation, defaults are high and prepayment risk remains. All of this makes the position of the largest provider of housing mortgages weak and its business model is insufficient in the current environment.

Settlement of DMBs in winding-up proceedings could cause instability

It is very important that settlements of DMBs in winding-up proceedings do not disrupt financial stability. Based on the book value of the estates and the breakdown of claims into domestic and foreign, the estimated impact of their winding-up on the net IIP will be negative by the equivalent of 45% of 2012 GDP. How payment is made to foreign creditors is of vital importance for financial stability. Putting aside the question of the bonds issued by the new Landsbankinn to the old Landsbanki (see below), proper handling of the sale of holdings by the estates in the new banks is crucial. Other assets of the estates which could have a negative impact on stability in the next few years amount to about 250 b.kr., making

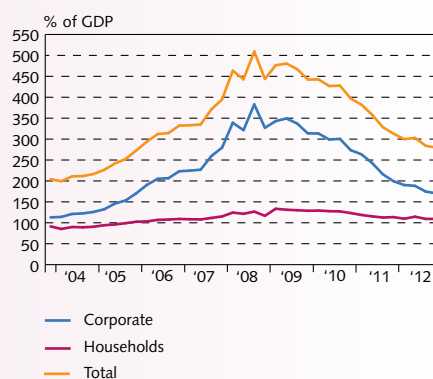
The Financial System - outlook and main risks

Chart 1
Default ratios of the three largest commercial banks¹



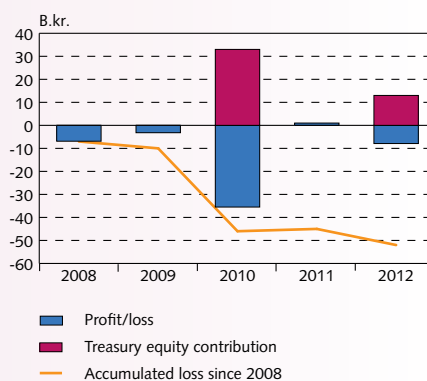
1. Parent companies, book value.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart 2
Private sector liabilities as a % of GDP



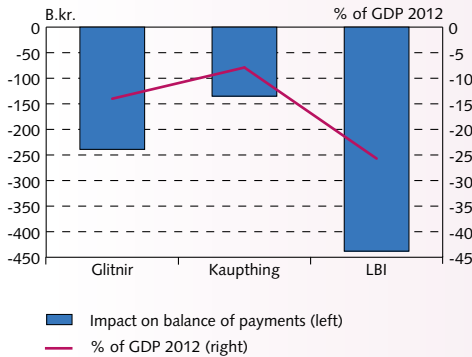
Source: Statistics Iceland, Central Bank of Iceland.

Chart III-3
HFF profit/loss and Treasury equity contribution



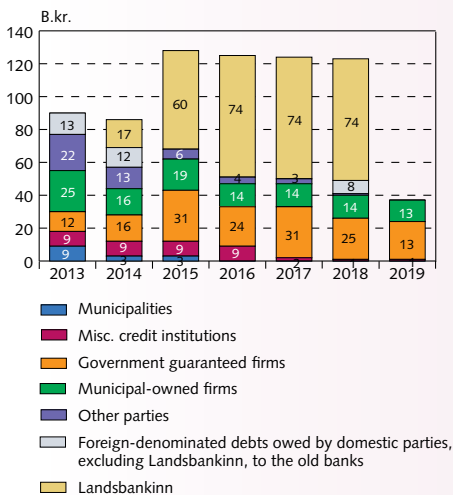
Sources: HFF annual financial statements.

Chart 4
Estimated impact of settlement of DMBs' winding-up on net IIP
Year-end 2012



Sources: Claims lists and financial information Glitnir, Kaupthing, LBI, Statistics Iceland, Central Bank of Iceland.

Chart 5
Estimated payments by parties other than the Treasury and CBI on foreign loans and foreign-denominated debts to the failed banks¹



1. All figures in b.kr. as of year-end 2012 and exchange rates of 4 March 2013.
Source: Central Bank of Iceland.

it necessary to find ways of ensuring these distributions do not upset the stability which has been achieved since the banks' failure. Before the relaxation of capital controls can even be considered, the settlement of DMBs in winding-up proceedings must be placed in a firm framework and the repayment period of bonds between Landsbankinn and the old bank must be extended.

Capital controls and impatient króna assets

Relaxing capital controls can cause instability of the Icelandic króna, increase funding costs for the Treasury and have a significant impact on the banks' loan portfolios and their liquidity position. Liquid króna assets held by non-residents currently amount to 367 b.kr., "offshore" krónur plus some 80 b.kr. which are liquid króna assets of DMBs in winding-up proceedings. These assets can be expected to flow out of the country fairly quickly once controls are relaxed.

Long-standing capital controls are not without cost to the economy, and which increases as time passes. The increased risk of asset bubbles developing under the control regime can add to systemic risk, undermining financial stability if no action is taken. Most indications suggest, however, that the benefit of proceeding slowly in lifting controls is as yet greater than the cost of maintaining them.

High refinancing risk in foreign currencies

Estimated instalments until 2018 on foreign loans of domestic parties, other than the Treasury and the Central Bank, are substantial. These instalments will increase from 87 b.kr. in 2014 to 128 b.kr. in 2015, when instalments of the bonds between Landsbankinn and the old bank begin in full. By comparison, the estimated underlying current account surplus in 2012 was 52 b.kr. If the current account balance in coming years is similar to what it has been in recent years, around 3-3.5% of GDP, parties other than the Treasury and the Central Bank will have to refinance the equivalent of 265 b.kr. until 2018.

The repayment profile of Landsbankinn's bonds is too heavy for the economy. The bonds will have to be extended or refinanced. Without extensions or substantial refinancing it is evident that there is no leeway, in the near term, to utilise the current account surplus in order to allow the exit of non-residents' króna assets. The interaction of relaxing controls and repayments of foreign loans forms the greatest risk in the financial system.

I Economic environment

Economic recovery slows

The output gap is still narrowing, although the pace of recovery has slowed. Inflation has continued to subside, while the Central Bank increased its policy rate four times last year. Since the beginning of this year the Central Bank has sold foreign currency several times on the market to mitigate FX flows. Iceland's sovereign credit rating has inched upwards and an Icelandic bank recently issued bonds in foreign markets for the first time in five years. Bond prices have remained high due to limited investment options under capital controls. The repercussions of the financial crisis still restrain growth in developed countries, although the outlook is for a slight improvement in the global economy in the latter half of this year. In coming years, leading central banks will seek ways to retreat from their low interest rate policies. Many financial institutions struggle with a capital shortage while at the same time growth is hampered by insufficient lending.

Foreign economic affairs and financial markets

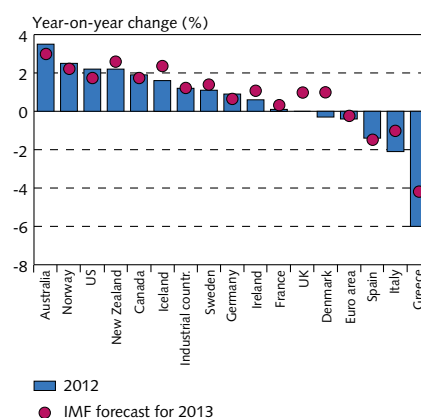
World economic outlook

The economic recovery in developed countries is expected to pick up in the latter half of this year. The International Monetary Fund (IMF) expects 3¼% real growth in the world economy this year and 4% next year.¹ In the IMF's opinion, the outlook has improved during the past six months, with the avoidance of the US fiscal cliff and by strong policy actions to the sovereign and financial crisis in the Euro area. Furthermore, the global financial system is now regarded as more stable than it was. Determined economic measures and continuing liquidity support by leading central banks has reduced the risk of major shocks. Further improvement is still needed to weak balance sheets of banking institutions, together with de-leveraging of the private and public sectors.²

A shortage of liquidity still hampers European banks and their profitability is low. In those European countries where the state is struggling the difficulties are much greater. High corporate and household indebtedness, increased fiscal austerity, low expectations and poor employment prospects dampen demand in various developed economies. Growth in developed countries is not expected to be higher this year than in the previous year; the IMF's most recent forecast is for growth of 1¼%. During the latter half of this year growth is expected to be equivalent to 2% on an annualised basis and 2¼% in 2014.

The principal risk factors in the Euro area are weak balance sheets of financial undertakings, corporates and households and disruption in credit mediation, especially in the southern parts of the currency area. There is still a risk of further increase in public debt in these regions and banks will have to continue to reduce their leverage. This could restrain recovery for a time, since many corporates and households are highly indebted. The delay in reinforcing the economic and cur-

Chart I-1
GDP growth in 2012 and outlook for 2013



Sources: Eurostat, IMF, OECD, Statistics Iceland.

1. IMF World Economic Outlook, April 2013.

2. IMF Global Financial Stability Report, April 2013.

Chart I-2
Expansion of central bank balance sheets
Monthly data, January 2007 - November 2012

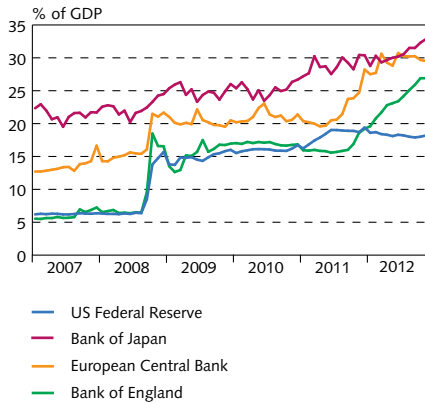


Chart I-3
Real policy rates of foreign central banks
Monthly data, January 2004 - March 2013

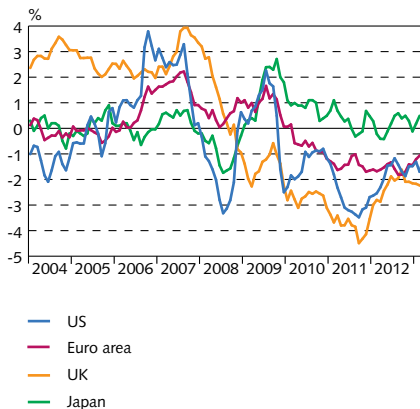
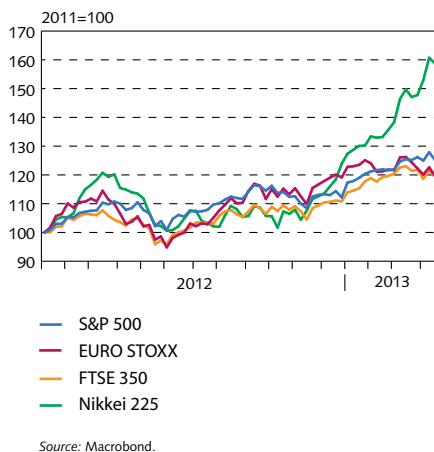


Chart I-4
Stock price
Weekly data, 6 January 2012 - 19 April 2013



rency union also gives cause for concern. In the US, the risk concerns federal finances. In emerging markets and developing countries there is generally a need, in the IMF's opinion, to tighten monetary policy in tandem with prudential regulation to stop the expansion of financial markets before it gets out of control.

Problems of low interest rate policies

Leading central banks will, in all likelihood, keep interest rates low for a while yet. In coming years they will wind down their balance sheets, which in recent years have ballooned as the central banks have acquired various financial assets which under normal circumstances they do not hold on their balance sheets.

A prolonged low interest rate period is risky in itself, and there is also a risk involved in winding down unorthodox measures which have been taken with the objective of stimulating the economy, with interest rates close to zero. Keeping interest rates low for a long period increases risk taking and indebtedness. Underestimating risk can result in a hidden imbalance developing between assets and liabilities of parties in the economy. Such an imbalance does not necessarily become visible until unexpected setbacks strike. There are no signs yet of asset bubbles in developed countries, but increased corporate indebtedness has appeared in the US and emerging markets. In emerging market countries, the increase in debt is partly in foreign currencies.

When central banks tighten monetary policy once more they are faced with finding a balance between the importance of price stability and of financial stability. This applies especially to central banks which have acquired a large amount of long-term securities assets. Central banks do not therefore hold sufficient short-term bonds on their balance sheets to reduce liquid funds in circulation rapidly. The option in such case to reduce slack is to sell long-term assets, but quick sale by central banks of such assets can have serious consequences in individual asset markets and in turn on financial stability. There is therefore a certain danger that price stability and financial stability do not go hand in hand when unorthodox measures by central banks are cut back.

Foreign markets

Yields on government bonds in the largest developed countries have dropped since the beginning of February, by some 40 bp in the case of 10Y UK and German government bonds, by about 30 bp in the case of 10Y US government bonds and by 10 bp on Japanese government bonds.

Equity indices have risen substantially in the past six months, especially in Japan, where the Nikkei has risen by about 50% since the beginning of November, and has not been higher for almost five years. Investors are moving from Treasury bonds to equities in part due to a decrease in yields on Treasury bonds. At the same time the JPY has weakened by 25% against the USD. In November, the Japanese prime minister announced extensive expansion measures in state fiscal policy and monetary policy. The Central Bank of Japan then began its planned purchases of governmental securities of all maturities in April.

Iceland's economy

Domestic demand

According to Statistics Iceland's preliminary figures, GDP growth last year was 1.6% compared to 2.9% in 2011. The negative output gap is still considerable, or close to 2%, which is around half a percentage point less than in 2011. At the same time, unemployment has continued to fall and seasonally adjusted unemployment was below 5% in January for the first time since 2008. National expenditure increased by 2% last year and the outlook is for an increase of just over 1% this year. Private consumption has grown slightly relative to GDP in the past three years, but is nonetheless still considerably below the historical average. The current account deficit is still decreasing; it measured 4.9% last year and is forecast to fall still further this year. A more detailed discussion of the underlying current account deficit is provided in Chapter II. Inflation has slowed slightly in recent months, inching closer to the target, above which it has remained for the past two years.

Business investment below historical average

Business investment was 12.6% of GDP in 2012, a slight increase from its low of 10.1% of GDP in 2010. Investment in business is therefore still somewhat below the average of 16.9% of GDP from 1990 to 2010. Lower business investment following a debt crisis is not limited to Iceland. As Chart I-5 shows, business investment in Ireland fell significantly in the wake of the economic downturn in that country. There are likely many interrelated reasons for this. For instance, undertakings are generally indebted following debt crises and the future vision of some of them is limited to overcoming this problem. Risk aversion also increases as a rule following an economic slowdown and there is uncertainty as to future demand.

Housing prices and housing investment

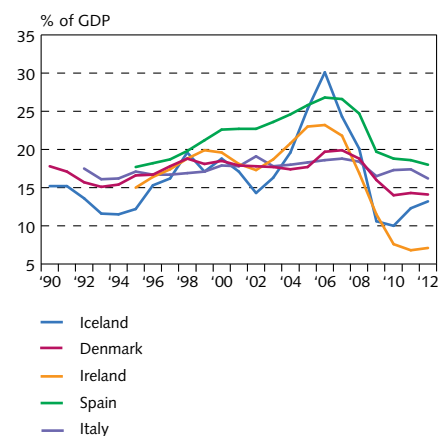
Investment in residential housing has grown very slowly after a large-scale drop in 2009. Despite volume growth of almost 13% in the past two years, housing investment is still at a minimum relative to GDP. Last year housing investment was equivalent to 2.6% of GDP, while historically housing investment as a ratio of GDP was lowest at 3.5% in 1999 and increased steadily after that to 6.9% of GDP in 2007.

Housing prices have risen once more in the past two years after a major contraction in the preceding two years. In the past two years housing prices increased by 12%, which is similar to the increase in Luxembourg at the same time and somewhat lower than in Norway (18%). The housing price index rose considerably less in other Nordic countries during the past two years. In Denmark housing prices dropped by 4% during this period but rose by 2% in Sweden and by 4% in Finland. During the past two years housing prices have, however, fallen by 20% in Ireland and by 23% in Spain. Further details of housing price developments are provided in Chapter II.

Deteriorating terms of trade

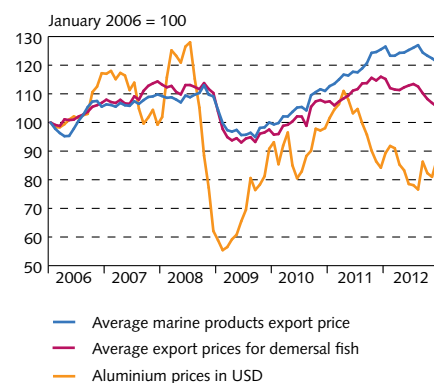
The outlook on Iceland's main export markets has darkened, espe-

Chart I-5
Business investment as % of GDP



Source: Eurostat.

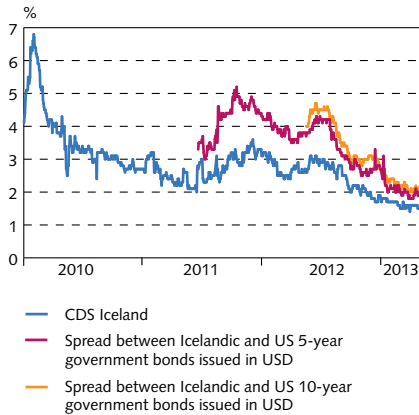
Chart I-6
Export prices for principal export products



Sources: Macrobond, Statistics Iceland.

Chart I-7

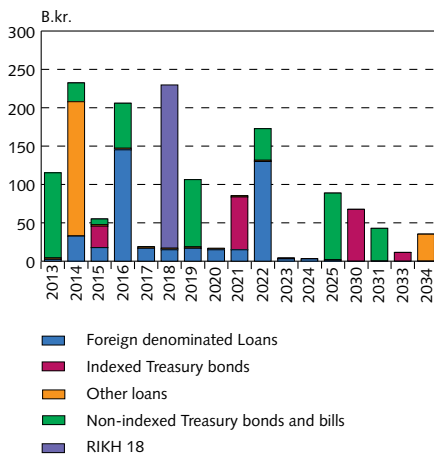
Credit spreads on Icelandic sovereign debt
Daily data, 1 January 2010 - 18 April 2013



Sources: Bloomberg, Central Bank of Iceland.

Chart I-8

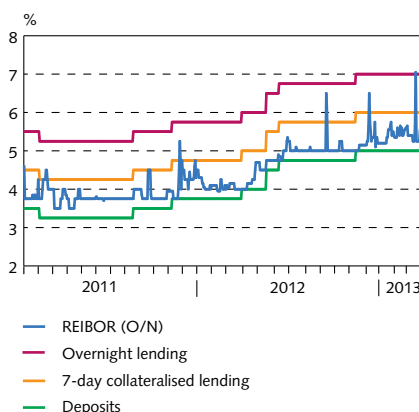
Treasury maturity profile
As of 31 March 2013



Sources: Central Bank of Iceland.

Chart I-9

O/N REIBOR rates and the CBI rate corridor
Daily data, 3 January 2011 - 27 March 2013



Source: Central Bank of Iceland.

cially in Europe, due to declining demand and lower product prices, and terms of trade are poorer than before. Average export prices for demersal fish products have dropped by over 8% since mid-2012, and at the same time the average export price for marine products has fallen by almost 5%. Aluminium prices have also remained low. The longer this situation persists the greater is the probability of negative effects not only in the export industries but also in other sectors.

State finances and access to foreign financial markets

Iceland's sovereign rating has improved this year. Moody's changed the outlook for the sovereign rating of Baa3 from negative to stable in February and Fitch raised its rating from BBB- to BBB. Both changes followed the ruling by the EFTA Court in the Icesave dispute at the end of January. In parallel to this the Icelandic state's CDS spreads have dropped by 30 bp since year-end 2012 and are currently 150 bp, the lowest since the autumn of 2008. The Treasury issued a 5Y USD 1 billion bond in the summer of 2011 and a 10Y bond in the same amount in the spring of 2012. The yields on these bonds were 330 and 400 bp respectively higher than comparable US government bonds when issued, but by mid-April this year, the premium was 190 bp on the 5Y bond and 212 bp on the 10Y bond. In March 2013, government debt amounted to 1491 b.kr., or 87% of GDP in 2012, and the Treasury's net debt position was 761 b.kr. or 45% of GDP. Treasury debt consisted of 619 b.kr. of foreign debt and debt in foreign currency was 414 b.kr. One-third of foreign currency loans mature in 2016, when the Treasury's 5Y bond matures. Treasury debt in foreign currency is offset by a balance of 319 b.kr. in foreign currency in the Central Bank of Iceland, as well as other domestic FX assets worth 63 b.kr. The treasury's net FX debt position is therefore around 22 b.kr. State guarantees amounted to 1,303 b.kr. in February 2013, with the Housing Financing Fund the major factor here, with liabilities guaranteed by the state of 938 b.kr. Around 23% of state guarantees are in foreign currencies.

Domestic markets

The interbank króna market

Since the banks' collapse, the liquidity position of financial undertaking has generally been high and remains so, on the whole. For this reason the Central Bank has issued certificates of deposit (CDs) aimed at temporarily reducing market liquidity and nudging market interest rates closer to the centre of the interest rate corridor. The CB's issuance is only a limited amount and each financial undertaking can choose whether to participate in the bidding. Interest rates on CDs are 25 bp below 7-day collateralised lending rates. Despite these actions by the Central Bank, overnight rates on the REIBOR market are generally in the lower half of the rate corridor, 25-75 bp below the midpoint, suggesting liquidity is plentiful.

Only rarely does the overnight rate jump to well above the midpoint and even up to the top end of the rate corridor. This occurs if a temporary shortage of krónur develops and no market maker considers itself able to grant loans on better terms than the Central Bank. Payments to and by the Treasury are the major influencing factor on

financial undertakings' króna position. These include both regular payments of salaries and fees as well as irregular ones. Despite these spikes, the overnight rate has always returned to its previous equilibrium level, which in recent years has been well below the midpoint of the rate corridor.

Total turnover on the REIBOR market in 2012 was around 400 b.kr. During the first three months of 2013, turnover on the interbank market was 140 b.kr., which is slightly higher than during the same period of the past three years. Turnover in the market is by far the greatest in overnight transactions but 7-day and transactions of up to a month also occur. Since the collapse, there have been no transactions of a longer term than one month. Interbank markets abroad also share these characteristics, i.e. by far the greatest number of trades are short-term, although there are more market makers.

The interbank króna market is small, with only three market makers. The Central Bank quotes daily market interest rates which reflect the interest rates offered by these three parties. There are no other interbank markets for krónur, neither swap markets nor repo markets.

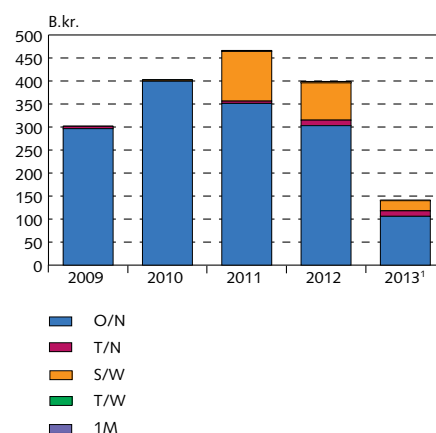
The FX market

Turnover on the FX market has grown steadily since it was reopened after the failure of the commercial banks in the autumn of 2008. In the first three months of 2013, turnover amounted to almost 50 b.kr., compared to just over 35 b.kr. in the first quarter of 2012. The Central Bank's share in FX market turnover was around 12% in the first quarter, or similar to its share in trading in 2012. The market makers are, as before, the three large commercial banks and the Central Bank can trade whenever it wishes to do so.

The FX market has been characterised by major fluctuations since the publication of the most recent issue of *Financial Stability* in October 2012. In December the króna depreciated by 3.5%, as measured by the trade-weighted index (TWI). The weakening of the currency was connected to a considerable extent to temporary factors linked to financial undertakings' end of year position, as well as deteriorating terms of trade. On New Year's Eve the Central Bank sold 6 million euros, equivalent to 1 b.kr. At the beginning of 2013, the Central Bank announced that it would suspend its previously announced regular currency purchases from market makers on the interbank market. These regular purchases had been underway without interruption since the end of August 2010. To begin with the bank purchased 1.5 m euros weekly, but near the end of July 2012 this amount was increased to 3 m euros. The bank's view remains that it is necessary to acquire sufficient foreign currency on the interbank market, as circumstances permit, in order to be able to sustain interest payments on the Treasury's foreign debt. It is also important to increase the share of its reserves which are not borrowed funds in a longer term perspective.

The króna weakening continued after the beginning of this year, with an additional decrease of 1.2% in January as measured by the TWI, until the Central Bank once more intervened in the

Chart I-10
REIBOR market turnover by maturity



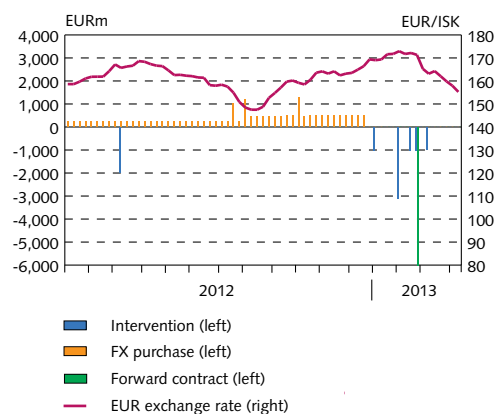
1. Turnover January - March.
Source: Central Bank of Iceland.

Chart I-11
FX market turnover
January 2012 - March 2013



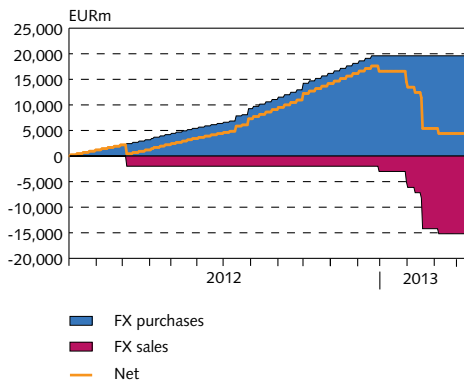
Source: Central Bank of Iceland.

Chart I-12
Central Bank interventions
and regular FX purchases and euro to
Icelandic króna exchange rate
Weekly data, 6 January 2012 - 11 April 2013



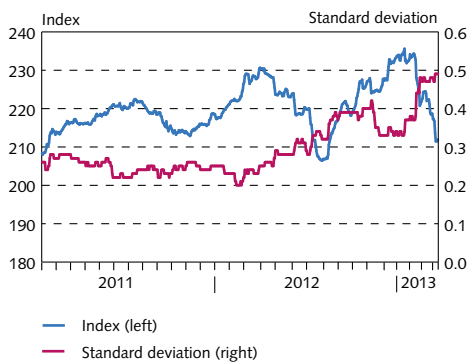
Source: Central Bank of Iceland.

Chart I-13
Central Bank FX purchases and sales
Daily data, 2 January 2012 - 11 April 2013



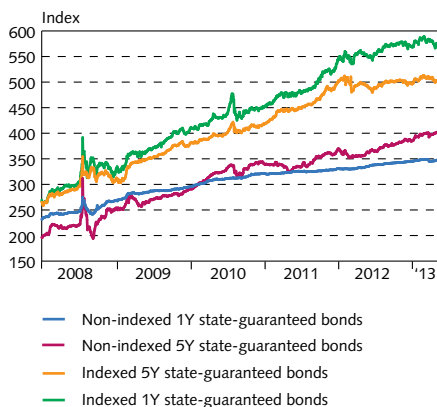
Source: Central Bank of Iceland.

Chart I-14
Exchange rate of the króna and daily standard deviation for the past 90 days¹



1. Central Bank's daily quoted rates for ISK/EUR and the narrow trade-weighted index.
Source: Central Bank of Iceland.

Chart I-15
Bond market indexes
Daily data, 1 April 2008 - 24 April 2013



Source: NASDAQ OMX Iceland.

market, selling a total of 18 m euros for over 3.1 b.kr. on 31 January and 1 February. The objective of the interventions was not to support the exchange rate but rather to even out FX flows and reduce exchange rate fluctuations. Until the beginning of March, the króna remained fairly steady, with continuing support from the Central Bank of Iceland, which sold a total of 18 m euros for around 3.1 b.kr. on 11 February, 18 February and 8 March. In addition, a 3M forward contract was concluded with Landsbankinn on 19 February which provided for the delivery of euros for krónur equivalent to 6 b.kr.³ The increased pressure on the króna in the previous weeks can be attributed to deteriorating terms of trade, foreign currency mismatch in the banking system and major instalments on foreign loans.

Since the beginning of 2012 the Central Bank has purchased FX in regular transactions totalling almost 20 b.kr. During that same period the Central Bank has sold FX totalling around 15 b.kr., including 6 b.kr. in a forward contract. Therefore the bank has been a net purchaser of FX during this period. In both 2010 and 2011 the Central bank purchased FX in amounts far exceeding its FX sales.

Table I-1 CB interventions 2012-2013

	M.kr.	M. Eur
6.3.2012	1,991	12
31.12.2012	1,021	6
31.1.2013	2,085	12
1.2.2013	1,032	6
11.2.2013	1,034	6
18.2.2013	1,038	6
8.3.2013	992	6
Total	9,192	54

Source: Central Bank of Iceland.

From the conclusion of the forward contract on 19 February this year until 15 April the króna has strengthened by 10% against the euro and by 11% against the narrow TWI, and is currently at a level similar to that of early October 2012.

Intraday exchange rate volatility against the euro has increased since mid-2012. Market fluctuations have been greater and the euro has also fluctuated considerably during this period. The daily standard deviation of exchange rate movements has risen from an average of 0.25% over a three-month period to almost 0.5%, see Chart I-14. The króna's volatility is still low, however, in an historical context. Since the Central Bank began its regular currency auctions, as part of relaxing controls on capital transactions, movements on the offshore króna market appear to have decreased. The exchange rate for the króna against the euro on the offshore market has ranged from 220-260 in recent months. Information on the extent of offshore market trading, however, is limited.

The bond market

The bond market is that financial market in Iceland which has been

3. The announcement of the FX transaction from Landsbankinn <http://www.landsbankinn.is/frettir/2013/02/20/Tilkynning-vegna-gjaldeyrisviðskipta/?p=9>

the most active following the banking collapse and has served as an important venue for Treasury funding. Bond turnover on NASDAQ OMX Iceland has been decreasing since 2010. In 2012 bond turnover was 2,324 b.kr., compared to turnover of 2,602 in 2011. Average monthly turnover last year was 194 b.kr., which is less than in 2011, when average turnover was 217 b.kr. per month. In the first two months of 2013, the average turnover was 166 b.kr. then in March turnover increased to 297 b.kr. By comparison, monthly turnover in the first quarter of 2012 was 301 b.kr. The most likely explanation for the decline in trading is the drop in bond yields and corresponding increase in price, renewed equity market activity and investors' tendency to hold their bonds in view of the limited investment options available under capital controls.

Following the financial collapse, bond issuance by financial undertakings and other corporates fell substantially, while Treasury issuance rose. During the first three months of this year the Treasury issued 30 b.kr nominal value in Treasury notes and 27 b.kr. in Treasury bills, as well as 1.3 b.kr. issued in connection with the Central Bank's foreign currency auctions. Around 99% of bond market turnover is in Treasury bonds and HFF bonds. Apart from these, trading is mainly in bonds issued by municipalities and Municipality Credit Iceland, (MCI). Turnover in financial undertakings' covered bonds and other corporate bonds has increased slightly from 6.4 b.kr. in 2011 to 14 b.kr. in 2012, in parallel with growing issuance by the parties, see Chapter V.

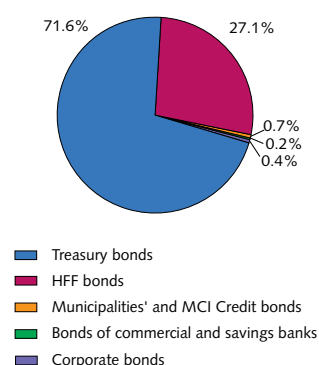
Soon after the banking system collapse in the autumn of 2008, and capital controls were introduced, bond yields dropped and their prices rose, and have remained fairly high since then (Chart I-15). Due to capital controls, demand for domestic investment options is high. The supply of bonds and equities is not sufficient to meet this demand and other investment opportunities are extremely limited.

The Treasury has, however, benefited from the controls which have enabled it to finance its increased borrowing needs on more favourable terms than otherwise. When capital account transactions are liberalised yields on the bond market can be expected to rise and the Treasury's financing costs to increase.

In November 2012, trading in HFF bonds on NASDAQ OMX Iceland was twice suspended in connection with news, firstly following an interview with HFF's CEO on the Fund's situation and possible changes to the terms and conditions of HFF bonds in the business newspaper *Viðskiptablaðið*, and then in the latter instance in connection with an interview with an MP and chairman of the parliamentary welfare committee with Bloomberg on the same subject. It was considered necessary to suspend trading, as news of this sort can greatly affect the market price of the bonds.

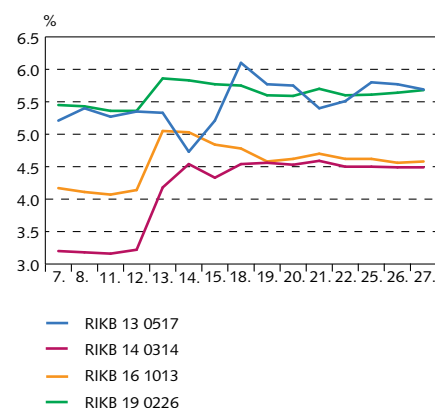
Changes to Acts and rules in connection with the capital controls affect the bond market. In March this year, a provision in the Act on Foreign Currency was cancelled which authorised owners of offshore krónur to invest in bonds eligible for repurchase agreements with the Central Bank, and the Central Bank was entrusted with adopting rules prescribing more detailed arrangements. Chart I-17 shows

Chart I-16
Breakdown of bond market turnover 2012



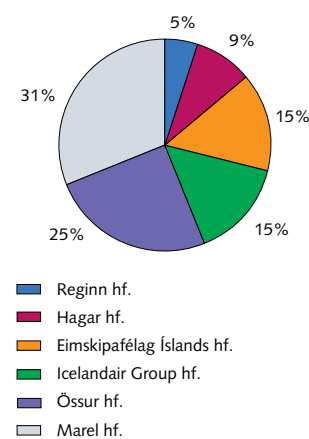
Source: NASDAQ OMX Iceland.

Chart I-17
Yields on short-term non-indexed Treasury notes
Daily data, 7 - 27 March 2013



Source: NASDAQ OMX Iceland.

Chart I-18
OMXI6 by market cap
27 March 2013



Source: NASDAQ OMX Iceland.

Chart I-19
OMXI6 Selected shares index
Daily data, 4 January 2012 - 26 April 2013



Source: NASDAQ OMX Iceland.

what impact the proposed amendment had on the yields of shorter Treasury notes, of which non-residents own a major share. The resulting fluctuations on the market appear connected with speculation that substantial changes would be made to investment authorisations following the statutory amendment. Such changes were not made.

The equity market

The equity market has undergone considerable changes recently. Listing of new companies on the market and limited investment options under capital controls appear to have sparked investors' interest in the equity market. In 2012, the OMXI6 selected shares index, which is comprised of the six listed companies with highest market turnover, rose by 16.5%. Shares of some individual companies rose considerably more, e.g. shares of Icelandair rose by over 60% and of Hagar by 40%. The first quarter of 2013 was also favourable for investors, as the index rose by over 14% during the period.

New listings were not conspicuous on the equity market during the first years after the collapse. Since December 2011, however, five new companies have been added to the NASDAQ OMX Iceland main list. Recently they were joined by the insurance company VIS Insurance and another insurance company, TM Insurance, is to be listed in May. The market capitalisation of companies on the main list rose from 360 b.kr. at the beginning of 2012 to over 420 b.kr. at the end of Q1 this year. Market turnover has also increased, as in Q1 2013 turnover on the equity market was 61.3 b.kr. compared to turnover of 88 b.kr. for the entire year in 2012.

Companies on the main list vary somewhat in size. The operating companies Marel and Össur are in something of a separate class with regard to market cap. At the end of March 2013, Marel's market cap was approximately 114 b.kr. and that of Össur about 93 b.kr. The value of other companies is considerably less. Trading is not always highest, however, in shares of the largest companies. In 2012, trading was highest in Marel's shares, totalling 27.4 b.kr., followed by trading in the shares of Icelandair Group hf. which totalled 26.3 b.kr. Trading in shares of Össur, the second-largest company in terms of market cap, was only 5.3 b.kr. This is due, among other things, to the company's double listing, as the company's shares are also traded on the Copenhagen stock exchange. The number of market trades has also grown in line with increased market turnover. During the first two months of 2013 there were over 4000 transactions, while in 2012 as a whole the number was almost 8000. In Q1 2013, there were an average of 85 equity transactions daily, compared to 31 in 2012.

Clearly, capital controls can affect prices on domestic asset markets, as investors are offered limited investment options. It is not easy, however, to analyse exactly what the impact of the capital controls is on trading and the market cap of listed companies on the equity market. On the other hand, there is every reason to monitor developments closely with regard to possible bubble indications.

Since the financial shock in the autumn of 2008, the Treasury has dominated the domestic bond market. Municipalities, Municipality Credit Iceland, the Housing Financing Fund (HFF) and the commercial banks have also issued bonds, however. In recent months corporate bond issuance has picked up as well. Corporate bond issuance totalled 71 b.kr. in 2012, and 18.9 b.kr. YtD in 2013.¹

Total authorisations for bond issuance in 2012 were 202.4 b.kr., which is considerably higher than the actual issuance. Most of the difference is explained by an unused authorisation for bond issuance by Norðurál of almost 100 b.kr. Unused authorisations of other parties were 31.5 b.kr. Listing of corporate bonds on NASDAQ OMX Iceland is still fairly limited. In 2012, publicly listed bonds totalled 5.3 b.kr., of which institutional investor funds own 60%. This year only the real estate company Eik has listed a bond on the exchange, in the amount of 11.6 b.kr.

Bonds which are issued without subsequently being listed on NASDAQ OMX Iceland are generally considered unlisted bonds. Total issuance of unlisted bonds in 2012 was 57 b.kr. and 18.9 b.kr. YtD. Institutional investor funds issued unlisted bonds totalling 28.4 b.kr. in 2012 and 2013 YtD, over 80% of which are secured by real estate mortgages;² 51% of the amount of the bonds issued is secured by mortgages on the Smáralind shopping mall and the Egilshöll sports complex. In other words, there are not many institutional investor funds behind these issues. At the same time, holding companies and real estate companies issued bonds for 17 b.kr.

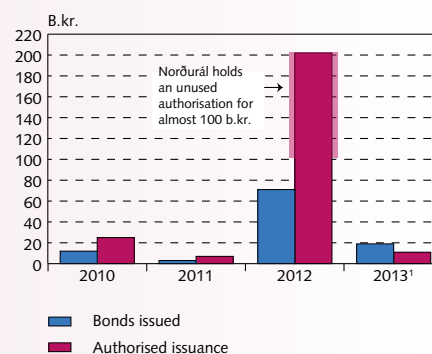
Corporates issued 20.4 b.kr. of unlisted bonds in 2012 and have issued bonds totalling 10.1 b.kr. this year. A major portion of the issues come from only a few undertakings, i.e. 6 undertakings account for 86% of the total amount issued. Of these, Actavis Group and Íslensk erfðagreining are the largest, with 36% and 19% respectively of the total amount.³

The increased bond issuance is intended to enable undertakings to take advantage of currently low market yields, which are partly the result of limited investment options under the capital control regime. The Central Bank's Investment programme is also opening up access for undertakings to fund themselves with unlisted bonds. Bond issuance in connection with the Central Bank's foreign currency auctions amounted to 32.4 b.kr. in 2012, or 57% of total unlisted bond issuance. In the two foreign currency auctions held in 2013, unlisted bonds totalling 12.8 b.kr. were issued, comprising 68% of all unlisted bond issuance this year.

Box I-1

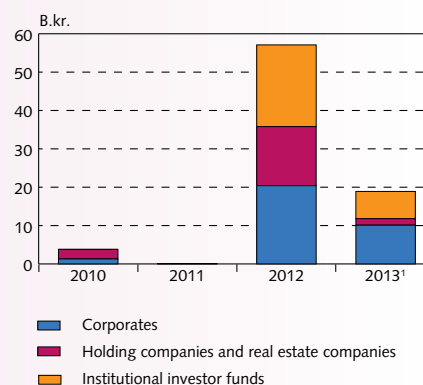
Corporate bond issuance

Chart 1
Bond issuance, additions to bonds series and authorisation for issuance
January 2010 - April 2013



1. Bond issuance and additions to series January - April 2013. Information on 2013 issues are based on the auctions which the Icelandic Securities Depository has already made available on its website. There may be a slight delay in publishing data.
Sources: Icelandic Securities Depository.

Chart 2
Issuance of unlisted bonds and additions to bonds series
January 2010 - April 2013



1. Bond issuance and additions to bonds series January - April 2013. Information on 2013 issues are based on the auctions which the Icelandic Securities Depository has already made available on its website. There may be a slight delay in publishing data.
Source: Icelandic Securities Depository.

1. According to information from the Icelandic Securities Depository. These are both new issues and supplements to earlier bond series.
2. As the information was obtained from the prospectuses of the Icelandic Securities Depository, which do not always state what collateral underlies the issues, this proportion could be higher.
3. The other four undertakings are: Elkem (6%), CCP (8%), Magma energy (12%) and Norðurál (5%).

II External position

Capital flows and underlying position

Substantial refinancing risk exists because the repayment profile of the nation's foreign debts is considerably heavier over the next few years than can be sustained by the economy's current account surplus, while at the same time uncertainty remains concerning access by domestic parties to foreign credit markets. It is important that foreign credit markets stand open to domestic parties to a greater extent, offering acceptable market terms given the profitability of the underlying investments. Otherwise the current loan agreements will need to be extended. The underlying net external position of the economy is estimated to be negative by close to 60% of GDP, which does not in itself present problems if debts can be refinanced on acceptable terms. The interest differential on domestic assets of foreign parties and foreign assets of domestic parties, however, could be burdensome. The heavy repayment profile and króna assets of foreign parties, both impatient assets and assets held in the failed banks, create significant uncertainty. This needs to be resolved as far as possible through specific actions. Doing so is a premise for the removal of capital controls.

The collapse of the króna in 2008 brought a complete reversal of the capital flows in Iceland. Last year, the surplus on trade in goods and services was around 110 b.kr., or over 6% of GDP. In 2009-2011 the surplus averaged 9% of GDP (see Chart II-1). The decreasing surplus is explained primarily by higher imports. The underlying factor income balance has been negative in recent years on average by close to 3.5% of GDP, or by around 60 b.kr. It must be borne in mind, however, that the factor income deficit in 2011 was somewhat more than in other years (Chart II-1). The current account balance for the past two years has been around 3-3.5% of GDP, after being somewhat more favourable in 2009 and 2010.

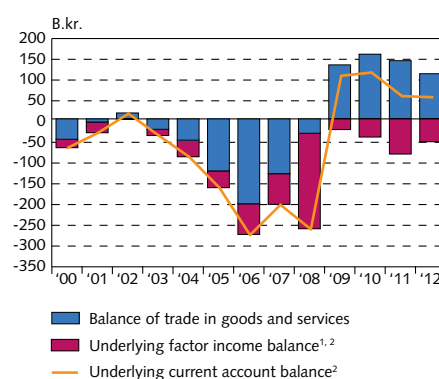
External position according to national accounts

Several times in recent years the Central Bank has published analyses of the underlying debt position in the economy. These analyses have been published in memoranda to the government and in publications issued by the bank. The most recent analysis was published in March this year, in Special Publication No. 9: *Iceland's underlying external position and balance of payments*. The bank's assessment of the position in these writings has fluctuated somewhat, underlining firstly the uncertainty concerning the valuation of the nation's assets and liabilities and, secondly, that the quality of the data upon which they are based has varied. Access to data has improved, however, and the uncertainty concerning the valuation of assets and liabilities has decreased as more time passes from the financial shocks of 2008.

The Central Bank publishes figures on balance of payments and net external position quarterly, most recently on 4 March this year, when the provisional summary of the balance of payments in Q4 2012 and the net external position at year-end 2012 were published. The situation is shown with and without DMBs in winding-up proceedings. Published results give a very misleading picture of the external position, primarily because they include debts of the failed banks and of undertakings which are being wound up at their nominal

Chart II-1

Balance of trade in goods and services, underlying factor income and current account balances



1. Operating contributions included with factor income. 2. Excluding income and expenses of DMBs in winding-up proceedings and the impact of the pharmaceutical company Actavis.
Source: Central Bank of Iceland.

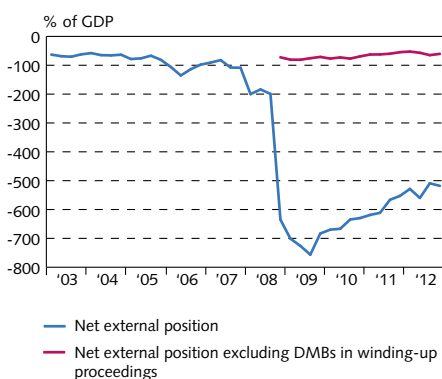
value plus interest on them. These debts will never be repaid in full. To gain a better understanding of the underlying position, it is necessary to estimate what will happen upon the final settlement of DMBs in winding-up proceedings, as well as other undertakings which are being wound up, and at the same time to take into consideration that a sizeable portion of Iceland's debt is connected to one undertaking, the pharmaceutical company Actavis, whose activities are for the most part outside of Iceland and which is owned by foreign parties.

Underlying net external position

Table II-1 gives a summary of the nation's foreign assets and liabilities and net position. The first figures are grand totals, in the next the assets and liabilities of DMBs in winding-up proceedings have been deducted, their estimated settlements are then added, and Actavis as well as several undertakings in winding-up proceedings excluded. These are undertakings other than the failed banks which are in winding-up proceedings or have concluded compositions. Their debts have not yet been written down for the most part since the financial collapse in October 2008 and are considerably higher than the value of their underlying assets. Their activities are concerned in most cases with maximising the value of assets and paying creditors. The domestic assets of these undertakings which will be paid to foreign creditors upon their winding-up are unsubstantial, but they hold sizeable foreign assets. Payments from the estates of these undertakings will therefore not have any significant negative impact on the nation's balance of payments. Underlying foreign debts, i.e. debts including the estimated settlements of DMBs in winding-up proceedings, excluding Actavis and undertakings in winding-up proceedings, are estimated to be 183% of GDP, while on the other hand foreign assets amount to 125% of GDP.

An assessment of the nation's underlying net external position is also shown in Table II-1. The external position recognised according to official standards was negative by 522% of GDP at year-end 2012. If DMBs in winding-up proceedings are excluded, the position is negative by 61% of GDP. As explained in Chapter VII, based on the book value of the assets of DMBs in winding-up proceedings, their settlements are now expected to create foreign debt equivalent to 45% of GDP. The combined underlying position is then negative by 106% of GDP. If Actavis is excluded, the position is negative by 65% of GDP and if other undertakings in winding-up proceedings are also corrected for the position is negative by 58% of GDP. This is a slight decrease from the assessment in Special Publication No. 9, due to the fact that now year-end figures are available from all DMBs in winding-up proceedings. Previously estimates were used of the value of their assets at year-end 2012. It was pointed out in Special Publication No. 9 that the confidence interval for the assessment of external position was estimated to be from 20 percentage points below to 25 percentage points above the point figure. The interval is therefore from 33% to 78% of GDP.

Chart II-2
Net external position at year-end 2012



Sources: Statistics Iceland, Central Bank of Iceland.

Table II-1 Estimated foreign assets and liabilities of the economy at year-end 2012

	Assets		Liabilities		Net position	
	B.kr.	% of GDP	B.kr.	% of GDP	B.kr.	% of GDP
Total	4,430	259	13,352	782	-8,922	-522
Excl. DMBs in winding-up proceedings	2,453	143	3,495	204	-1,042	-61
Based on the calculated settlements of DMBs in winding-up proceedings	2,550	149	4,362	255	-1,812	-106
Underlying debt based on the calculated settlements of DMBs in winding-up proceedings and excluding Actavis	2,213	129	3,318	194	-1,105	-65
Underlying debt based on the calculated settlements of DMBs in winding-up proceedings and excluding Actavis and other undertakings in winding-up proceedings	2,143	125	3,132	183	-989	-58

Sources: Statistics Iceland, Central Bank of Iceland.

Interest differential on assets and liabilities

Around one-third of the nation's foreign assets and debts are the country's foreign currency reserves and loans in connection with them, and assets and liabilities of the commercial banks (Table II-2 and Chart II-3). It is thus possible to reduce foreign debt to some extent by selling foreign assets and thereby reducing the nation's balance sheet, without creating obligations between domestic parties. This would not affect the net external position, however. Only two categories of parties shown in Table II-2 have a net positive external position, the pension funds and direct investment excluding energy-intensive industry. It should be pointed out that ownership of assets in the direct investment category is extremely broad.

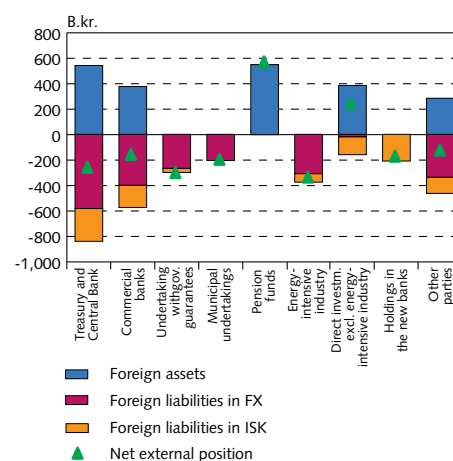
Foreign debts are mostly loans owed to foreign parties, debts in foreign currencies owed to the failed banks, loans classified as direct investment in Iceland, primarily in connection with energy-intensive industry investment, and non-residents' króna assets in Iceland. All of these asset classes bear a fixed interest rate and the last two bear rather high interest. On the other hand, the nation's assets are to a large extent in the form of low-interest rate deposits of the commercial

Table II-2 Estimated underlying foreign assets and liabilities of the economy at year-end 2012

	Foreign asset	Foreign debt in FX	Foreign debt in ISK	Net position	
	B. kr.	B. kr.	B. kr.	B. kr.	% of GDP
Treasury and CBI	543	-583	-258	-298	-17
Commercial banks	378	-400	-175	-197	-12
Government-guaranteed firms	0	-267	-33	-300	-18
Municipal-owned firms	0	-206	0	-206	-12
Pension funds	550	0	0	550	32
Power-intensive industry	0	-309	-67	-376	-22
Direct investment excl. energy-intensive industry	386	-19	-141	226	13
Holdings in the new banks	0	0	-210	-210	-12
Other entities	286	-337	-127	-178	-10
Total	2,143	-2,121	-1,011	-989	-58

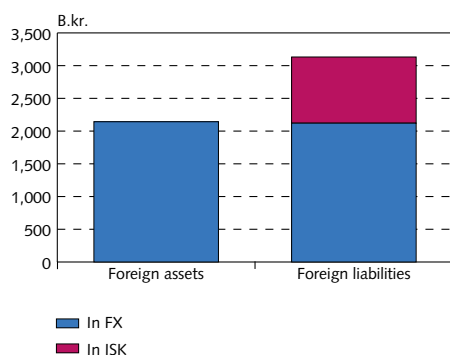
Sources: Statistics Iceland, Central Bank of Iceland.

chart II-3
Estimated foreign assets and liabilities in underlying net external position
Year-end 2012



Source: Central Bank of Iceland.

Chart II-4
Estimated external assets
and liabilities at year-end 2012



Source: Central Bank of Iceland.

banks abroad, foreign currency reserves in trustworthy liquid assets, pension funds' assets in equities and security funds, and unlisted equities through direct investment. All of these are low-interest rate assets or variable income assets. The foreign liabilities bear higher interest rates than the foreign assets - the estimated interest rate differential is 1.2-1.3%. This estimated interest rate differential is potentially higher, given the composition of the foreign assets and liabilities. The interest rate differential could increase still further when a larger portion of the domestic assets of DMBs in winding-up proceedings is kept in liquid funds which could be invested.

One-third of the nation's foreign debt in krónur

Part of the nation's foreign debt is denominated in Icelandic krónur. Non-residents own substantial assets in Iceland in Icelandic krónur, primarily in three asset categories:

- Impatient króna assets, generally referred to as offshore krónur, amounted to 384 b.kr. as of year-end 2012.
- Domestic assets of DMBs in winding-up proceedings denominated in krónur, which will barring changes accrue to foreign creditors upon the winding-up of the estates, were recognised according to the Winding-up Boards at 419 b.kr. as of the end of last year.
- Non-residents also own share capital in Icelandic undertakings through direct investment amounting to 208 b.kr. as of the end of last year. Of this amount, 67 b.kr. were in connection with energy-intensive industry investment by foreign parties in Iceland. The largest portion of this asset is ISK-denominated.

This makes the nation's total ISK-denominated foreign debt 1,011 b.kr. as of year-end 2012, which is fairly similar to the net external position. As of year-end 2012, the nation's foreign assets were 2,143 b.kr. and its foreign debt in foreign currencies 2,121. As there is roughly a balance in foreign assets and foreign liabilities in foreign currencies, exchange rate movements of the króna have therefore insignificant impact under current circumstances on the underlying net external position.

Impatient króna assets of non-residents and domestic assets of DMBs in winding-up proceedings denominated in krónur which belong to foreign creditors totalled 803 b.kr. as of year-end 2012. If these assets are included in the underlying net external position, at the average exchange rate in the Central Bank's last three currency auctions of 230 krónur per euro rather than the quoted rate of the Central Bank as of year-end 2012 of 170 krónur per euro, the external debt position decreases by 209 b.kr., making the net external debt 780 b.kr. or 46% of GDP. The decrease would be even more if, for example, the price obtained for sale to domestic parties of the holdings of the failed banks in the new banks were to be lower than their current book value.

Non-residents' impatient króna assets

Impatient króna assets of non-residents amounted to 367 b.kr. or 22% of GDP at the end of last March, decreasing by 64 b.kr. from

March 2012. The decrease can be attributed primarily to the Central Bank's currency auctions, as the bank has served as an intermediary in transferring 51 b.kr. of impatient króna assets between owners during this same period.

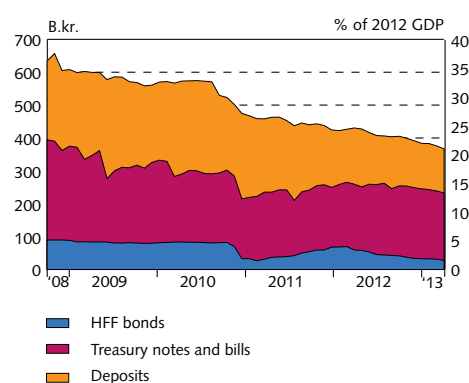
Non-residents' impatient króna assets can be roughly divided into three categories:

- Deposits in DMBs now amount to around 98 b.kr. These can be divided between so-called vostro deposits, which are deposits of foreign financial undertakings in Iceland, and other deposits of non-residents. The vostro deposits have decreased steadily since August 2010, by well over one-third since March 2012 (Chart II-6). Vostro deposits are generally considered to be the most impatient of non-residents' króna assets. The currency auctions appear to help direct these assets into the hands of long-term investors. Other deposits of non-residents in DMBs are practically unchanged since March 2012.
- Balances with the Central Bank amount to around 36 b.kr. These are connected to settlements by foreign clearing houses of Icelandic securities. These positions fluctuate somewhat over time, although not significantly, in connection with the maturities of domestic securities.
- Government-guaranteed bonds and bills amount to around 233 b.kr. This position has changed little since the Avens agreement was concluded,¹ although it fluctuates considerably over time. The Treasury's bill issuance has been limited in recent months, and non-residents' holdings in short-term Treasury notes has increased accordingly.

Some consolidation has occurred in ownership of impatient króna assets in recent years, as foreign owners of these assets can sell their positions to other foreign parties without restriction. Ownership volatility appears to be lower when it comes to exiting from capital controls, at least based on the price offered to owners in the Central Bank's currency auctions. The volatility of the assets is now probably controlled both by expectations and price. It should be borne in mind that the position of these parties is not completely unfavourable. Their securities assets are state guaranteed and deposits are held by DMBs with a high capital ratio and moderate leverage. Furthermore, these parties can withdraw the interest payments on the above-mentioned assets from the country.²

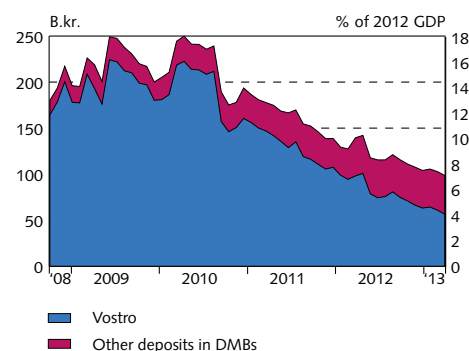
The above-mentioned asset categories are the most liquid assets of non-residents in Iceland. Non-residents with assets other than the above have publicly stated that they wish to dispose of them and transfer their receipts out of the country. These consist primarily of holdings in listed and unlisted equities which ended up in the hands of non-residents upon the collapse of the banking system or shortly

Chart II-5
Liquid króna assets held by non-residents
October 2008 - March 2013



Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-6
Non-residents' króna deposits in DMBs
October 2008 - March 2013



Sources: Statistics Iceland, Central Bank of Iceland.

1. The Avens agreement provided for the purchase by pension funds, through the Central Bank's intermediation, of króna assets owned by the Central Bank of Luxembourg amounting to 120 b.kr. in return for foreign currency.

2. Cf. the Rules of the Central Bank on Foreign Currency, No. 300/2013.

thereafter, before capital controls on inflows were removed in October 2009. The market value of these assets is in the tens of billions, but they may be illiquid.

Based on their currently estimated winding-up and the book value of their assets, distributions by DMBs in winding-up proceedings will, considering the current position, deliver domestic króna-denominated assets amounting to 419 b.kr. to foreign creditors. Around 80 b.kr. are already liquid funds, 129 b.kr. are claims on domestic parties and 210 b.kr. is the value of foreign creditors' holdings in the new banks. Further discussion of DMBs in winding-up proceedings is provided in Chapter VII. The final sales value of these assets is uncertain, but if it is paid to foreign creditors in krónur, this will gradually add to the stock of non-residents' impatient króna assets in Iceland.

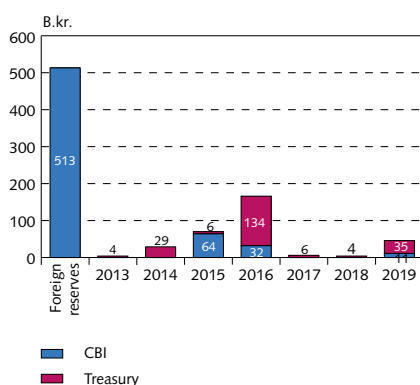
Payment flows independent of the controls

With the exception of the Treasury and export undertakings with strong foreign-currency cash flow, access by domestic parties to foreign credit markets has been limited since the banking system collapse. Both CDS spreads on the Treasury's debt and yields on its issued bonds have fallen in recent months. Further discussion of this development is provided in Chapter I. In February this year, Arion Bank sold non-indexed 3Y bonds in Norway with a nominal value of NOK 500 million, equivalent to 11.2 b.kr. The issue is discussed further in Chapter V. It is extremely important that foreign credit markets open up to domestic parties. Furthermore, the terms on offer must be acceptable given the profitability of the underlying assets. It is not certain that this point has been reached yet. Domestic parties' refinancing on credit markets abroad is currently especially difficult, in part because many of the privately operated European banks which loaned most to Iceland prior to the banking system collapse are either insolvent or in winding-up proceedings. Domestic parties need to reinforce their business relationships with foreign credit markets.

At year-end 2012, domestic parties' loans from foreign parties and foreign-denominated debts owed to DMBs in winding-up proceedings totalled 1,677 b.kr. or almost 100% of GDP. This is offset by substantial foreign assets. For instance, direct loans and other FX liabilities of the Central Bank of Iceland and the Treasury owed to foreign parties and the failed banks totalled 575 b.kr. as of year-end 2012, while on the other hand the bank and the Treasury held currency reserves of 513 b.kr. (Chart II-7). The majority of foreign debt and foreign-denominated debt to DMBs in winding-up proceedings is owed by parties with access to foreign credit markets, who have foreign cash flow or to some extent have accumulated foreign assets to meet the payments. The minority of debtors has no FX income or assets to cover instalments and interest on their debts. Without access to foreign credit markets, these parties must purchase currency on the market in order to make scheduled payments on their foreign loans.

Under the current circumstances on foreign credit markets there has been a tendency for domestic parties, even those with good market access, to pay down their foreign debt rather than refinance it, due in part to the unfavourable lending terms on offer. This could create

Chart II-7
Estimated payments by Treasury and CBI on foreign loans and foreign-denominated debts owed to the failed banks plus the CBI's FX reserves¹



1. All figures in b.kr. as of year-end 2012 and exchange rates on 4 March 2013.

Source: Central Bank of Iceland.

additional instability on the FX market if the repayment schedule is steep and the underlying current account is not sufficiently favourable. The repayment profile of foreign loans and foreign-denominated debt owed to DMBs in winding-up proceedings is shown in Table II-3. A similar profile has previously been provided in the Central Bank's Financial Stability reports, e.g. both in 2012/1 and 2012/2. The main changes from the previously published profile, apart from exchange rate movements, are conversions by DMBs in winding-up proceedings of part of their FX loans to domestic parties to loans in krónur; revaluations and prepayments of bonds issued by Landsbankinn to LBI; prepayments by government-guaranteed firms of maturities in 2013; and two changes in terms announced by municipal-owned firms in the spring of 2012 which eased their repayments somewhat, especially in 2013.

Aside from the Treasury and the Central Bank, the majority of estimated repayments are connected with foreign debts of government-guaranteed firms, municipal-owned firms and Landsbankinn. The repayment profile, excluding the Treasury and the Central Bank, which is shown in Chart II-8, becomes significantly heavier in 2015, when payments on Landsbankinn's bonds to the old bank begin in full force, rising from 87 b.kr. in 2014 to 128 b.kr. in 2015. By comparison, the estimated underlying current account surplus in 2012 was 52 b.kr.

Estimated payments by parties other than the Treasury and the Central Bank in 2013-2018 amount to 678 b.kr. If the current account surplus in coming years is similar to that of the past few years, around 3-3.5% of GDP, it can be expected to amount to 415 b.kr. in 2013-2018. The shortfall is therefore 263 b.kr. The underlying current account balance may possibly be somewhat underestimated, since the factor income balance is based on accrued and not paid factor income. Accrued factor income on non-residents' domestic assets in the failed banks, and impatient króna assets, are not completely transferred out of the country. On the other hand, interest income on the country's foreign assets is not completely transferred into the country. In the

Table II-3 Estimated instalments on foreign loans and foreign-denominated debts owed to the failed banks

	2013	2014	2015	2016	2017	2018	2019
Central Bank of Iceland	0	0	64	32	0	0	11
Treasury	0	25	2	130	2	0	31
Municipalities	9	3	3	0	0	0	0
Misc. credit institutions	9	9	9	9	2	1	1
Government-guaranteed firms	12	16	31	24	31	25	23
Municipal-owned firms	25	16	19	14	14	14	13
Other entities ¹	22	13	6	4	3	1	0
Foreign-denominated debts owed by domestic parties, excluding Landsbankinn, to DMBs in winding-up proceedings	17	17	4	4	4	12	4
Landsbankinn	0	17	60	74	74	74	0
Total	94	116	198	292	131	127	83
Total excl. the Treasury and the CBI ²	90	87	128	125	125	123	37

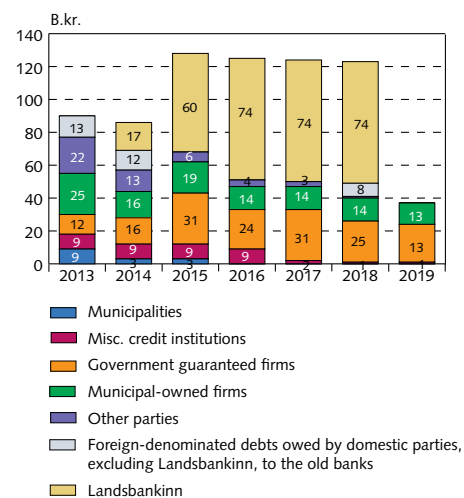
1. A more detailed breakdown is provided in Special Publication No. 9: Iceland's underlying external position and balance of payments.

2. A small portion of foreign-denominated Treasury debt is owed to DMBs in winding-up proceedings.

Source: Central Bank of Iceland.

Chart II-8

Estimated payments by parties other than the Treasury and CBI on foreign loans and foreign-denominated debts to the failed banks¹

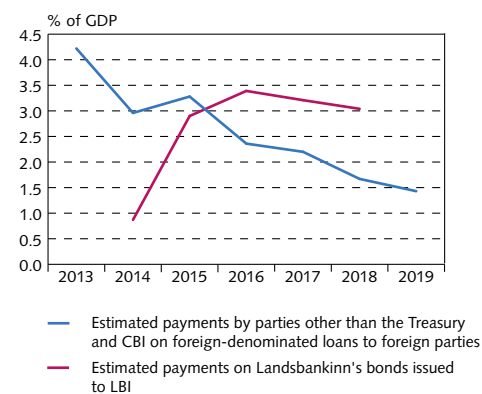


1. All figures in b.kr. as of year-end 2012 and exchange rates of 4 March 2013.

Source: Central Bank of Iceland.

Chart II-9

Estimated payments by parties other than the Treasury and CBI on foreign-denominated loans to foreign parties and payments on Landsbankinn's bonds



Sources: Statistics Iceland, Central Bank of Iceland.

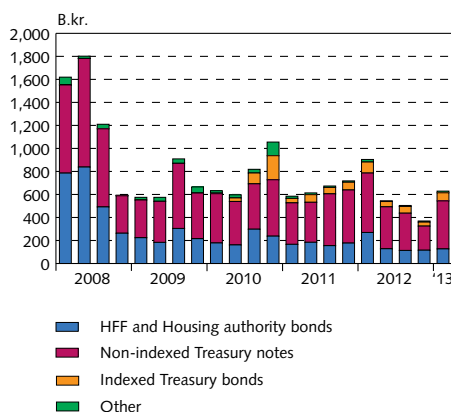
longer term the factor income outflow is likely to increase with further refinancing, given the terms which domestic parties are currently offered on foreign refinancing. In order to make up the shortfall, a mixture of capital inflows, refinancing and loan extensions will be required. Domestic parties will be dependent upon access to foreign credit markets in coming years, as well as to an inflow of capital needed to make payments on foreign debts. Some of the debts will also have to be extended. Estimated repayments, for instance, on all the country's foreign loans, excluding the Treasury and Central Bank and debts owed to the failed banks, are around 4% of estimated GDP in 2013 and around 3% in 2014 and 2015, then fall fairly steadily to 1.5% by 2019. Instalments on the Landsbankinn bonds alone are estimated at 3-3.5% of GDP in 2015-2018 (Chart II-9), which is similar to the underlying current account surplus. The repayment schedule of Landsbankinn's bonds is too heavy for the economy. The bonds need to be extended or refinanced. The nation's current repayment profile gives scant leeway for other outflows, for instance, in connection with compositions of the failed banks or of non-residents' impatient króna assets, or for relaxing of capital controls, unless offset by other capital inflows. Further access by domestic parties to foreign credit markets on acceptable terms is a necessity in the next few years. The steep repayment profile of foreign debt is among the main risks in the financial system in connection with the relaxing of capital controls.

Development of asset prices under capital controls

National expenditure has fallen sharply in Iceland following the financial crisis. By 2011, private sector investment as a % of GDP dropped by 49% from an historically relatively high level in 2007 and is still below the long-term average. At the same time private consumption fell by 10% as a percentage of GDP. Public works are also at a minimum, decreasing by 49% in 2007-2011 using the same measure. The economy as a whole has thus been forced to deleverage substantially, despite a decrease in real income. Demand for credit is limited, while savings have grown substantially. Due to capital controls and limited domestic investment options corporate and household savings have accumulated in banks, investment funds and pension funds. The compulsory savings of the pension fund system need to be directed into investment, although demand for capital is limited, cf. the discussion in Box I-1. Under such conditions there is a real risk of asset price rises beyond what is justified by their expected profitability. Such ungrounded rises are reversed sooner or later and can result in asset transfers between parties and sectors.

Strong bond market demand since 2009 resulted in considerable price increases for listed securities. This rise, however, appears to have levelled off during the first half of 2012. Chart II-10 shows a considerable slowdown in bond market turnover in the latter half of 2012, which picked up once more in Q1 this year. Falling turnover in listed bonds suggests that savings are now seeking other investment options to a growing extent. NASDAQ OMX Iceland's bond index for 10Y inflation-indexed bonds rose by 1.8% in the first three months of this year (a 0.3% decrease in real price) while its average

Chart II-10
Bond market turnover
January 2008 - March 2013



Source: Nasdaq OMX Ísland.

annual increase over the past three years is 12.6% (a real increase of 8.1%). The index for 5Y non-indexed bonds rose by 3% in the first three months of this year, and rose on average by 11% annually in the preceding three years. The rise in bond prices, therefore, appears to have slowed somewhat, suggesting that capital has begun moving into other markets.

The OMXI6 selected shares index rose by 14.4% in the first three months of this year (the CPI rose by 2.1% during this same period). Its average annual increase over the past three years was 9.1% (the CPI rose on average by 4.2% annually in the last three years). It is difficult to assess how lasting the equity price rise since the beginning of this year will prove to be. As discussed in Chapter I, turnover on the equity market in recent months has grown substantially. New listings have also increased as time passes from the financial shocks. Demand for equities in recent public offerings prior to listing on the exchange has grown substantially, as the shares have tended to rise still more on the market after being admitted to trading. On average, share prices of newly listed companies have risen by 10% from the offer price in the first month after public listing and by 23% during the first three months. At the end of April two public offerings concluded. A public offering of 70% of shares in VÍS Insurance was sold for 14.3 b.kr., with bids totalling 150 b.kr. while a 29% holding in TM Insurance was sold for 4.4 b.kr., with bids totalling 357 b.kr.

Twelve-week average turnover on the real estate market (weekly data) is shown in Chart II-11. It shows that turnover has grown steadily since 2009. Real estate prices decreased by 12% in 2009, remained steady in 2010, then increased by 9.9% in 2011 and by 5.8% last year. Real housing prices have remained fairly stable in recent years after falling sharply in 2008 and 2009. Developments in real estate prices, however, depend to some extent on the location. The average m² price is considerably higher in the capital region than elsewhere and fluctuations are also greater. Last year the price per m² outside the capital region rose by 1.8%, by 5.4% in the suburbs of Reykjavík and by 10.7% in the districts closest to the city centre. This is the first time that price developments have varied so greatly between different areas of the city and could indicate growing interest in investment in housing in specific areas of the capital.

Price increases on the bond market have slowed from those a year ago and capital appears to be seeking a return elsewhere. Real prices for real estate remain fairly steady, but housing prices rose considerably in certain areas of the capital last year. Capital appears to be once more flowing to an increasing extent into the equity market and possibly into unlisted securities. It is important to monitor the risk factors which could cause an asset price bubble.

Risk factors under capital controls

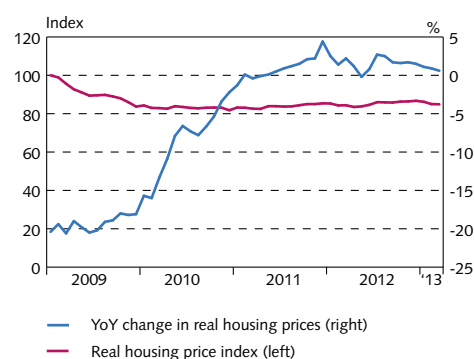
Restrictions on capital movements have many types of undesirable effects. Some of them directly influence financial stability while others have an indirect impact through the real economy. This makes it desirable to remove them once the balance of payments problem has been resolved.

Chart II-11
Real estate market turnover, 12-week averages
January 2008 - March 2013



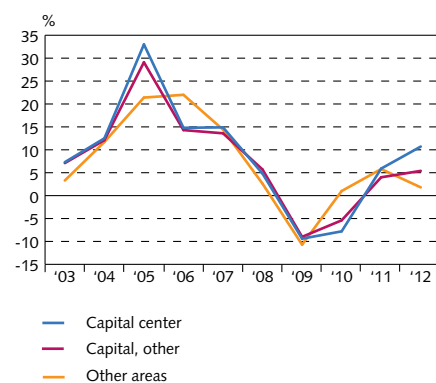
Source: Registers Iceland.

Chart II-12
Real housing prices



Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Chart II-13
Annual change in housing prices



Sources: Registers Iceland, Central Bank of Iceland.

The controls support lower financing costs, because capital is kept within the country which otherwise would have sought to exit. As discussed above, low market interest rates and a scarcity of investment options can distort asset prices. Under such conditions domestic parties seek funding at market rates to a growing extent. This is evident in the increased issuance of both listed and unlisted bonds. At the same time, investors seek better interest rates, and therefore buy issued bonds and equities as well. Equity market turnover has picked up and prices have risen recently. This is often accompanied by higher leverage. Due to limited corporate demand for credit for investment purposes, there is also a risk that credit institutions might increase their lending for leveraged acquisitions, which could increase systemic risk.

All parties need to be aware that domestic funding could become more expensive after controls are removed. It is therefore necessary to take advantage of the shelter provided temporarily by the controls to prepare for their removal. This applies not least to public authorities. They must continue to aim at a Treasury surplus, in order to begin to pay down debt. The Treasury must be prepared to be able to sustain higher market interest rates on its domestic funding. Public sector investment decisions must also reflect market interest rates in an environment without controls, otherwise there is a danger that they will be economically unprofitable.

Capital controls limit possibilities for cost-efficiency in business and distort the premises for investment decisions. The longer the control regime remains in force, the greater is the risk that investment options will be determined to a growing extent by possibilities of returns within the controls, while at the same time emphasis grows on seeking ways to circumvent the controls. The structure of business and industry could therefore in time develop differently within the control regime than without it. Options decline in number, and output growth and living standards deteriorate.

If the removal of the controls causes substantial instability on the FX market, this could have a negative impact on both households, corporates and credit institutions. The capital controls prevent the risk of a major capital outflow which could cause instability. The liquid króna assets of foreign parties and DMB's are most likely to be sold for foreign currency when capital movements are liberalised. It is also possible to map out other scenarios with considerably greater capital outflows.

Since 2011 the Central Bank has held a series of foreign currency auctions in accordance with the bank's plans for relaxing capital controls.¹ The auctions provide owners of foreign currency which is not subject to repatriation the opportunity to sell FX at the auction rate and purchase long-term inflation-indexed Treasury bonds (Treasury bond option) or through an investment programme. Through the latter, investors can purchase krónur at the auction exchange rate for the equivalent of 50% of the amount to be invested, while the other 50% is converted on the domestic FX market. In both instances investors oblige themselves to hold the investment for at least five years if they avail themselves of these options. In parallel with the above-mentioned auctions, non-residents who wish to close their króna positions are offered to participate in auctions where they offer krónur for sale in exchange for FX which is not subject to repatriation obligations. The Central Bank therefore serves as intermediary in matching investors wishing to invest in Iceland for the long term and parties who wish to dispose of their krónur.

Treasury bond FX auctions began in the summer of 2011, while the first auction under the investment programme was held in February 2012. A total of twelve Treasury bond auctions have been held and ten for the investment programme. Based on the auction price in each instance and the Central Bank's quoted mid-rate of the same date, investors have brought a total of around 45 b.kr. into the country through the Treasury bond option and over 98 billion through the investment programme. Around one-third of this has gone through the domestic FX market, since 50% of the amount to be invested under the investment programme has to be converted on the domestic FX market. If only the auctions where both options were on offer are examined, the investment programme appears to enjoy considerably more popularity among investors, as Chart 1 indicates. However, the chart only shows part of the inflow from the auctions, since as previously pointed out investors choosing the investment option must convert an equivalent amount on the domestic FX market.

To date, the foreign currency auctions have brought into the country foreign investment equivalent to just over 8% of 2012 GDP. Around 44% of the capital inflow of the investment programme has been invested in bonds, around 43% in equities, 12% in real estate and around 1% in UCITS (Chart 2). A breakdown of investors taking part in the auctions between residents and non-residents shows that domestic investors account for 37% of the total amount and non-residents for 63%. In this analysis, foreign companies owned by Icelandic residents were classified as domestic investors.

An additional 11 auctions have been held inviting bids from parties wishing to sell their króna assets in exchange for FX which is exempt from repatriation obligations. In 2011 two such auctions were held where the exchange rate was 210 krónur per euro. The price held fairly steady in 2012 at around 240 krónur per euro, but has since decreased in 2013 and in the latest auction in March this year the auction price was 225 krónur per euro (Chart 3). In the 11 auctions a total of 271 b.kr. have been offered for sale, of which the Central Bank has purchased around 84 b.kr. (Chart 4). The price expectations of those parties offering their króna assets for sale are not always in line with the price expectations of investors taking advantage of the FX auctions to make long-term investments in Iceland.

Despite repeated claims that impatient króna assets of non-residents are the principal obstacle to removing capital controls, the

Box II-1

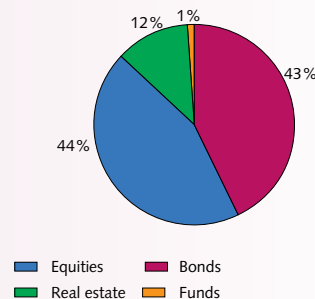
Central Bank's foreign currency auctions

Chart 1
Central Bank of Iceland foreign currency auctions
Purchases of euros for krónur



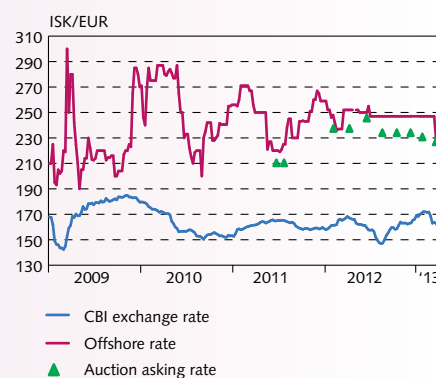
Source: Central Bank of Iceland.

Chart 2
Breakdown of the Investment programme
by investment type
31.3.2013



Source: Central Bank of Iceland.

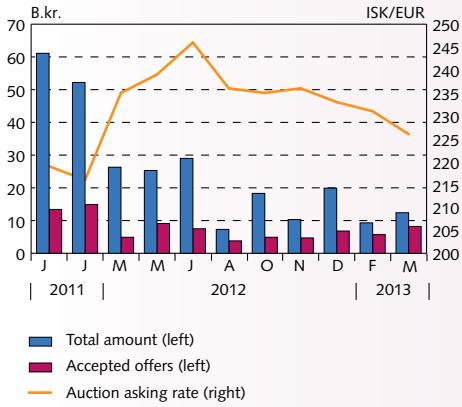
Chart 3
CBI exchange rate, offshore rate
and auction asking rate



Sources: Reuters, Central Bank of Iceland.

1. See <http://www.sedlabanki.is/lisalib/getfile.aspx?itemid=8672>.

Chart 4
 Central Bank of Iceland foreign currency auctions
 Purchases of krónur for euros



Source: Central Bank of Iceland.

FX auctions have shown that the interest of non-residents in selling króna assets at the auction price is limited. This is an indication that part of the non-residents' impatient króna assets are in fact not as impatient as previously assumed, at least not at the price on offer in the currency auctions. The auctions have, however, relieved pressure by offering an exit route for the most impatient ones. Part of those remaining are possibly here to stay, at least for some time.

III Financial market entities

Housing Financing Fund (HFF) in a difficult position and pension funds need more investment options

Total assets of the financial system decreased YoY because of a decrease in the balance sheet of the Central Bank of Iceland. Savings banks' market share declined still further, and their situation is generally weak. The Housing Financing Fund is in difficulties, as its business model is ill suited to the current environment. The largest insurance companies have recently been listed or are preparing for public listing on NASDAQ OMX Iceland. Capital controls keep pension funds in a veritable straight jacket. Their need for investment can cause a systemic distortion in asset prices.

Financial system components

The financial system in Iceland consists of the banking system, various credit undertakings (including the state-owned Housing Financing Fund (HFF)), pension funds, insurance companies, mutual funds, investment and institutional investment funds, as well as state loan funds. Currently four commercial banks are operating. Their activities changed slightly last year with the merger of Verdi hf. (previously Arion Securities Custody hf.) with Arion Bank and that of Kreditkort hf. with Íslandsbanki. The savings bank Sparisjóður Ólafsfjarðar was also merged with Arion Bank. DMBs account for just over one-third of the financial system, or 36%.¹ The greatest systemic risk is linked to DMBs, especially to the large market operators. A more detailed analysis of the commercial banks' assets is provided in Chapter IV *Assets of DMBs and borrowers' situation*, of their debts in Chapter V *Financing and liquidity*, and of their operations in Chapter VI *Operations and equity*. This chapter therefore focuses on other actors in the financial system and its structure. These include especially the Central Bank of Iceland, HFF and pension funds.

Table III-1 Financial system assets

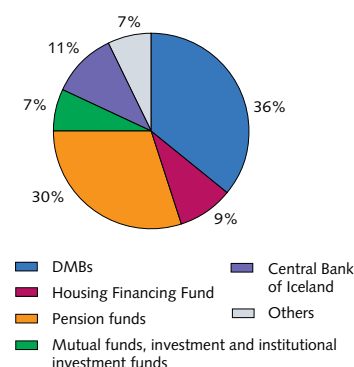
Assets, ma.kr.	Change from					
	31/12. 2008	31/12. 2009	31/12. 2010	31/12. 2011	31/12. 2012	31/12. 2011
Banking system ¹	4,632	3,967	3,878	4,402	3,841	-560
thereof Central Bank of Iceland	447	1,011	1,114	1,466	896	-570
thereof commercial banks	3,417	2,573	2,627	2,875	2,889	13
thereof savings banks	768	383	137	60	57	-3
Other credit institutions	1,284	1,194	1,129	1,097	1,060	-37
thereof Housing Financing Fund	733	795	836	864	861	-3
Pension funds	1,665	1,849	1,989	2,169	2,441	271
Insurance companies	122	131	138	145	154	8
UCITS, investment and institutional funds	212	195	284	516	583	67
State loan funds	125	146	161	171	187	16
Total assets	8,040	7,483	7,579	8,500	8,266	-235

1. The banking system consists of commercial banks, saving banks and the Central Bank of Iceland. Internal trades between the Central Bank of Iceland and other parties are excluded.

Source: Central Bank of Iceland.

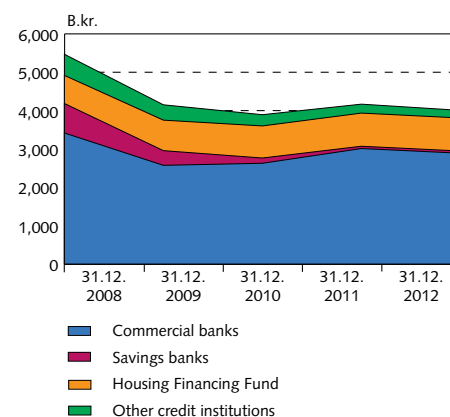
1. DMBs consist of commercial banks and savings banks.

Chart III-1
Breakdown of financial system assets¹
End-of-year 2012



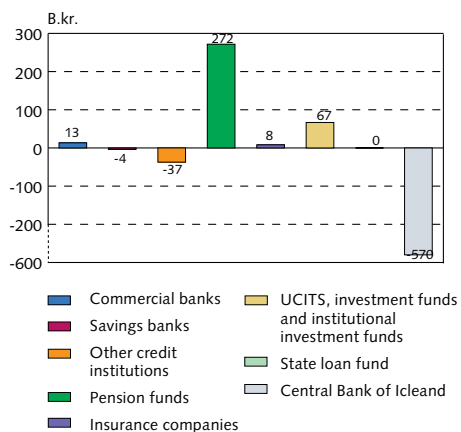
1. Parent companies.
Source: Central Bank of Iceland.

Chart III-2
Credit institutions' total assets¹



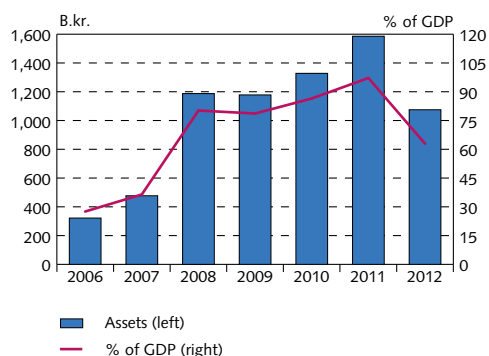
1. Parent companies.
Source: Central Bank of Iceland.

Chart III-3
Changes in financial system assets¹
December 2012, YoY



1. Parent companies.
Source: Central Bank of Iceland.

Chart III-4
Balance sheet of the Central Bank of Iceland



Sources: Statistics Iceland, Central Bank of Iceland.

Assets of the financial system shrink

Total assets of the financial system at year-end 2012 amounted to 8,266 b.kr., decreasing YoY by 235 b.kr. or 3% (Table III-1).

The largest factor here is a decrease in assets of the Central Bank of Iceland by 570 b.kr. The drop is due primarily to a reduction of FX balances of financial institutions in winding-up proceedings, and the advance repayment by the state and the Central Bank of loans from the Nordic countries and the IMF. This is partly offset by an increase of 295 b.kr. in pension funds' net assets during the year, to total 2,394 b.kr. at year-end 2012. The increase amounts to over 14% of the pension funds' total net assets. There was little change to the overall asset position of the commercial banks. The change among savings banks is due primarily to a merger with commercial banks. Assets of other credit institutions² shrank by 37 b.kr., mainly as a result of a prepayment of a foreign loan by one credit undertaking. Total assets of the insurance companies were 154 b.kr. at year-end 2012, an increase of almost 9 b.kr., or 6%, year-on-year. Assets of UCITS, investment funds and institutional investment funds rose by almost 67 b.kr. in 2012, or the equivalent of just over 11% of their total assets at year-end 2012.

According to figures at year-end 2012, DMBs held by far the largest share of credit undertakings' assets, with almost 74% of the total, or the equivalent of 172% of GDP. HFF's share is just over 21% of credit undertakings' total assets and other credit undertakings have around 5%.

Central Bank's balance sheet contracted

At year-end 2012, Central Bank assets totalled 1,068 b.kr. and had decreased by 570 b.kr. during the year. In 2012 the Central Bank repaid in advance the equivalent of around 284 b.kr. in foreign loans from the IMF and Nordic countries, taken in the wake of the banking collapse in the autumn of 2008 to reinforce its FX reserves. A total of 53% of the original IMF loan amount and 59% of the original amount of loans from the Nordic countries were paid back ahead of schedule. In addition, a loan from the Faroe Islands in the amount of 6.6 b.kr. was repaid in full. The foreign deposits of financial institutions in winding-up proceedings dropped by 313 b.kr. YoY,³ reducing FX reserves by this amount, although this did not effect net FX reserves.⁴ On the other hand, at the end of 2012 the Treasury issued 10Y bonds for a total nominal amount of 1 billion USD, or the equivalent of 129 b.kr., to reinforce net FX reserves. The Central Bank's foreign assets, which represented 67% of its total assets at year-end 2011, had therefore decreased to 51% of total assets at year-end 2012. The bank's net interest income amounted to almost 15 b.kr. in 2012, a drop of nearly 19 b.kr. from 2011. This is due in particular to a decrease in interest income on indexed securities and other domestic

2. Other credit institutions include Borgun hf., Valitor hf., Lýsing hf., the Institute of Regional Development, Municipality Credit, HFF and Straumur Investment Bank hf.

3. The deposits were exempt from the prohibitions of the Foreign Currency Act, No. 87/1992, cf. the amendments made by Act No. 17/2012, which entered into force in March 2012.

4. Net reserves are defined in accordance with IMF standards as reserves after deducting scheduled net outflows of FX assets for the next 12 months.

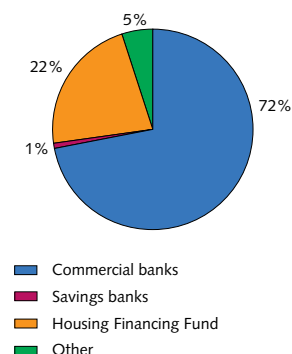
assets. In assessing the cost to the Central Bank and the Treasury of FX reserves and financing in connection with them, the methodology commonly used is to calculate the interest spread between the interest rate at which the loans are taken and the interest on the most secure assets, in order to estimate the net risk-adjusted interest cost. For 2012, this cost is estimated to be around 1.4% of GDP.

Savings banks in a difficult position

At year-end 2012, the savings banks' total assets amounted to just over 57 b.kr., and continue to decrease.⁵ The drop was almost 3 b.kr. from year-end 2011 to year-end 2012, primarily due to the merger of Sparisjóður Ólafsfjarðar with Arion Bank. Savings bank assets as a share of total credit institution assets have therefore dropped from 14% at year-end 2008 to just over 1.5% at year-end 2012. Further mergers are in the pipeline, according to Arion Bank's announcement of its proposed merger with the savings bank AFL in the near future.⁶ In this context it should be pointed out that in September 2011 Arion Bank attempted to dispose of its holdings in the afore-mentioned savings banks but was met with scant interest at that time. In late summer 2012, at the instigation of the Competition Authority, the Board of Directors of the savings bank Sparisjóður Svarfdæla turned to the Savings Banks' Guarantee Fund, requesting the latter's assistance to reinforce its operating basis. The Guarantee Fund agreed to provide the savings bank with new guarantee capital and grant it a subordinated loan, after which the savings bank reached an agreement with Landsbankinn that the latter would cancel plans to acquire the savings bank's operations and assets.

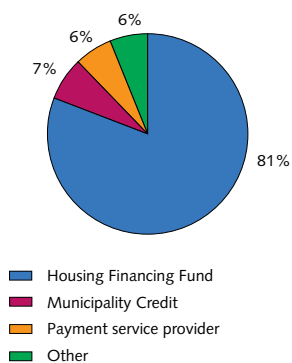
In 2012 four out of nine savings banks operated at a loss and their return on total assets was minimal. The results of many savings banks were characterised by extraordinary items, such as debt write-downs recognised as income, trading gains, etc., in addition to which they were hard hit by various public levies.⁷ The savings banks' combined capital ratio, as defined by the Act on Financial Undertakings and the Financial Supervisory Authority's rules on risk base, amounted to just over 14% at year-end 2012. As is the case for other credit institutions, some uncertainty persists regarding valuation of loans in connection with judgements on exchange rate-linked loans, and thereby regarding the savings banks' actual equity position. At year-end 2012, two savings banks which had undergone financial restructuring in 2010, Sparisjóður Bolungarvíkur and Sparisjóður Þórshafnar og nágrennis, were below the minimum capital ratio required of such savings banks by the Financial Supervisory Authority. The decrease in the number of savings banks and insolvency of Icebank has transformed the savings banks' operating environment, and to some extent undermined

Chart III-5
Credit institutions' assets¹
End-of-year 2012



1. Parent companies.
Source: Central Bank of Iceland.

Chart III-6
Assets of other credit institutions¹
End-of-year 2012



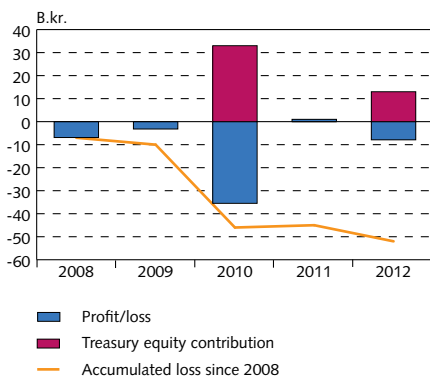
1. Parent companies.
Source: Central Bank of Iceland.

5. Figures are based on summaries of savings banks' assets and liabilities gathered by the Central Bank of Iceland.

6. See, for example, Arion Bank's annual financial statements for 2012.

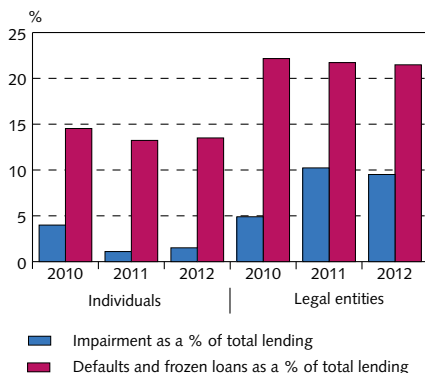
7. Three savings banks, Sparisjóður Vestmannaeyja, Sparisjóður Höfðhverfinga and Sparisjóður S-Pingeyinga, have reached agreement with the Central Bank of Iceland's holding company on recalculation and reduction of FX debt. The agreements were concluded subject to no opposition or setting of conditions by the Financial Supervisory Authority and the EFTA Surveillance Authority.

Chart III-7
HFF profit/loss and Treasury equity contribution



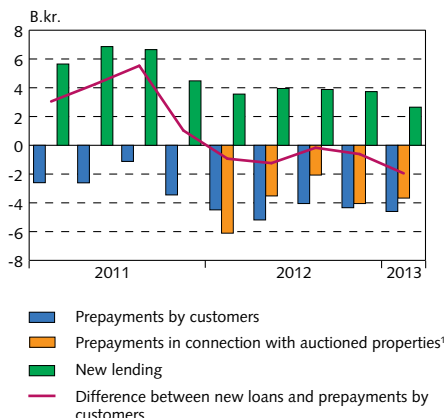
Sources: HFF annual financial statements.

Chart III-8
Impairment, defaults and frozen loans as a % of total lending¹



1. Total defaults and loans frozen over 90 days.
Sources: HFF annual financial statements and monthly reports.

Chart III-9
Prepayments by HFF customers and new loans



1. Data for 2011 not available.
Source: Housing Financing Fund.

their activities. Their position does not threaten financial stability, but it is clear that savings banks will need to continue to seek all possible ways of increasing efficiency and achieving synergies in their operations, such as through mergers or co-operation with larger financial undertakings. Attempts up until now to merge savings banks or find buyers for them, as proposed in the future strategy of Icelandic State Financial Investments, have not been successful.⁸ There have been some indications of interest in mergers this spring, as according to a news announcement at the end of March Sparisjóður Svarfdæla and Sparisjóður Þórshafnar intend to merge. Their merger plan is to be submitted to meetings of guarantee capital owners this spring.

Weak situation of HFF

The total assets of credit institutions other than DMBs amounted to 1,060 b.kr. at year-end 2012. HFF, Municipality Credit and the Institute of Regional Development hold 90% of the assets of other credit institutions, or a total of 950 b.kr. This amount has changed little since year-end 2011.

HFF's assets amounted to 876 b.kr. at year-end 2012. Loans totalled almost 800 b.kr. while its issued bonds were almost 850 b.kr. A total of 96 b.kr. of the Fund's assets do not bear interest in accordance with its debts from securities issuance, firstly, because of appropriated assets totalling around ISK 30 b.kr. and, secondly, because it has liquid funds and claims on credit institutions of 66 b.kr. In 2012, the loss on HFF's operations amounted to 7,856 m.kr., which is a complete reversal from 2011, when its operations returned a profit of 986 m.kr. This change in the Fund's operations can be attributed principally to the increased write-down provisioning in connection with payment remedies which have been offered to borrowers, as well as increased impairment due to losses on enforcing claims. Since 2008, HFF's accumulated loss amounts to almost 51.5 b.kr., due to large-scale impairment and also in part to a write-down of HFF's claim against the former commercial banks in connection with bonds and derivative contracts. HFF's capital ratio is still below its long-term objective of 5%. The ratio decreased from 2.3% at year-end 2011 to 3.2% at year-end 2012, in terms of the government's promise of an equity injection of 13 b.kr.⁹ This is the second time that the Treasury has had to provide HFF with funding; in 2010 it made a capital contribution of 33 b.kr.

Defaults on the Fund's loans have fallen slightly in 2012, but remain high. In total, defaults and freezing of loans are equivalent to 15% of the Fund's total lending; defaults and freezing of loans to legal entities are over 21%. Loans to corporates are around 17% of HFF's total assets. Considerably higher provisions of almost 10% have been expensed for credit losses to legal entities.

8. Icelandic State Financial Investments, 16 March 2012. On Icelandic State Financial Investments. Future Strategy. <http://www.bankasysla.is/um-bankasysluna/framtidarstefna/>

9. In its budget for 2013, the Icelandic parliament Althingi approved an authorisation to the Minister of Finance and Economic Affairs to increase HFF's equity by up to 13 b.kr. in order to boost its equity position and so that its capital ratio would not fall below 3% at year-end 2012.

HFF finances its lending by issuing four series of indexed HFF bonds (HFF14, HFF24, HFF34, HFF44). The Fund's total outstanding bond stock amounted to almost 850 b.kr. at year-end 2012. Because of its strong liquidity, HFF held only one bond auction in 2012. This high liquidity is the result of paybacks and a drop in new lending in the face of strong competition from other credit institutions, firstly with the entry of the commercial banks and savings banks into the housing mortgage market in 2004 and most recently with their offers of non-indexed loans. The roots of the problem go back to 2004, when changes in the Housing Act entered into force. The amendments created high prepayment risk for the Fund, as borrowers could repay their loans from HFF but the Fund's own indexed bonds are not callable.

As a result of amendments to the law on consumer loans, as of 1 September this year HFF will have to finance its new indexed lending with a new loan series which is to be callable. An issue of this sort will not create prepayment risk for the Fund. Its current liquidity, however, is so strong that there is not much need for new bond issues in the near future, unless the Fund decides to place its liquid funds in less liquid assets, e.g. by acquiring loan portfolios. It is also clear that new issues will not reduce the prepayment risk the Fund faces now and in the immediate future.

Largest insurance companies head for public listing

Twelve insurance companies were operating at year-end 2012. Their total assets amounted to over 154 b.kr. at year-end 2012, increasing YoY by almost 9 b.kr. or 6%. Loans and market securities amounted to almost 95 b.kr., and increased by 5.2 b.kr. during the year. Other assets totalled 35.4 b.kr., decreasing by 2.5 b.kr. YoY.

There are various indications that the three large Icelandic insurance companies, VÍS Insurance, Sjóvá and TM Insurance, will all be listed on the equity market soon. Shares of VÍS were accepted for listing on NASDAQ OMX Iceland in April after Klakki hf. sold around 70% of the company's share capital in a public offering. Klakki retains 30% of the company's share capital, however. The intention is to list TM Insurance on the market on 8 May this year, following a public offering which took place at the end of April. Stoðir, which held 33.6% of the company, sold 28.6% in the offering. Last year a group of pension funds and other domestic investors acquired a majority of the company's share capital. At its AGM in 2012, Sjóvá announced that the company would go public. A fourth insurance company, Vörður hf., is owned by BankNordik, which is listed on NASDAQ OMX Iceland.

Pension funds' assets increase¹⁰

Currently 33 pension funds operate in Iceland. They have decreased in number in recent years, as in 2005 there were 46. At year-end 2012, pension fund assets amounted to 2,440 b.kr., increasing by

10. Figures are based on the pension funds' summaries of assets and liabilities, which are gathered by the Central Bank of Iceland. Monthly data is collected from a sample of the largest Icelandic pension funds and total pension fund assets are estimated on this basis. Based on provisional figures.

Chart III-10
Insurance companies' assets¹
End-of-year 2012

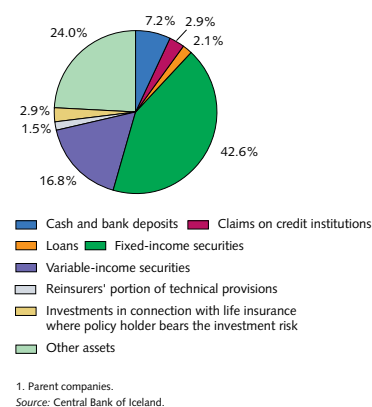


Chart III-11
Pension fund assets as a % of GDP¹

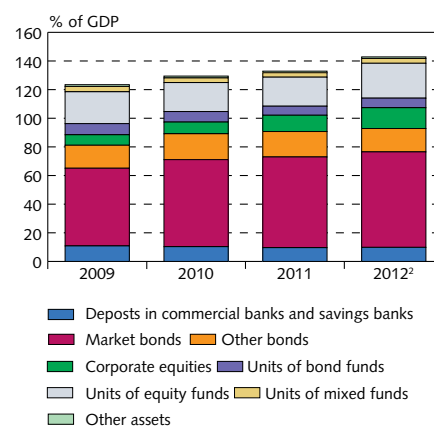


Chart III-12
Pension funds' market bonds¹
End-of-year 2012

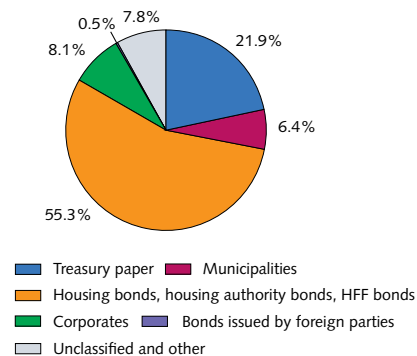
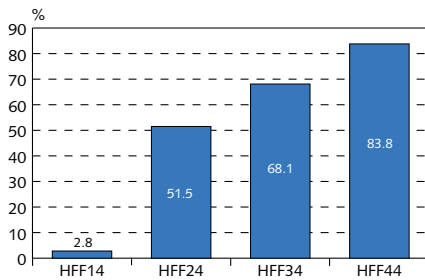
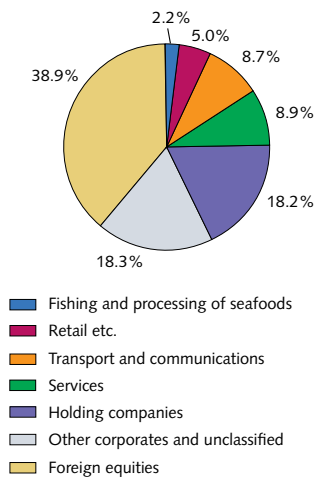


Chart III-13
Pension funds' share of outstanding HFF bonds
31.3. 2013



Source: Housing Financing Fund.

Chart III-14
Pension funds' equity holdings¹
End-of-year 2012



1. Year-end figures based on monthly reports for December are revised as soon as annual financial statements are received. The funds' final results are not available and the figures are therefore provisional and may change.
Source: Central Bank of Iceland.

over 270 b.kr. from the end of the previous year.¹¹ The majority, or 58%, of pension fund assets at year-end 2012 were bonds, deposits in commercial banks and savings banks 7%, corporate equities 10%, unit share certificates 24% and other assets 1%. Pension funds' foreign assets were equivalent to 560 b.kr., or some 23% of their total assets at year-end 2012. This proportion remained fairly constant YoY. Pension funds have not been authorised to undertake new investments abroad, but are able to invest funds obtained from refinancing of foreign assets which they held when capital controls were imposed.

In 2012, pension fund holdings in market bonds rose by 105 b.kr. to 1,140 b.kr. at year-end. Over half of these bonds were housing bonds, Housing Authority bonds or HFF bonds, and around one-fifth were Treasury notes. The pension funds hold more than half of HFF bond series HFF24, HFF34 and HFF44. Only just under 1% of the market bonds were issued by foreign parties. The pension funds' unlisted bonds decreased slightly YoY and totalled 279 b.kr. at year-end 2012, or 11% of total pension fund assets.

The greatest YoY increase was in corporate equities and unit shares of equity funds, which grew by a total of around 148 b.kr. or 29%. Pension funds' holdings in domestic equities and equity funds increased considerably in 2012, by 71 b.kr. Foreign equities and equity funds, however, rose by 77 b.kr., due primarily to returns abroad and exchange rate movements. Equities and unit shares comprised around one-third of pension funds' total assets at year-end 2012.

According to a summary that FME compiled from pension funds' annual financial statements, their investment needs in 2013 can be estimated to at least 130 b.kr. but, like other investors, they are subject to capital controls and have limited investment options. At year-end 2012 listed bonds comprised almost 50% of pension funds' total assets. Net issuance of listed securities this year is expected to be considerably less than equivalent to pension funds' needs for investment, so that they will therefore have to seek other investment options. In February this year, a bill was submitted to the Althingi proposing to loosen somewhat several provisions restricting pension funds' assets in unlisted securities, but the parliament had not completed handling it before the session concluded. Increasing authorisations for purchase of unlisted securities, however, is not a permanent solution to the problem of cash collecting up due to capital controls.¹²

11. In addition, the assets of private pension savings custodians amounted to around 119 b.kr. at year-end 2012.

12. See the Central Bank's opinion on the bill amending the Act on Mandatory Guarantee of Pension Rights and Operation of Pension Funds (investment authorisations) <http://www.althingi.is/pdf/erindi/?lthing=141&dbnr=1983>

The Housing Financing Fund (HFF) faces major difficulties, which increased still further in 2012. In 2012, the Fund's loss amounted to 7.8 b.kr., bringing its accumulated losses from 2008 to 52 b.kr. During this same period the state has contributed 46 b.kr. to strengthen the Fund's equity. At year-end 2012 HFF's equity was 17 b.kr., which is less than 2% of its assets. On a risk-weighted basis its equity ratio is 3.2%. The Fund's operating difficulties are in part the result of greatly increased prepayments and prepayment risk, an insufficient interest margin and high defaults. At mid-April this year, a working group appointed by the Minister of Welfare delivered a report on the Fund's future prospects and future role, with proposals for necessary actions to make its operations sustainable. The working group is of the opinion that HFF should continue to operate as a public service function, which implies, among other things, ensuring equal access of households to mortgage financing and to provide alternative financing in the case of a market failure. The working group proposes to reduce the state's guarantee of HFF's obligations and that in the future its funding will be without a state guarantee. Furthermore, it recommends the establishment of a wholesale bank with participation of lenders, operated as a non-profit institution without a state guarantee. To improve the Fund's current situation, the working group proposes separating its lending activities from administration of appropriated assets, with the latter to be handled by a separate state-owned company, regardless of whether the properties are unfit for habitation, under construction or ill-suited for rental.

Prepayments and prepayment risk

On 1 July 2004, HFF's financing system was altered, with the issuance of callable debt in the form of housing bonds replaced by non-callable debt in the form of HFF bonds. Following the change, the Fund has been subject to uncovered interest rate risk, i.e. prepayment risk, as the change boosted the Fund's risk substantially.

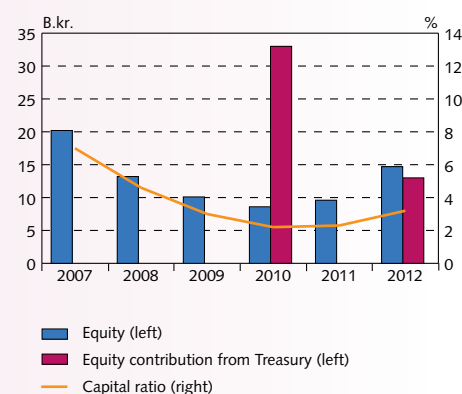
Its annual financial statements for 2011 show that the difference in the fair value of its assets and liabilities was 201 b.kr. Loans were valued based on the Fund's lending rate while its debts were valued based on market yields. In the 2012 annual financial statements, however, the methodology applied to assess the fair value of assets and liabilities has been changed. The fair value of loans is now assessed by discounting the cash flow of the loan portfolio using the market yield on HFF bonds plus a premium of 1.0%. The fair value of liabilities is based on the market value of HFF bonds, as before, but now a premium of 0.5% and 1.0% has been added to the interest rate on HFF bonds in discounting housing authority bonds and housing bonds respectively. This change in methodology makes the difference in the fair value of assets and liabilities 74 b.kr. at year-end 2011 instead of 201 b.kr. as in its 2011 annual financial statements; the new method therefore results in a 63% lower difference between assets and liabilities. This is a very major change, and it must be regarded as inadvisable to change the methodology applied in assessing the fair value of the Fund's assets and liabilities in its annual financial statements at a time when its operations and situation very much under review. The difference between the fair value of assets and liabilities in 2012 is 57 b.kr. according to the new method. In view of the above-mentioned 63% difference between the two methods, the difference between assets and liabilities could be around 100 b.kr. more, or close to 160 b.kr., using the previous method of calculation.

The fair value of liabilities in the 2012 annual financial statements is based on the market value of HFF bonds at year-end 2012.

Box III-1

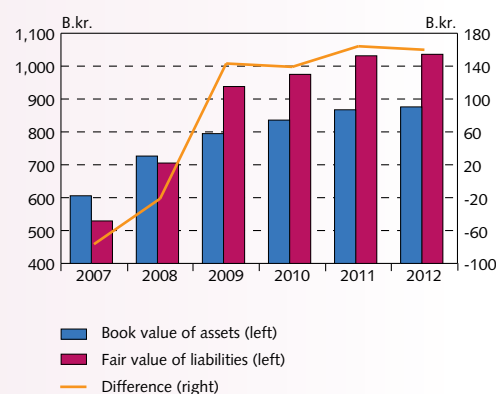
Housing Financing Fund

Chart 1
HFF equity and capital ratio



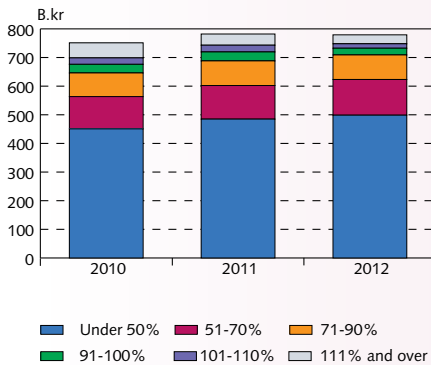
Source: Housing Financing Fund.

Chart 2
Book value of HFF assets and fair value of liabilities



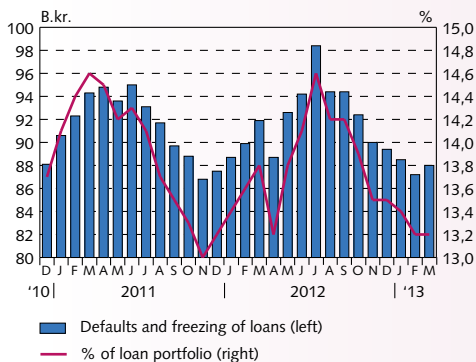
Source: Housing Financing Fund.

Chart 3
Loan-to-value (LTV) ratio



Source: Housing Financing Fund.

Chart 4
Defaults and freezing of loans, individuals



Source: Housing Financing Fund.

These are obligations with a state guarantee, which would result in real cost if the Fund's debts were to be paid off. The methodology used to assess the fair value of assets is based on market interest rates and therefore would only be a realistic assessment of the value of its loans if the Fund had possibilities of selling off the loans. What would be the real value of assets if, for instance, system changes result in substantial paybacks? In such case it would perhaps be more correct to use as a basis the book value of loans and other assets rather than discounting the estimated cash flow using market interest rates plus a premium of 1%. Chart 2 shows that the difference between the book value of assets and fair value of liabilities has grown substantially in recent years with lower market interest rates. The Fund's loans amount to almost 780 b.kr., of which around 141 b.kr. are covered with a special payback fee and 169 b.kr. are partly covered.¹ Uncovered loans thus amount to 470 b.kr., while non-prepayable debts are 850 b.kr. The cost which would accrue to the Treasury could be considerable if, for example, changes to the system result in large-scale paybacks. This therefore comprises a major risk, and it would be inadvisable to boost it still further with additional issuance of HFF bonds in unchanged form. This is not likely to happen, however, since amendments to the Act on Consumer Lending which were adopted by the Althingi in March this year will mean that HFF will have to finance new indexed lending with a new bond series as of 1 September this year. The intention is to have the new bond series callable, and thereby cover the prepayment risk on new lending.²

In 2004-2006, when the banks entered the housing mortgage market with a vengeance, offering loans for real estate purchases on favourable terms, paybacks of HFF loans amounted to 236 b.kr., around half of its entire loan portfolio at that time. A report by IFS Consultants on HFF's risk and equity requirements,³ which was prepared at the request of the Ministry of Finance, analyses prepayment risk. It states that if market interest rates drop by 1%, the negative impact on interest income and thereby on the Fund's activities, as things now stand, could amount to 2-3 b.kr. per year for each 100 b.kr. prepaid.

The report assesses the prepayment risk in three scenarios. The scenario that IFS considers most appropriate to use as a basis assumes minor changes in the market, such as increased competition and decreasing lending rates. As previously mentioned, part of HFF's loans are covered to some extent, and consideration is given to this. Furthermore, it is assumed that there is no risk of prepayment if the loan principal is higher than the real estate valuation of the property in question. In such a scenario, the loans which are vulnerable to prepayment amount to 120-210 b.kr. If HFF bonds in the same amount were to be acquired on the market the cost could amount to 20-40 b.kr. It is unlikely, given the current situation and especially if market interest rates drop, that HFF will acquire HFF bonds on the market if paybacks increase substantially. It is more

1. HFF's 2012 annual financial statements point out that one customer of the Fund requested cancellation of the prepayment fee, as the customer was of the opinion that this had not been specified clearly enough on the mortgage bond which was concluded. The Rulings Committee for Social Services and Housing is currently examining the matter. If the fee charged is deemed unlawful due to a lack of information disclosure to the customer, the Fund is completely unprotected against paybacks, as it has no authorisation to prepay its own borrowing to offset the prepayments.
2. In mid-2012, the loan-to-value ratio (LTV) of around 45% of HFF mortgages exceeded 100% of the real estate assessment. A major portion of these borrowers are probably locked in because of the over-mortgaging, i.e. refinancing is all but impossible.
3. See http://www.fjarmalaraduneyti.is/media/skjal/ILS_Mat_a_ahaettu_og_eiginfjarthorf_122012.pdf

likely that the funds which are released by prepayments would be added to HFF's liquid funds and utilised as appropriate to grant new loans. This also involves a loss, however, under current market circumstances.

Liquid assets and operations

In 2012, prepayments on loans exceeding normal instalments amounted to 18 b.kr. while new loans granted totalled 15.3 b.kr. (of this general mortgages were 12.9 b.kr.). The Fund's liquid assets rose in 2012, reducing its interest income, since the funds which were not used to grant new loans could not be re-invested on similar terms. In the first three months of 2013, prepayments amounted to 4.6 b.kr. and new lending to 3.2 b.kr. Prepayments in excess of new lending during the first three months of this year therefore amount to around half of the difference between prepayments and new lending in 2012. Recently there has been conspicuous investment in housing for rental purposes by financially strong parties. In such cases, mortgages on the properties are repaid. Such transactions comprise part of the explanation for the increased paybacks to HFF.

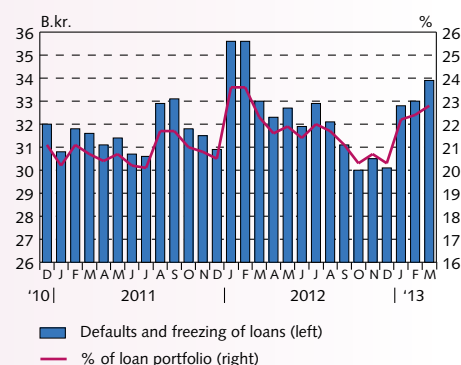
In total, the Fund has a negative interest margin on around 9% of its assets⁴ and this can be estimated to cost around 3 b.kr. annually. The most recent lending rate decision provided for an interest rate premium of 0.45% to cover operating cost and 0.45% to meet credit risk, or 0.90% in total. The interest margin between overall lending and borrowing, however, was estimated at only 0.29% at year-end 2012. Today, general operating expenses are just over 0.2% of the value of the loan portfolio, and therefore there is practically no interest margin to cover credit losses. Clearly, HFF's operations are not sustainable under current conditions.

Credit risk is substantial

HFF's credit risk has increased considerably since the financial system collapse in 2008. At the end of March 2013, defaults by individuals were 13.2% and by legal entities 22.8%,⁵ whereas their combined defaults were less than 2% at the beginning of 2008. The total amount of loans to individuals in default or frozen amounted to 88 b.kr. at the end of March, and loans to legal entities 34 b.kr. (a total of 122 b.kr.). Defaults by individuals have nevertheless decreased from their peak of 14.5% in July 2012, while defaults of legal entities have been similar in recent quarters. At year-end 2012, mortgaging in excess of 100% of real estate assessment totalled 47 b.kr., compared to 63 b.kr. at year-end 2011. The LTV situation has improved as real estate prices have risen (Chart 3), although it should be pointed out that provisions amount to 23 b.kr., or just about half of the amount which exceeds 100% of real estate valuation.

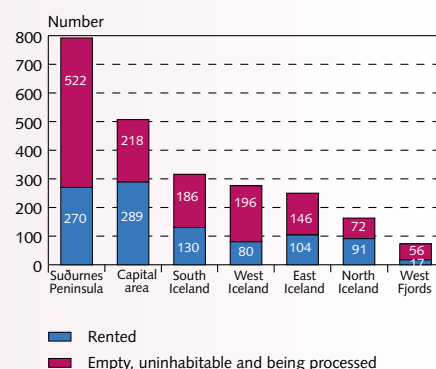
At the end of March this year, the Fund had 2,377 appropriated properties valued at over 30 b.kr., compared to 1,606 at year-end 2011 and 1,069 at year-end 2010. Since the beginning of 2008, i.e. during a period of just over five years, the Fund has sold 611 properties. Of the 2,377 properties which the Fund owned at the end of October last year March, only just over one-fifth were in the capital region. Around one-third of the homes are in the nearby Suðurnes region, and the remainder elsewhere in the country. HFF will have to appropriate additional assets in coming quarters. At the end of March this year, 981 properties were rented out and the

Chart 5
Defaults and freezing of loans, legal entities



Source: Housing Financing Fund.

Chart 6
HFF real estate by region
As of the end of Mars 2013



Source: Housing Financing Fund.

4. The properties which the Fund has appropriated are included here.

5. See HFF's monthly reports: <http://www.ils.is/markadur/manadarskyrslur/>

rental income is only sufficient to cover the operating costs of the appropriated assets, i.e. rental income cannot be used to offset the financing cost of these properties. The Fund's appropriation of real estate assets therefore has a major negative impact on its future operations.

At the end of November 2012, a working group of the Ministry of Finance and Economic Affairs, which was to assess HFF's economic situation and outlook,⁶ concluded that provisions for credit losses needed to be increased by as much as 20 b.kr. This amount corresponds to a shortfall in collateral due to over-mortgaging of 47 b.kr. less reserves of 23 b.kr. which had already been set aside. It could be mentioned, however, that there is uncertainty concerning the value of the Fund's appropriated assets, since a major portion of them are outside the capital region and the losses could well be somewhat higher. If such impairment materialises, an additional contribution from the Treasury is likely to be required for HFF to be able to fulfil its commitments.

HFF's position is weak

There is high uncertainty concerning the Fund's situation and performance in the next few years. Market interest rates are likely to remain low under capital controls, which implies a high prepayment risk. If changes occur in the market which create, for example, increased competition and declining interest rates, losses due to paybacks could amount to 20-40 b.kr., but paybacks would have to increase significantly from their current level for such losses to materialise. The Fund's operations are not sustainable and, other things remaining equal, its performance will be negative in coming years. Possible additional losses due to defaults and appropriations could amount to over 20 b.kr. It is important that HFF manage to restructure its customers' debts to reduce defaults, and to make the Fund's operations profitable, taking its future role into consideration.

6. See http://www.fjarmalaraduneyti.is/media/skjal/Skilabref_starfshops121123.pdf.

IV Assets of DMBs and borrowers' situation

Improvement in corporate and household financial situation slows

Defaults and total liabilities of both households and corporates continued to decrease YoY in 2012. Icelandic households and corporates are still highly indebted by international comparison. Credit risk is therefore considerable. However, the risk base of the Icelandic commercial banks is high compared to that of similar banks abroad, which means that the Iceland banks allocate more capital against their loans. Concentration risk resulting from the banks' large exposures has decreased YoY. Private sector investment is rather low. Indicators for the household situation point in different directions, but it appears that the recovery has slowed and uncertainty has increased. While the total amount of loans in default has continued to drop, the number of individuals on the default register continues to rise. Private consumption has slowed but at the same time household expectations are brightening once more. The corporate situation is currently fragile. The number of undertakings on the default register has changed but little over the past 2 years; some 15% of the large commercial banks' corporate loans are still in default, corporate debt remains very high and investment plans are limited.

Assets of DMBs

DMB's total assets shrink

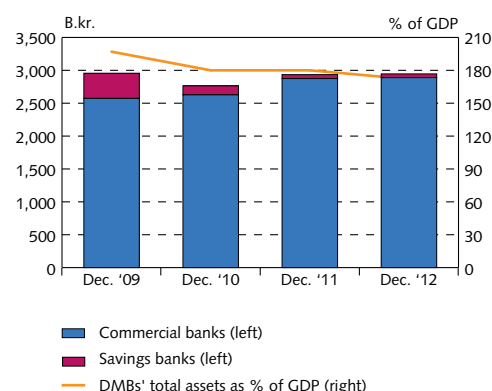
Currently there are four commercial banks and nine savings banks operating in Iceland, with total assets of 2,950 b.kr. as of the end of December 2012. This amount was practically unchanged YoY and therefore the assets decreased in real terms. As a proportion of GDP, DMBs' total assets have decreased somewhat since 2009, falling from around 200% of GDP to 172% at year-end 2012. Assets of other credit undertakings amounted to 1,060 b.kr.¹ By far the largest portion of these are assets of the Housing Financing Fund (HFF), which totalled around 876 b.kr., of which housing mortgages were 779 b.kr.

Since the collapse of the financial system in the autumn of 2008, Landsbankinn has been the largest commercial bank based on balance sheet size. At year-end 2012, the bank's total assets comprised around 38% of total commercial bank assets, with Arion Bank and Íslandsbanki holding 31% and 29% respectively. MP Bank is the smallest commercial bank, with around 2% of total assets. Landsbankinn's share of total commercial bank assets has been decreasing slightly, as at year-end 2008 the bank's assets amounted to almost 42% of their total assets. The principal reason for these changes is that the balance sheets of Arion Bank and Íslandsbanki have grown following takeovers of other financial undertakings and their acquisitions of loan portfolios, while debt repayments have had a greater impact than takeovers at Landsbankinn.

A breakdown of DMBs' asset portfolios by type of asset reveals that loans are by far the largest assets, comprising around 65% of the

Chart IV-1

DMBs' total assets, % of GDP¹

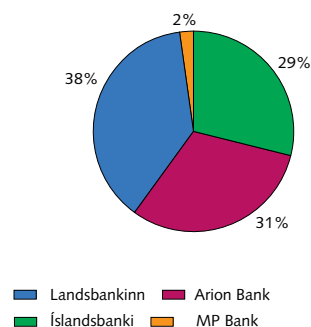


1. Parent companies.

Sources: Statistics Iceland, Centra Bank of Iceland.

Chart IV-2

Commercial banks' share of total assets¹
End-of-year 2012

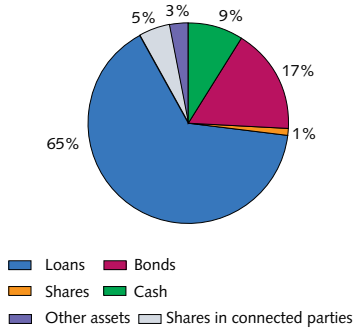


1. Consolidated figures.

Sources: Banks' annual accounts.

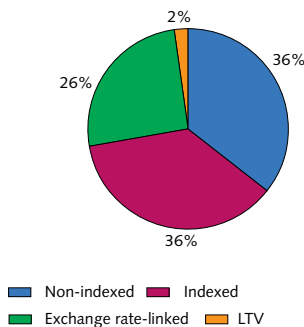
1. Miscellaneous credit undertakings apart from the Housing Financing Fund are: Valitor hf., Borgun hf., Lýsing hf., Straumur fjárfestingabanki hf., the Icelandic Regional Development Institute and Municipality Credit Iceland.

Chart IV-3
DMBs' total assets¹
End-of-year 2012



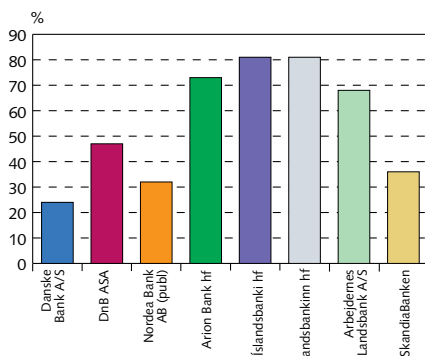
1. Parent companies.
Sources: Banks' annual accounts.

Chart IV-4
DMBs' loans¹
End-of-year 2012



1. Parent companies.
Source: Central Bank of Iceland.

Chart IV-5
Risk weighted assets as % of total assets¹
End-of-year 2012



1. Consolidated figures.
Sources: Banks' annual accounts.

total. This proportion changed little in 2012. In real terms the loan portfolios have shrunk, as have total assets. Demand for new loans is limited, and although there were slightly more upward than downward revaluations, repayments and prepayments have reduced the value of loan portfolios (see Chapter VI). The value of bonds, which comprise 17% of the banks' assets, decreased by 40 b.kr. in 2012. This is explained mainly by Landsbankinn's advance payment on its bond owed to LBI (the former Landsbanki) and parallel sale of short-term foreign bonds. At the end of last year cash and cash equivalents were just over 260 b.kr., or around 9% of the asset portfolio. This includes both cash, deposits with the Central Bank and deposits with DMBs abroad. DMBs cash and cash equivalents increased by over 70 b.kr. last year, reflecting their high liquidity position. Of other assets, equities comprise only around 1% of DMBs' assets, with the result that market risk arising from equity prices on their balance sheets is hardly significant. At year-end 2012 claims on foreign parties amounted to 380 b.kr. or around 13% of asset portfolios, after increasing slightly during the year.

Lending by DMBs amounted to just over 1,900 b.kr. at year-end 2012. During the past year the share of exchange rate-linked loans in their asset portfolios dropped to 26% from 29% twelve months earlier. This development is mainly the result of Supreme Court judgements on the illegality of exchange rate linking of loans and the value of receipts for full payment. Indexed and non-indexed lending each account for 36% of asset portfolios, increasing last year in line with the contraction in exchange rate-linked loans. There was a very slight increase in lending in the form of asset-leasing agreements, but this form of lending is a very minor share of loan portfolios. Loan write-downs increased YoY by 12%, due both to recalculation of unlawful loans and greater uncertainty concerning recoveries.

The Icelandic commercial banks' risk base is high in comparison to total assets

The difficulties plaguing the international financial system since 2008 have shown that all assets involve some risk. The Financial Supervisory Authority sets rules on risk base and capital base, and how assets are recognised in the risk base under credit risk, market risk and operational risk. The risk-weighting, and thereby the capital requirement, is higher the riskier the asset is considered to be. All the Icelandic banks use the Standardised Approach in calculating their risk base. No Icelandic bank uses the Internal Ratings Based Approach (IRBA), which is based on an undertaking's own model to assess risk, and is used by most large foreign banks. The capital requirements of banks using the IRBA are generally lower than of those who follow the Standardised Approach.

At year-end 2012, the ratio of the three large commercial banks' risk-weighted assets, i.e. their risk base, to their total assets ranged from 75% to 81%. This ratio is considerably lower at leading banks in countries generally used for comparison. Nordea's ratio, for example, was 32% and that of Danske Bank 24% at year-end 2012; both of these banks use the IRBA (see Chart IV-5). The lower the risk base, the

lower is the capital required to offset it. The large difference between the risk base and total assets has given rise to speculation in international fora as to whether the current rules on capital requirements reflect the actual risk of banks' operations.² Swedish authorities, for instance, have responded by setting higher capital requirements for systemically important financial institutions.³ The situation of the large commercial banks in Iceland is strong, as their risk base is around 80% of total assets and their capital ratio was 25% at year-end 2012.

Large exposures decrease

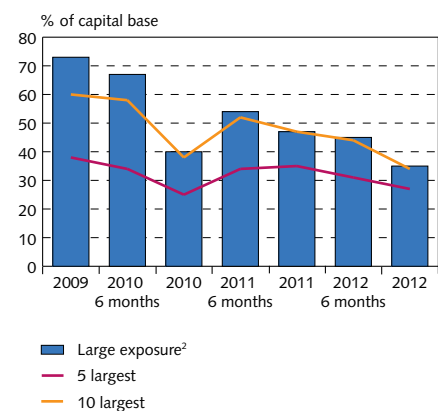
The amount of the five largest exposures decreased by 8% of the commercial banks' combined capital base in 2012, and the amount of their 10 largest exposures decreased even further, by 13% of the banks' combined capital base. As Chart IV-6 shows, these obligations have decreased fairly steadily ever since 2009. The commercial banks' total large exposures also decreased somewhat in 2012; they now total around 35% of the combined capital base, a decrease of 12% from the previous year. In recent years the amount of the commercial banks' large exposures has shrunk considerably from its previous level, and the number of large exposures has declined as well. Monitoring of large exposures has also been tightened and the legal provisions prescribing how undertakings are to be connected have been amended.

Increase in new housing mortgages in 2012

New housing mortgages granted by DMBs in 2012 amounted to 47 b.kr., which is a considerable increase over 2011, when new housing mortgages totalled 14 b.kr. Near the end of 2011 a certain turnaround could be detected in the number of new housing mortgages granted by DMBs. The increase peaked around mid-2012, when new mortgages totalled 4-5 b.kr. per month. This amount remained fairly constant until last December, when it decreased to around 3 b.kr. Since then the total amount of new housing mortgages granted has been around 3 b.kr. per month, or a similar amount to that of the early months of 2012. By far the great majority of housing mortgages granted in 2012 were non-indexed, or 79%, although demand for such loans decreased during the latter half of the year. During the final three months of 2012, non-indexed mortgages were around 63% of new housing mortgages, while during the first three months of the same year this ratio was close to 90%. This development can probably be explained for the most part by increasing interest rates, reflecting Central Bank policy rate hikes, on non-indexed loans as the year progressed. The DMBs' customers, however, still appear to be of the opinion, despite the rate hikes, that the interest terms on the mortgages are more favourable.

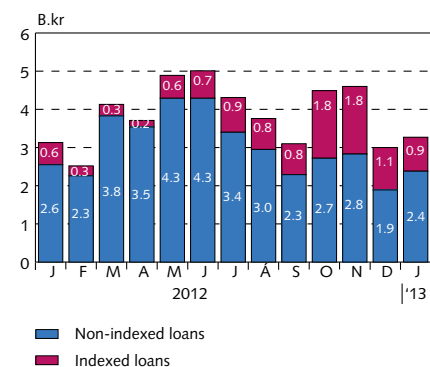
New general HFF mortgages amounted to almost 13 b.kr. in 2012, while paybacks during this same period were 18 b.kr. This is quite a change from 2011, when new mortgages were granted totalling 21 b.kr. while paybacks were around 10 b.kr. New housing mort-

Chart IV-6
Large exposures¹



1. Consolidated figures. Large exposures to a client or group of clients may not exceed 25% of a financial undertaking's capital base. The total amount of large exposures may not exceed 400% of a financial undertaking's capital base. 2. An exposure incurred by a financial undertaking to a client or a group of connected client's the value of which amounts to 10% or more of the capital base of the undertaking. Source: Financial Supervisory Authority.

Chart IV-7
New DMB mortgage lending¹
January 2012 - January 2013

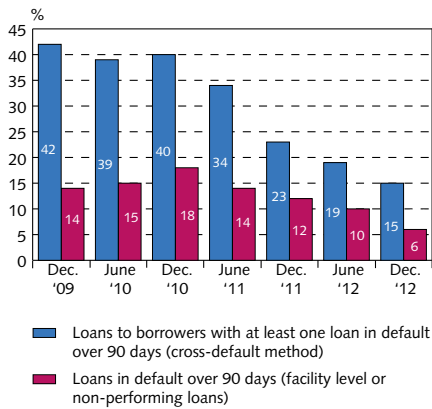


1. Commercial banks and savings banks. Source: Central Bank of Iceland.

2. See <http://www.bis.org/publ/bcbs240.pdf>.

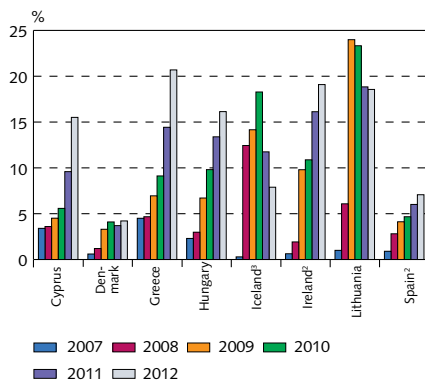
3. See <http://www.government.se/sb/d/15431/a/181233>.

Chart IV-8
Default ratios of the three largest commercial banks¹



1. Parent companies, book value.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart IV-9
Default ratios in European comparison¹



1. Year-end figures 2007-2011. 2012: 3rd quarter unless otherwise stated. Banks' non-performing loans as a percentage of gross loan portfolio w/o write-downs. Non-performing loans are gross loans in default and not only the amount in default. 2. 2012: Figures from 2nd quarter. 3. 2007: Figures estimated from the annual accounts of the failed banks. 2008: Central Bank estimates.

Sources: International Monetary Fund, World Bank, Financial Supervisory Authority, Central Bank of Iceland.

gages from pension funds amounted to over 7 b.kr. in 2012, which is a drop of around 3 b.kr. from the preceding year. In total, 55% of new housing mortgages granted by DMBs, HFF and pension funds were non-indexed and 45% indexed. During the latter half of 2012, 46% of new housing mortgages granted by DMBs, HFF and pension funds were non-indexed and 54% indexed. This makes it evident that demand for indexed housing mortgages is still high.

Defaults continue to drop

Restructuring of household and corporate loan portfolios continues to progress. Based on a cautious, cross-default assessment of defaults, i.e. if one loan taken by a customer is non-performing, all of that customer's loans are considered to be non-performing, default ratios of the three largest commercial banks decreased from 23% at year-end 2011 to 15% at year-end 2012 (Chart IV-8). This is based on the book value of loans. The decrease in defaults in 2012 clearly slowed from the rate of decline in 2011. There are likely several reasons for this. Larger cases are likely to have been the first to be restructured, leaving smaller and possibly more difficult cases to be dealt with later. In addition, the Supreme Court's judgement of February 2012, on the value of final receipts for payment, added to the uncertainty concerning recalculation of loan contracts providing for unlawful exchange rate linking. The conclusion of joint efforts by interested parties in response to the judgement was that some twenty issues of contention had to be resolved to determine the methodology to be used for recalculation before this could begin. Judgements by the Supreme Court since that time on exchange rate-linked loans have only resolved part of these questions and the commercial banks maintain there is a need for further judgements before it will finally be possible to conclude recalculation of unlawful exchange rate-linked loans. Despite this situation, most of the lenders who granted unlawful exchange rate-linked loans to households and corporates have begun recalculation. As the outcome of additional test cases is obtained, the number of loans awaiting final recalculation will decrease.

Another measure of default is the one generally used in financial reporting and the notes to annual financial statements. According to this measure of default, even though a customer has one loan in arrears for 90 days or more, that customer's other loans are not considered to be in default. By this measure, 6% of the banks' loans were in default at year-end 2012, a decrease of over 3 percentage points YoY. Generally speaking, for banks with a good loan portfolio, this figure should be around 1-2%. Defaults have increased worldwide in recent quarters, especially in those countries struggling with economic difficulties (Chart IV-9). It is not clear whether defaults have peaked in these countries, but it is not unlikely that they will continue to increase still further in 2013, as forecasts predict little or no growth in the countries with the greatest problems.⁴ In year 2010 default ratios peaked however in Iceland.

4. See <http://www.oecd.org/eco/economicoutlook.htm#country>.

Households

Decline in household debt slows

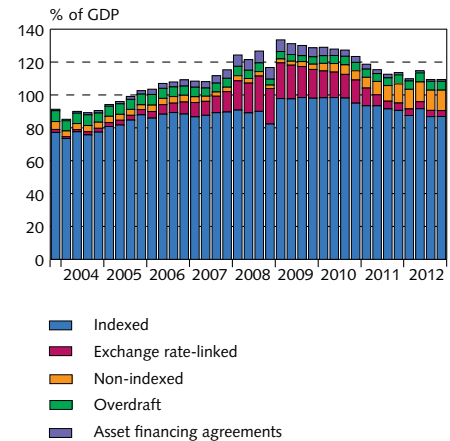
According to the Central Bank of Iceland's most recent estimate, household debt peaked at 134% of GDP in Q1 2009.⁵ As described in previous issues of Financial Stability, it has been declining fairly steadily since 2009. It was estimated at 114% of GDP at the end of 2011 and 109% of projected GDP at the end of 2012 (see Chart IV-10).⁶ The decrease in 2012 can be attributed to higher GDP, while the household debt principal was practically unchanged that year.

Household debt will in all probability continue to decrease in coming quarters, as the banks have already begun recalculating contracts for illegal exchange rate-linked loans, taking into consideration a judgement of the Supreme Court in February 2012 on the value of final receipts for payment. To begin with the recalculation will include mainly housing mortgages, as the commercial banks maintain that the Supreme Court needs to clarify further the premises on which automobile loans and other shorter-term loans are to be recalculated. On 19 March this year, for instance, Landsbankinn announced that the bank had informed 700 borrowers of recalculation of their housing mortgages, in accordance with Supreme Court verdicts in 2012. The total write down is equivalent to 3 b.kr. and on average the loan principal decreased by 35%. Financial undertakings have already made provisions for or written off over 20 b.kr. of household loans in connection with the Supreme Court's judgements concerning final receipts for payment, however, at the beginning of this year it largely remained to apply the write-down to household loans. The amounts concerned can make a difference for the households, since recalculation of automobile and other shorter-term loans can result in cash refunds. The commercial banks hope that in 2013 the Supreme Court will pronounce judgements clarifying the legal uncertainty which still prevails concerning the premises for recalculation of exchange rate-linked loans and that this will be concluded for the most part by the end of this year.

The composition of household debt has changed in recent quarters, with the share of indexed and exchange rate-linked debt decreasing while non-indexed borrowing has increased. At year-end 2012 households' indexed debt was equivalent to 87% of GDP, non-indexed loans 12%, overdrafts 5%, exchange rate-linked loans 4% and asset leasing contracts 1%. As mentioned before demand by households for non-indexed loans has been strong, but has declined in recent months in tandem with less favourable interest terms.

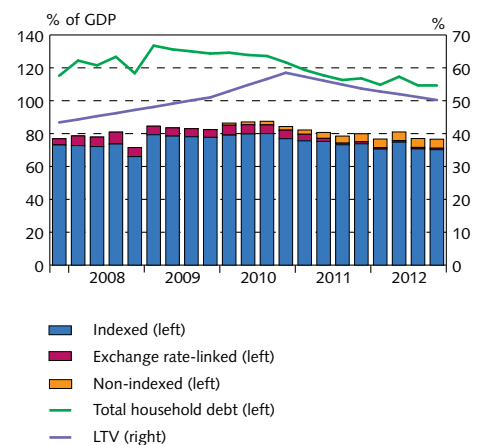
The rise in non-indexed debt is due primarily to mortgage financing and conversion of exchange rate-linked loans to non-indexed króna-denominated loans. The share of non-indexed mortgages rose

Chart IV-10
Household debt as % of GDP
Q4/2003 - Q4/2012



Sources: Statistics Iceland, Central Bank of Iceland.

Mynd IV-11
Household mortgage debt as % of GDP
and real estate value
Q4/2007 - Q4/2012



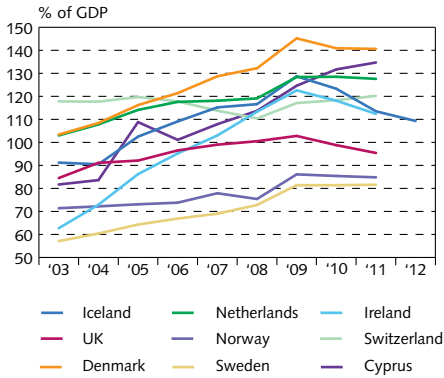
1. Household mortgage debt as % of total assets of households in real estate.

Sources: Statistics Iceland, Central Bank of Iceland.

5. The Central Bank's most recent estimate of private sector debt could differ from previously published figures. Since the collapse, it has proven more difficult to obtain this information, particularly information from financial institutions that have lost their operating licences, and information on credit in the form of asset-backed securities issued by the banks before the collapse. The Central Bank of Iceland is making every effort to compile in-depth data on household and corporate debt for its statistical reporting.

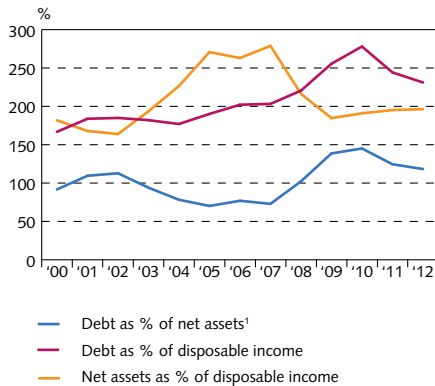
6. Chart IV-10 shows the ratio of household debt to GDP increasing between Q1 and Q2 2012. This is because after seasonal adjustment GDP was lower in Q2 in of the year than in Q1.

Chart IV-12
Household debt by European comparison
2003-2012



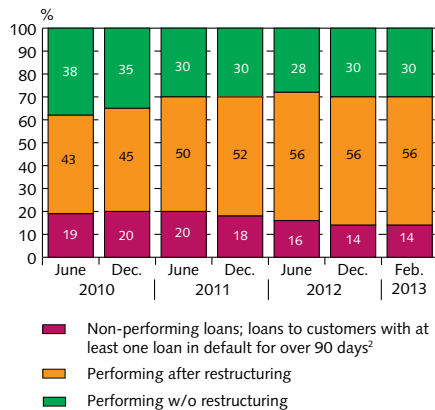
Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart IV-13
Financial position of households
2000-2012



1. Including real estate, motor vehicles, bank balances, and various securities, but excluding pension assets.
Source: Central Bank of Iceland.

Chart IV-14
Status of loans to households from three largest banks and Housing Financing Fund¹



1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for over 90 days or deemed unlikely to be paid. The cross-default method is used, i.e. if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.
Source: Financial Supervisory Authority.

from 0.1% of GDP at the beginning of 2010 to 5.5% at year-end 2012 (see Chart IV-11). Over the same period, indexed mortgages declined from almost 80% of GDP to 70%. The loan-to-value ratio (LTV) of household mortgages was around 43% at year-end 2007 but rose considerably when housing prices fell and inflation rose following the financial system collapse in 2008. LTV peaked at year-end 2010 at 59%, but has been declining since then as housing prices have risen. At year-end 2012 it had dropped to 50%. Further details of household debt and indebtedness are provided in Box IV-2.

Indebtedness of Icelandic households has improved by international comparison

At the beginning of this century, the debts of Swiss households relative to GDP were the highest in Europe, while the debts of Icelandic households were on a level similar to those in Denmark and the Netherlands. In other comparison countries, the ratio of debt to GDP was considerably lower. In making such a comparison, it must be borne in mind that access to credit has been good in Iceland and LTV high, in addition to which the proportion of home ownership is considerably higher in Iceland than is generally the case.

During the first decade of this century, growth of household debt in most western countries exceeded GDP growth (Chart IV-12). In 2009, the ratio in Iceland was the second-highest in Europe; only in Denmark was it higher. Debt restructuring (including a reduction to the principal in connection with unlawful exchange rate linking and the 110% route), paybacks by households exceeding new mortgages taken out, and economic growth in 2011 and 2012 have made the reduction in household debt in Iceland relative to GDP since 2009 the greatest. In 2010-2011 this ratio decreased by almost 20% in Iceland while it remained unchanged in Denmark and the Netherlands and rose in Cyprus and Switzerland. In 2012 it appears that the debt position of Icelandic households will be similar to that of Irish households, whereas the situation in Iceland was much poorer than that in Ireland at the beginning of this century.

Households' situation still sensitive

Since mid-2012 there has been a clear slowdown in the improvement to households' financial situation. GDP growth has slowed and the outlook is for a smaller than expected increase in economic activity in coming quarters. Purchasing power rose by only 0.5% from year-end 2011 to year-end 2012. Within a shorter time frame, purchasing power was unchanged from mid-2012 to February this year. In March, purchasing power of wages grew by 1.1% due to contractual wage increases. This means that households' disposable income has increased more than price level developments and debt as a ratio of disposable income has continued to decrease this past year. The ratio was 230% at year-end 2012 after a reaching a high of 280% at year-end 2010. According to *Monetary Bulletin* 2013/1, the purchasing power of disposable income should increase by 0.9% in 2013 and, with further debt restructuring, debt as a ratio of disposable income can be expected to continue to decrease in 2013.

The Central Bank expects the growth in private household consumption to slow in 2013. This trend should not come as a surprise, since those aspects which have encouraged increased private consumption, such as the increased authorisation for withdrawals of private pension savings, have declined or even disappeared, e.g. special interest benefits. The low exchange rate of the króna at year-end may also have dampened private consumption. Early withdrawals of private pension savings during the period from March 2009 until February 2013 amounted to around 80 b.kr., while requests pending for additional withdrawals amount to only an additional 3 b.kr. On the other hand, child allowances have increased by 2.5 b.kr. and cash refunds to households are expected in connection with overpayments of unlawful exchange rate-linked loans. Forecasts predict unemployment of around 4.8% this year, which is a percentage point lower than the previous year. It could also be pointed out that Icelandic consumers have only once since the collapse of the financial system in September been more optimistic in their outlook.⁷ From the above it is evident that the household situation will be sensitive this year, but an increase in purchasing power and higher economic activity is expected as early as next year.

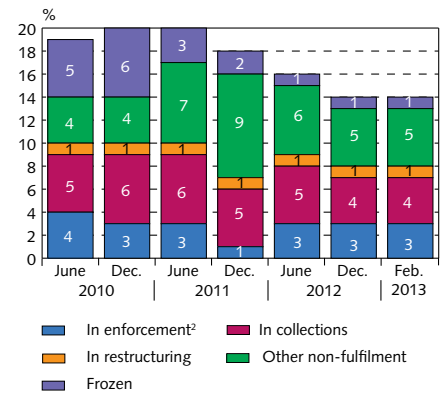
Default ratios continue to decline but ...

At the end of February 2012, some 14% of total loans granted to households by the three largest commercial banks and HFF were in default, based on book value and using the cross-default method, that is, categorising a customer as being in default if he or she has one loan in default. At year-end 2011 this ratio was around 18%, down from 20% at year-end 2010 (Chart IV-14). If the above-mentioned methodology is applied, the book value of loans in default was 172 b.kr. at the end of February this year, compared to 206 b.kr. 12 months earlier. Considerable success has therefore been achieved in reducing defaults.

The lower default level at the end of February 2013 as compared with year-end 2010 is due to the reduction in the share of frozen loans from 6% to 1% and a decrease in the proportion of loans under enforcement or collection from 9% to 7%. On the other hand, other non-fulfilment increased from 4% to 5% (Chart IV-15), while the proportion of loans undergoing restructuring remains the same as at year-end 2010, or 1%. One sign of the decrease in the proportion of loans under enforcement or in collection is the increase in forced auctions, e.g. forced auctions of residential housing rose from 485 in 2011 to 773 in 2012. The major decrease in the proportion of frozen loans is a positive trend, since these loans are on hold awaiting further handling. Last year credit institutions expected that restructuring of loans to individuals would be concluded by the end of that year. The special remedy of problem debt restructuring, for instance, expired at the end of 2012. Restructuring of household loans, however, is likely to continue for a while yet, since the book value of loans in default still amounts to 170 b.kr.

Chart IV-15

Status of household loans in default from the large commercial banks and the Housing Financing Fund¹



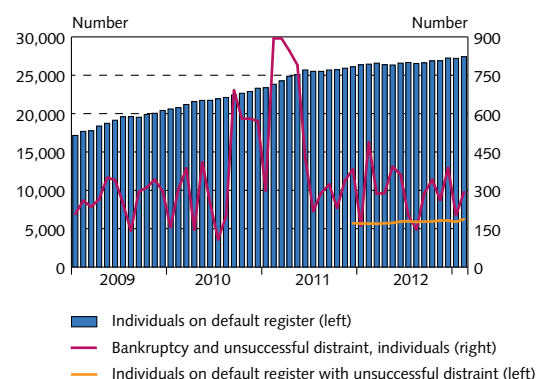
1. Parent companies, book value. Non-performing loans are defined as loans in default for over 90 days or deemed unlikely to be paid. The cross-default method is used, i.e. if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing. 2. The share of loans in enforcement proceedings and collections declined in December 2011 because the HFF did not send out dunning letters or forced sale requests in the latter half of the month.

Source: Financial Supervisory Authority.

Chart IV-16

Individuals on default register, bankruptcy, and unsuccessful distraint

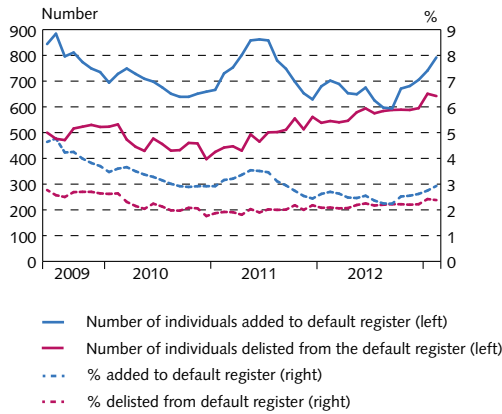
Monthly data, January 2009 - February 2013



Source: CreditInfo.

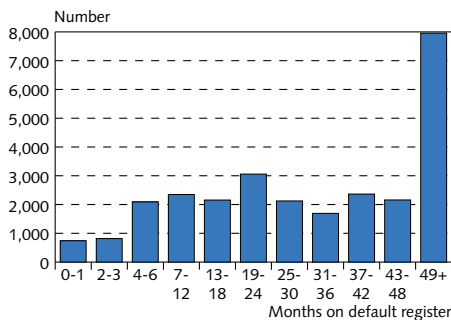
7. <http://capacent.is/Frettir-og-frodleikur/Vaentingavisitala/>

Chart IV-17
Number and % of individuals added to or removed from the default register
6 month average, June 2009 - February 2013



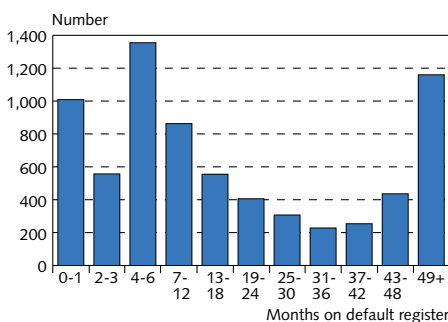
Source: Creditinfo.

Chart IV-18
Individuals on default register¹
Status at 19 February 2013



1. By number of months on default register.
Source: Creditinfo.

Chart IV-19
Number of individuals on default register in year 2012¹



1. By number of months on default register.
Source: Creditinfo.

... the number of individuals on the default register is still rising
Around mid-2012 the number of individuals on the default register appeared to be reaching equilibrium, as from February until August, they numbered around 26,500, or around 11% of persons over 18 years of age. In the autumn, however, the number of individuals on the default register began to increase once more and the monthly increase has been similar to that from mid-2011 until February 2012. At the end of February 2013, there were 27,423 individuals on the default register. Chart IV-17 shows the number and proportion of individuals added to and delisted from the register, based on six-month averages. The chart shows that in August last year, where the lines for additions to and delisting from the register meet, the number of individuals levelled off. Furthermore, it shows that the number of individuals delisted from the default register each month has continued to increase, but the increase is considerably less than the number of new individuals added to the register since August 2012. The monthly increase in the number of persons added to the default register is similar to that in the latter half of 2010, when according to other indicators the household situation was substantially worse than at present.

The development of individuals on the default register has therefore differed from the default trend at the three largest commercial banks and HFF, where the proportion of loans in default has decreased steadily since 2010. This is a negative development, i.e. that over four and a half years after the financial system collapse, the number of individuals on the default register is still increasing. As mentioned in earlier issues of Financial Stability, there is a considerable lag between a decrease in credit institutions' defaults and a corresponding drop in the number of individuals on the default register. Furthermore, individuals undergoing debt mitigation by the Debtors' Ombudsman, for instance, and those whom the banks are handling in their problem debt resolution are not listed in the default register.⁸ In most cases this also applies to those persons who have reached an agreement with their creditors for settlement of debts, freezing or postponement of payments. However, the loans of these parties, i.e. loans which are frozen or in default, are included in the default figures of DMBs and HFF.

Since the beginning of 2009, almost 18,000 persons have been subject to unsuccessful distraint measures or declared bankrupt. Unsuccessful distraint measures are around ten times more common than bankruptcy. Since individuals remain on the default register for 4 years due to unsuccessful distraint measures, unless the creditors behind the action give notice that this no longer applies, it can be assumed that a major portion of the individuals on the default register have been subject to unsuccessful distraint. From December 2011 until February 2013 the number of individuals registered on this basis has ranged from 5,700 to 6,200 (Chart IV-16), or around 21-23% of those on the register. It would therefore appear that a major portion of the individuals subject to unsuccessful distraint measures or declared bankrupt are delisted from the default register before the

8. The special remedy of problem debt restructuring expired at the end of 2012.

period of limitation concludes. Chart IV-18 shows how long individuals listed on the default register on 19 February 2013 had been continuously on the register.⁹

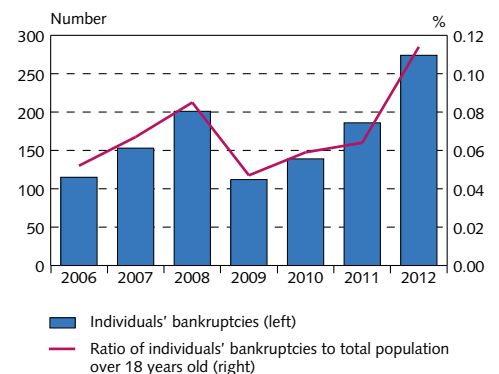
In 2012, 7,130 individuals were delisted from the default register. Chart IV-19 shows how long these individuals had been continuously on the register. Some 53% of those delisted from the default register during 2012 had been listed for less than one year, and the frequency of delisting is therefore higher for those persons who had been on the register for a short time. The impact of the four-year limitation for unsuccessful distraint measures is visible in Chart IV-19, as the number of persons who had been on the register 43-48 months when they are delisted is almost twice the number who had been on the register for 31-26 or 37-42 months. Some 16% of those who were delisted from the register in 2012 had been listed for 49 months or more.

The frequency of unsuccessful distraint increased in the autumn of 2011. The main explanation for this development is that District Commissioners were then authorised to conclude unsuccessful distraint without the distraintee being in attendance. During the first 8 months of 2011, over 600 unsuccessful distraint actions were registered on average per month, while 8 months later the 8-month average had fallen to around 300, and has remained around that level since that time. On the other hand, bankruptcies have increased: they were around 140 in 2010, 190 in 2011 and over 270 in 2012. Chart IV-20 shows that bankruptcies increased from 2006 to 2008, then dropped by half in 2009. The reason is probably that the main remedies for payment difficulties for individuals which were set up after the financial system collapse were aimed at resolving individuals' financial difficulties without resorting to bankruptcy. The increase in bankruptcies between 2011 and 2012 is quite substantial, probably influenced to some extent by changes to the rules on bankruptcies at year-end 2010 which reduced the period of limitation from four years to two. The change facilitates and expedites the return of bankrupt individuals to personal solvency.

It is not clear what the reason(s) are for the discrepancy between the development in the number of individuals on the default register and the development of defaults at the three largest commercial banks and HFF. One of the explanations could be that credit institutions have made concerted efforts to restructure debt and improve the situation of borrowers in payment difficulties. The default figures confirm this. The consequence of this could be that individuals give priority to loan instalments while claims of other parties are allowed to end up in default. Despite the fact that many household indicators have been moving in a positive direction in the past two years, e.g. lower unemployment, increased purchasing power and rising housing prices, the fact cannot be ignored that the increase in the number of individuals on the default register is a clear indication that households' situation is still difficult.

9. Around 30% of individuals had been on the default register for 49 months or longer. The reason for this large number is that some individuals are subject to new defaults or unsuccessful distraint measures before the previous registration is delisted or subject to limitation. For this reason it is difficult to predict exactly when these individuals will be removed from the register.

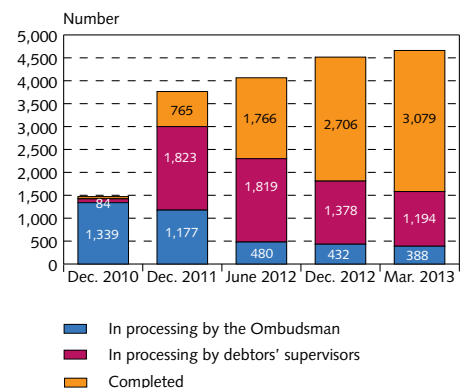
Chart IV-20
Individuals' bankruptcies¹



1. Total for entire year.

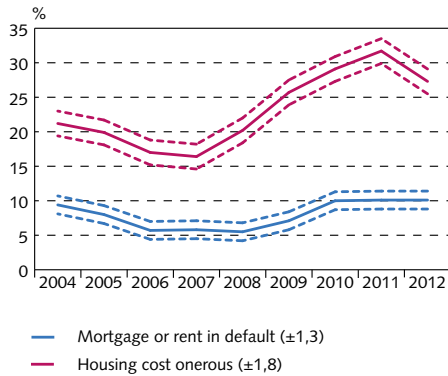
Sources: Council of District Court Administration, Statistics Iceland.

Chart IV-21
Status of applications filed with the Debtors' Ombudsman



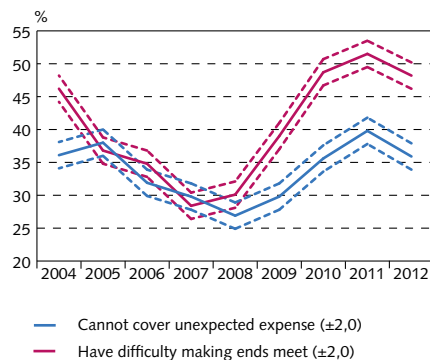
Source: Debtors' Ombudsman.

Chart IV-22
Statistics Iceland random sample survey
Debt service and default¹



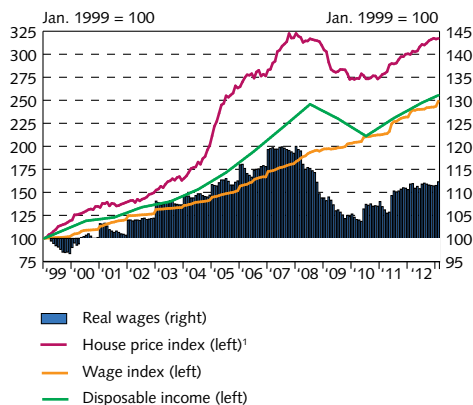
1. Dotted lines show 95% confidence interval for year 2012.
Source: Statistics Iceland.

Chart IV-23
Statistics Iceland random sample survey
Financial distress¹



1. Dotted lines show 95% confidence interval for year 2012.
Source: Statistics Iceland.

Chart IV-24
Greater Reykjavik real estate prices, wage index and per capita disposable income
January 1999 - February 2013



1. Greater Reykjavik house price index.
Sources: Registers Iceland, Statistics Iceland.

Applications for payment mitigation rise once more

At the end of March, 4,661 individuals had applied for debt mitigation to the Debtors' Ombudsman; of these, 388 were still being processed by the Ombudsman's office, 1,194 had been referred to supervisors and 3,079 had been concluded. Of the last-mentioned, 1,587 cases were concluded by voluntary agreements. Only 8% of applications are therefore still being processed by the Debtors' Ombudsman, while 66% have been closed. In December 2011, however, 31% of applications were still being processed by the Ombudsman's office and only 20% had been concluded. Progress has therefore been made in processing the backlog of cases which had collected at the Debtors' Ombudsman.

The term of agreements concluded is assumed to be 24 or 36 months. According to information from the Debtors' Ombudsman, however, of 1500 agreements concluded by the office, the term of 1,030 agreements is 24 months or less, and thereof 330 agreements were without a payment mitigation period. In around half of the agreements concluded 100% of contractual claims were waived.¹⁰

Since July 2012, the number of uncompleted cases has been steady at around 400. It is worth noting that the number of applications for payment mitigation has increased in recent quarters. During the period from September 2012 until March 2013 the number was 486, while for the period of the same length preceding that applications numbered 367. The increase is 32%. One of the explanations for this increase could be that some of the individuals whose HFF loans were frozen have applied for payment mitigation for individuals, as in the autumn of 2012 three-year freezing of the loans of many of the Fund's borrowers expired. This is yet another indication that the situation of many households remains difficult.

Households' financial situation improves for the first time since 2008 according to a Statistics Iceland survey

At the beginning of April, Statistics Iceland presented the conclusions of its annual living standards survey¹¹, which is part of EU harmonised living standards research. A total of almost 3,100 households responded to questions which cover, for instance, defaults and households' financial situation. As this is a very large sample, the conclusions give a definite indication of households' situation.

In general it could be said that the conclusions of the living standards survey show signs of improvement in households' financial situation, as for the first time since 2008 the number of households in financial difficulties decreases from that of the previous year. The principal conclusions are that, while the proportion of those who consider the cost of housing to be a heavy burden decreases from 31.7% to 27.6% from 2011 to 2012, defaults on housing mortgages are

10. Contractual claims are those claims which were the object of an agreement between the creditor and borrower; these are unsecured claims. Claims are ranked in priority for payment, with claims by public bodies first (e.g. Icelandic Students' Loan Fund, taxes owed, child support arrears etc.), followed by statutory liens (e.g. property taxes and mandatory fire insurance), mortgage claims and finally unsecured claims (i.e. contractual claims).

11. See <https://hagstofa.is/?PageID=421&itemid=26c84715-845e-4533-aac7-89620-c0305bf>

unchanged at around 10% and the proportion of persons who consider other loans to be a heavy burden decreases from 15% to 14% at the same time. Around 48% of households had difficulty making ends meet in March to May last year, instead of almost 52% during this same period in 2011, although the difference is not significant with a 95% confidence interval. The proportion of households who have difficulty meeting unexpected expenditures decreases from around 40% to 36%. This proportion was lower, for example, for 2012 than for 2004 and 2005, when households' real income was higher.

A breakdown by family type shows that single parents are most likely to be in financial difficulties; age classification shows the 30-39-year age group is most likely to be in financial difficulties, as 57% of this group says they have difficulty making ends meet. In 2011 this proportion was 59% for this age group.

The two lowest income groups¹² face the greatest financial difficulties, as 57% of households which belong to these income groups state that they have difficulty making ends meet. This outcome is hardly surprising. In income groups three and four, 51% and 49% respectively say they have difficulty making ends meet. There is a major change in the case of the highest income group, as around 26% of households belonging to this category say they have difficulty making ends meet. It could therefore be said that only half as many households in the highest income group as in the other four groups have difficulty making ends meet, but at the same time around 34% of household debts belong to the highest income group (see Box IV-2).

In general it could be said that the conclusions of the living standards survey show that as the average age of household members increases the household is less likely to be in financial difficulties.

Uncertainty concerning households' situation persists

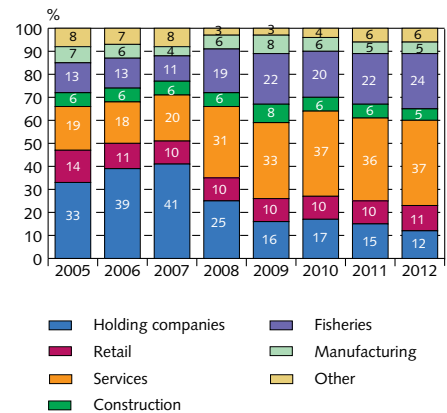
Household debt is likely to decrease somewhat in coming quarters, as recalculation of exchange rate-linked loans is not completed. A reduction in debt has many positive effects on households, their asset position improves, for instance, and the debt service on their loans decreases. The outlook for this year is for little change in the situation of households, with a moderate increase in private consumption and purchasing power. An increase in purchasing power is expected in 2013 with increased activity in the economy. The premises for such developments, however, are fragile, as they assume a substantial increase in investment in connection with power-intensive industry and also because there is high uncertainty concerning the economic recovery in Iceland's main trading partner countries. The uncertainty is therefore considerable, and the situation of households is clearly sensitive.

Corporates

Growing significance of operating companies

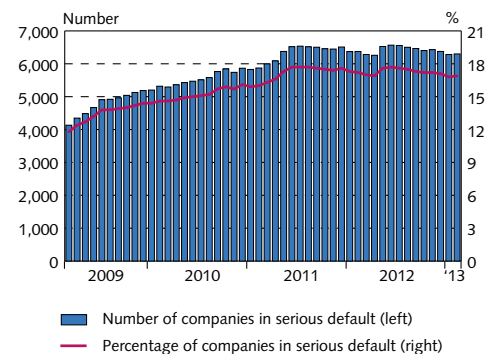
The Icelandic economy has changed greatly in the space of a few years. The external circumstances of domestic undertakings were radically altered by the financial shocks of 2008 and in the domestic

Chart IV-25
DMBs' lending to companies, by sector¹



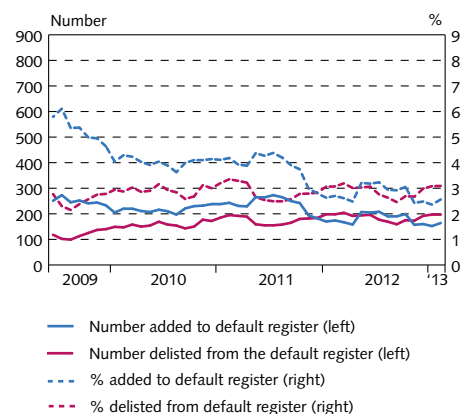
1. Parent companies, book value.
Source: Central Bank of Iceland.

Chart IV-26
Companies in serious default
Monthly data, March 2009 - February 2013



Source: CreditInfo.

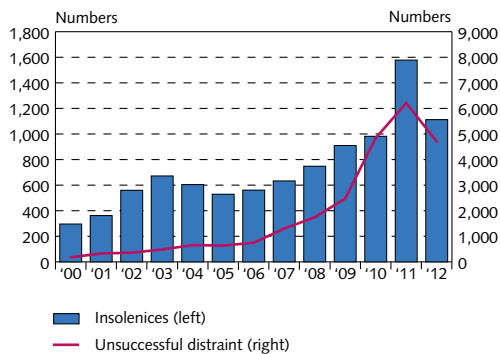
Chart IV-27
Number and % of companies added to or delisted from the default register
6-month averages, June 2009 - February 2013



Source: CreditInfo.

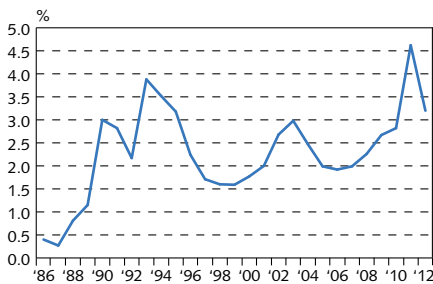
12. Participants in the living standards survey are divided into five income groups.

Chart IV-28
Corporate insolvencies and unsuccessful distraint
Total for entire year



Sources: Registers Iceland, Statistics Iceland.

Chart IV-29
Frequency of corporate insolvencies



Sources: Statistics Iceland, Central Bank of Iceland.

economy the significance of operating companies, the travel industry and smaller undertakings has increased at the cost of large holding companies and international financial undertakings, which dominated the scene prior to the collapse of the banking system. Adaptation to these altered external circumstances has to involve the winding-up or restructuring of the operations of non-viable undertakings. This takes time, especially when there is major uncertainty concerning external developments.

A breakdown of DMBs' corporate lending by sector provides a certain cross-section of business and industry. It shows that the share of loans to holding companies has dropped from 41% at year-end 2007 to 12% at year-end 2012. This is due especially to the considerable number of holding companies becoming insolvent or undergoing financial restructuring, with a corresponding decrease in their balance sheets. The activities of some of them have been transferred to other categories classified as services, such as real estate companies and head office activities. The increased share of loans to services undertakings, which rose from 20% at year-end 2007 to 37% at year-end 2012, is explained, in addition to the above, in part by greater activity in the travel industry and IT sector. The share of loans to fishing and fish processing has also grown substantially during this period, rising from 11% at year-end 2007 to 24% at year-end 2012. This is partly due to the solid position of operating companies in the fisheries sector, where write-offs have been lower than in other sectors. Loans to customers are around 65% of DMBs' assets. As around 2/3 of DMBs' loans are to corporates, corporate lending comprises over 40% of their total assets. The position of corporates is therefore a major factor in the position of DMBs, especially if their assets are highly mortgaged.

In recent months, corporates have been funding themselves to an increasing extent with issues of both listed and unlisted bonds, see Box I-1. Bond market yields are low, not least due to the limited investment options under currency controls. The bond issues are aimed at enabling undertakings to enjoy the benefits of the yield on the market. In most instances these are bond issues with underlying real estate mortgages acquired by institutional investors. A large number of companies have also issued and sold bonds in connection with the Central Bank's foreign currency auctions.

Insolvencies and unsuccessful distraint actions have peaked

The number and proportion of undertakings on the default register has decreased insignificantly in recent months. Currently some 6,300, or around 17% of all undertakings, are listed on the default register, which is similar to the situation in May 2011. The 6-month average number and proportion of undertakings added to and delisted from the default register shows the same trend. In the autumn months of 2011, the 6-month average number and proportion delisted from the default register exceeded for the first time those added to the register. Since that time, additions to and delistings from the default register have been practically in balance. In examining the number and proportion of undertakings on the default register, it must be borne in mind that there are some 35,000 undertakings registered as operat-

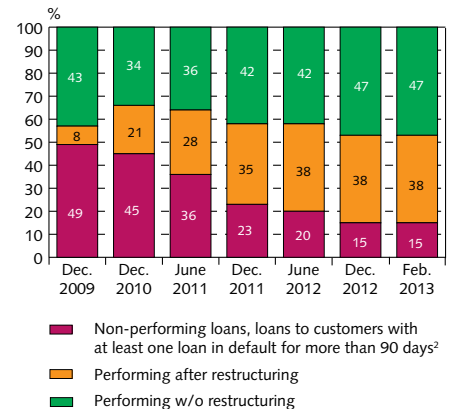
ing companies in Iceland: unlimited partnerships, limited partnerships, partnerships limited by shares, co-operatives, public limited companies and private limited companies. It is unlikely that all of these companies have extensive activities; some of them may be on the default register at the same time as their activities are insignificant. There may therefore be limited incentives for owners of the companies to settle their debts and remove them from the default register.

Insolvencies and unsuccessful distraint actions peaked in 2011 when unsuccessful distraint actions were brought against 6,210 undertakings and 1,578 were placed in liquidation. In 2012, the number of unsuccessful distraint actions dropped by 2012 YoY to 4,709 or 25%, while insolvencies decreased by almost 30% to 1,112. All indications are that this trend has slowed; during the first three months of 2013 almost as many unsuccessful distraint actions were brought against undertakings as during the same period of the previous year. Insolvencies, however, have continued to drop at the same rate as in 2012. The frequency of insolvencies in 2011 was the highest in a quarter century: 4.6% of undertakings were placed in liquidation compared with 2.4% on average in 1990-2010. The frequency of insolvencies in 2012 was 3.2%. There is known to be a considerable time lag until operating difficulties and eventually insolvencies appear, as these developments following the financial shock of 2008 bear witness. According to most indications, the number of undertakings on the default register which are subject to unsuccessful distraint or placed in liquidation will remain above the historical average for a while yet. This is primarily due to the fact that the dire straits in which many undertakings found themselves after the financial setbacks of 2008 due to high leverage were without precedent in Iceland.

Restructuring of corporate lending continues

At year-end 2009, 49% of corporate lending by the three large commercial banks was in default, if the cross-default method is applied, i.e. if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing. As a result, restructuring has naturally taken some time. The proportion of loans in default decreased by almost half in 2011, falling from 45% at year-end 2010 to 23% at year-end 2011. The pace of restructuring slowed somewhat in 2012, with the default proportion falling from 23% at year-end 2011 to 15% at year-end 2012 (Chart IV-30). This is in part due to the fact that large-scale cases which were relatively easy to deal with were restructured first, leaving smaller and more challenging cases to be subsequently resolved. At the same time, Supreme Court judgements on the illegality of exchange rate indexation and the value of receipts for full payment have dampened readiness to make payment, added uncertainty and slowed the restructuring process. An examination of those loans in default reveals that the proportion of corporate loans under restructuring has fallen rapidly, from 26% at year-end 2010 to 12% at year-end 2011 and then to 4% at year-end 2012 (Chart IV-31). This shows that lenders are well along the way in restructuring those cases they have been working on. The proportion of corporate loans in default and enforcement or in the collection

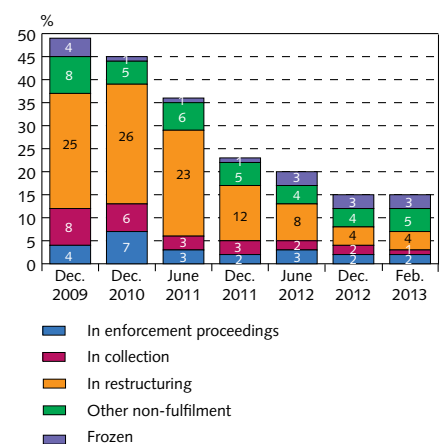
Chart IV-30
Status of the three largest commercial banks' corporate loans¹



1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for more than 90 days or deemed unlikely to be paid. The cross-default method is used; that is, if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.

Source: Financial Supervisory Authority.

Chart IV-31
Status of non-performing corporate loans¹



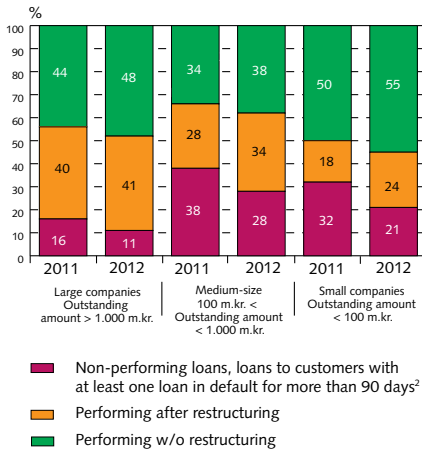
1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for more than 90 days or deemed unlikely to be paid. The cross-default method is used; that is, if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing. Corporate loans include loans granted by the three largest commercial banks.

Source: Financial Supervisory Authority.

Chart IV-32

Status of the three largest commercial banks' corporate loans, by amount of claim¹

End-of-year 2011 and 2012

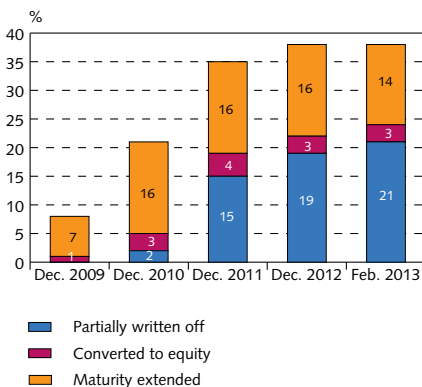


1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for more than 90 days or deemed unlikely to be paid. The cross-default method is used; that is, if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.

Source: Financial Supervisory Authority.

Chart IV-33

Corporate debt restructuring measures¹



1. Parent companies, book value. Corporate loans include loans granted by the three largest commercial banks.

Source: Financial Supervisory Authority.

process has also decreased somewhat, from 13% at year-end 2010 to 5% at year-end 2011 and then to 4% at year-end 2012. This is in line with the increased frequency of insolvencies and unsuccessful distraint, especially in 2011. On the other hand, the proportion of corporate loans in default due to freezing or other non-fulfilment has remained practically unchanged at 6-8% since year-end 2010. Legal disputes are probably preventing the restructuring of a portion of those corporate loans which are still in default. The banks estimate, however, according to their reporting to FME, that only around 3% of corporate lending is the subject of legal disputes, one-fifth of those loans which are currently in default.

Restructuring of lending to large undertakings is farther along than the restructuring of credit to SMEs.¹³ At the end of 2012, for instance, around 11% of loans to large undertakings were non-performing, 28% of loans to medium-size companies and 21% of loans to small companies (Chart IV-32). Restructuring of loans in all classes proceeded at a good pace in 2012, although the proportion of loans to SMEs in default has decreased markedly more than the proportion of loans to large undertakings. This is explained in part by the fact that restructuring of large undertakings had progressed farther by the beginning of 2012. At year-end 2012, 41% of lending to large undertakings had been restructured, 34% of lending to medium-size undertakings and 24% to smaller undertakings. The proportion of loans performing without restructuring was highest for smaller undertakings, at around 55%, and lowest for medium-size undertakings, around 38%. It is rather striking that the quality of lending to small undertakings is better than to larger ones. Lending to large undertakings comprises around 70% of total corporate lending, with loans to medium-size and small undertakings 20% and 10% respectively.

There have been some changes in recent years to the remedies applied by the commercial banks in restructuring corporate debt. In 2010 they offered practically only extensions of debt and equity conversion. Later, in 2011 and 2012, they have applied almost exclusively write-downs. The proportion of loans extended remained almost unchanged from year-end 2010 until year-end 2012 at around 16%, but has decreased by 2% during the first two months of this year. The proportion of loans converted to equity has also changed little since year-end 2010, ranging from 3% to 4%, while the proportion of loans partly written off has risen from 2% at year-end 2010 to 15% at year-end 2011 and to 19% at year-end 2012 (Chart IV-33). There are likely several reasons for this. Those undertakings which were first to undergo restructuring have to some extent emerged from the restructuring still over-indebted and will have to be restructured once more. In addition, a change of ownership in tandem with restructuring is more common as more time has passed since the banking collapse, and it is conceivable that more debt has to be written off for undertakings which are changing owners in order to facilitate their sale.

13. Large companies are defined as those having outstanding debts of over 1,000 m.kr. to individual commercial banks, medium-size companies are those with outstanding debts of 100-1,000 m.kr. and small companies are those with outstanding debts of less than 100 m.kr.

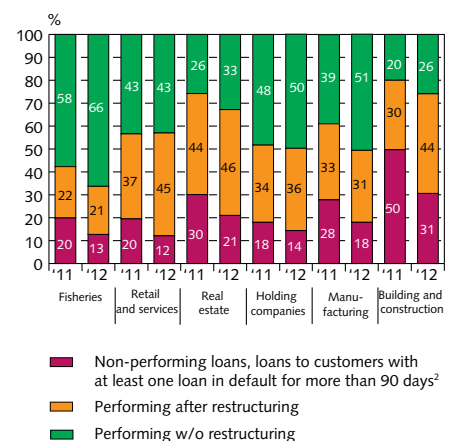
All of the above-mentioned default rates have remained more or less unchanged during the first two months of 2013; the success of restructuring tends to be more visible in those months when the commercial banks release their quarterly results. For instance, the proportion of loans in default dropped insignificantly in those months of 2011 when the banks did not publish results. In 2012 the proportion dropped on average almost twice as much in the months when the banks published results. The uncertainty concerning settlement of exchange rate-linked loan contracts could possibly be a factor as well. The rules on how recalculations are to be made are still not established in all instances and recalculation for undertakings whose loans were already restructured or have been performing takes time, possibly slowing the restructuring process.

Restructuring of corporate lending by the commercial banks has begun to show positive results. Companies on the default register are no longer increasing in number, unsuccessful distraint actions are decreasing and the proportion of defaults is falling fairly rapidly. This indicates that more companies are once more going concerns and can service their debt. This trend will probably continue in coming quarters if external circumstances do not become unfavourable for the undertakings. The decrease in defaults, however, will slow as more time passes from the financial collapse; to some extent, difficult cases still await restructuring and some undertakings will require restructuring yet again. This is only natural, since corporate operating premises become clearer as more time elapses from the financial setbacks, making it easier to assess their future debt servicing capacity.

Defaults vary between sectors

Chart IV-34 shows defaults at the three commercial banks in the largest industrial sectors. The situation varies greatly from one sector to the next. Around 2/3 of loans in the fishing and fish processing sectors are performing without restructuring, while only 26% of loans in construction are performing without restructuring and only 1/3 in connection with real estate transactions. Construction was hard hit by the recession and a significant drop in demand for both residential and commercial property. The default rates for all sectors decreased somewhat in 2012, with the greatest drop in construction activities, 19% of total lending, and least among holding companies, 4%. At year-end 2012 loans in default were at a similar level in most sectors, at around or over 15%, but were most conspicuous in construction, at 31% and in real estate transactions, at 21%. The persistent high default rates in these categories could be due to the fact that it is difficult to realise the underlying collateral due to sluggish sales and recoveries are unclear until pledged assets are sold. Lending to fishing and fish processing are the largest shares of the three large commercial banks' corporate lending, comprising around 25% of total corporate lending. The share of the retail sector and services is similar at around 25%, while lending for real estate transactions amounts to around 20%. Holding companies account for about another 12% and other sectors are of lesser significance. The default situation reflects how dependable is the income generation in the respective sector, as well as its indebted-

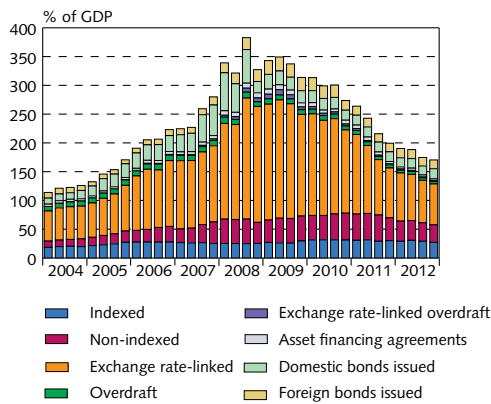
Chart IV-34
Status of the three largest commercial banks' corporate loans, by sector¹
End-of-year 2011 and 2012



1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for more than 90 days or deemed unlikely to be paid. The cross-default method is used; that is, if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.

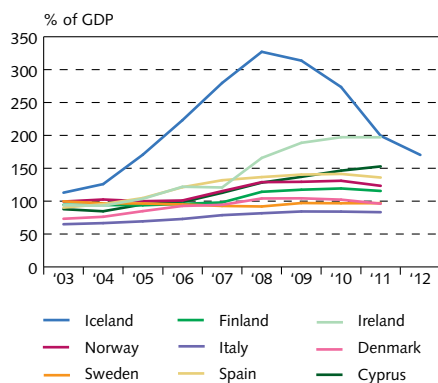
Source: Financial Supervisory Authority.

Chart IV-35
Corporate debt as % of GDP¹
Q1/2004 - Q4/2012



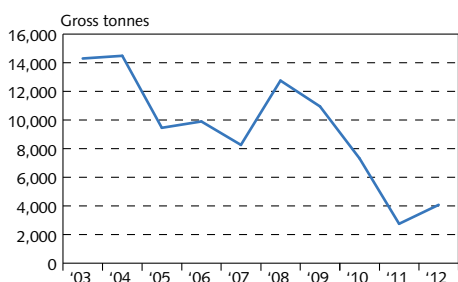
1. Debt owed to domestic and foreign financial undertakings and market bonds issued.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-36
Corporate debt as % of GDP



Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart IV-37
Total gross tonnage of newly registered and re-registered decked ships, 3-year averages¹



1. Adjusted for Coast Guard vessel Þór.
Sources: Icelandic Register of Ships 2004-2013.

ness. From this it can be concluded that income generation in fishing and fish processing is currently high, while the income of undertakings in real estate transactions and construction is the least secure.

Corporate debt continues to decline

Total debts of Icelandic undertakings, i.e. debts owed to domestic and foreign financial undertakings plus market bonds issued, have continued to decrease in recent years, falling by close to 25% of GDP in 2012. At the end of that year, their debts were estimated to amount to 170% of GDP, and have decreased by more than half from their peak of 375% of GDP in the autumn of 2008 or decreased by more than two GDP. The greatest change has occurred, firstly, in exchange rate-linked loans, which have fallen from around 210% of GDP to around 70%, and secondly, in domestic market bonds issued, which have decreased from around 60% of GDP to around 18% (Chart IV-35). It should be borne in mind that these debt figures do not include loans from connected companies. No figures are available on loans from domestic connected companies, but at year-end 2012 loans from foreign connected companies amounted to around 1,082 b.kr. or 63% of GDP; if the pharmaceutical company Actavis is excluded these loans amounted to 358 b.kr. or 21% of GDP. These debts are almost entirely connected with power-intensive industry investment in Iceland.

By international comparison, Icelandic undertakings' indebtedness is still among the highest in Europe. Irish undertakings appear to be more indebted and the indebtedness of Icelandic undertakings is now approaching the situation in Cyprus (Fig IV-36).

Despite the large-scale reduction in corporate debt in Iceland in recent years, the debt burden of many undertakings is still heavy and it is uncertain whether they can support it if external circumstances become unfavourable. The debt reduction is due to two main causes. In the first place, to insolvencies, restructuring and write-offs for undertakings in difficult circumstances. Secondly, the undertakings in better shape are rapidly paying off their debts in connection with contractual loan maturities. The high debt burden and lack of access to foreign credit markets prevents refinancing of debt. Deleveraging is therefore both harsh and forced; if this debt reduction proceeds too rapidly there is a risk that it will be to the detriment of corporate investment and thereby eventually to the entire economy.

Corporate investment plans at a minimum

The Central Bank of Iceland and the Confederation of Icelandic Employers conclude a quarterly survey of managers of the country's 500 largest undertakings regarding their situation and future outlook. The most recent survey, of March this year, indicates that business investment, excluding vessels and aircraft, will be similar to or less than that of 2012. Furthermore, it suggests that investment will be to an even lesser extent, or only around one-fifth of it, financed with credit. The worst outlook is in fisheries, where 60% of undertakings expect to make less or substantially less investment than in 2012 and only 3% expect increased investment. Need for investment appears to be accumulating, cf. Chart IV-37, especially in light of the very few

new registrations and re-registrations of decked vessels in 2011 and 2012. The outlook is the brightest in transport and the travel industry, where around 40% of undertakings expect to increase investment while 17% expect this to decrease. The figures are similar for construction and utilities. Investments are necessary to maintain growth and create the conditions for increased purchasing power.

Travel industry in high gear

There is plenty of activity in the travel industry, as depreciation of the króna has made Iceland a less expensive destination than before. The number of foreign travellers entering Iceland via Keflavík airport rose by 15% YoY in 2011 and by 16% in 2012. Now, during the first three months of this year, arrivals have increased by almost 40% over the same time in 2012. The same trend is visible in the number of nights of accommodation purchased by foreign nationals. Another positive trend is the decline in seasonal fluctuations in the travel industry. At fixed exchange rates the YoY increase amounts to 13% in 2011 and by 20% in 2012. As Chart IV-38 shows, the growth in numbers of foreign visitors is similar to the rise in use of foreign payment cards in Iceland, indicating that the average card turnover per traveller is fairly stable.

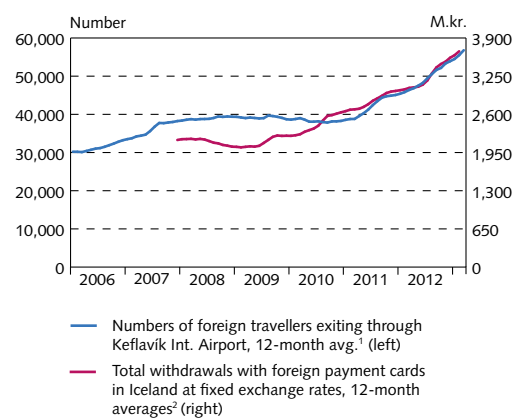
Operational uncertainties continue

Currently uncertainty concerning undertakings' external operating environment is substantial, both domestically and abroad. If the crisis in the Eurozone, Iceland's principal export market, becomes protracted there is a risk of the impact on domestic undertakings become more extensive than it has been in recent years. The principal factors of uncertainty in Iceland are connected with the general economic development, currency controls and changes to the legal environment. Undertakings are generally indebted and, if the economic recovery slows, the risk that they will not be able to sustain this indebtedness increases. Instability on the foreign currency market resulting from relaxing of currency controls could weaken some of their balance sheets. Removal of controls will also probably result in higher domestic capital costs. In the longer term, however, borrowers will have to adapt their activities to market interest rates outside this sheltered environment, and to a return on investment options which is not determined by the controls. Changes to the legal environment have been frequent in recent years, and some of the changes have directly affected the profitability of investments. It is important that instability in the legal environment should not reduce the willingness and capacity for corporate investment.

DNBs' assets and risk factors

The risk on the commercial banks' assets side has decreased in the past year, in part due to lower indebtedness and falling household and corporate defaults, to a decrease in the proportion of their large exposures and to higher real estate prices, which improve the banks' collateral position. It is important that the decrease in defaults reflect a real improvement in the situation, and not just short-term actions which

Chart IV-38
Number of foreign visitors and
foreign payment card turnover in Iceland



1. Monthly numbers are the average for the past 12 months.
2. Monthly withdrawals are average withdrawals for the past 12 months at fixed exchange rates of January 2007.
Sources: Icelandic Tourist Board, Central Bank of Iceland.

Housing mortgages: Non-indexed vs. indexed

Box IV-1

For the past three years borrowers have been offered non-indexed housing mortgages with floating rates or 3- or 5-year fixed interest rates. At the end of the fixed interest period the rates are revised to reflect current market interest rates. In many cases borrowers can choose to pay floating rates. Borrowers are also often offered the option of switching to another type of loan, e.g. an indexed mortgage. Warnings have been given concerning non-indexed loans, especially those with floating interest rates.¹ This is primarily with reference to the risk of rising interest rates, i.e. that the borrower will not be able to make the payments if interest rates rise substantially.

Most housing mortgages are indexed amortised loans, generally granted for the maximum term, which has been 40 years since 1996. The outstanding balance on indexed mortgages tracks price levels and as a result the interest payments and instalments on them do so as well. The principal advantage of such loans is that the real value of repayments is known from the beginning. Furthermore, the real payment burden of indexed loans is steady as long as wages and prices develop in tandem throughout the loan term, and debt service on these loans is lighter in the beginning than for comparable non-indexed loans. Their disadvantage, however, is that the real debt service burden can increase if there is a mismatch in wage and price trends. Equity creation is also slower at the beginning of the loan term if loans are indexed.

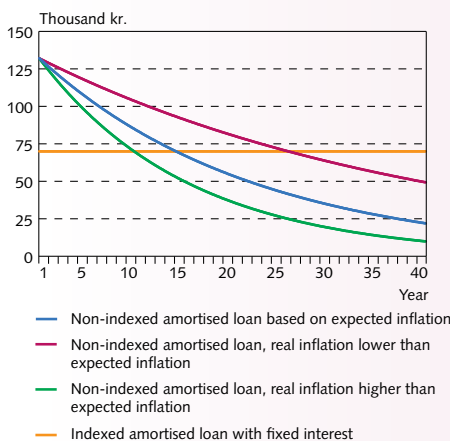
The impact of inflation on non-indexed loans differs from the impact on indexed loans, and is manifest in interest rate changes. If inflation expectations change this should, other things remaining equal, lead to changes in the interest rate on non-indexed loans. As a result, there is some uncertainty concerning the development of real payments throughout the loan term in the case of non-indexed loans. The principal advantage of non-indexed loans is the rapid equity creation, while the disadvantage is a possible sharp increase in the debt service burden due to higher interest when inflation rises, especially near the beginning of the loan term when the principal is still high.

Interest

Market interest rates are determined, among other things, by supply and demand for credit, the Central Bank's policy rate, international interest rates and expectations of price level developments. An assessment has to be made of the different effects of unexpected inflation on the real value of repayments on different types of loans. Since indexed loans are linked to inflation as measured by the CPI, the real interest on such loans is known. In the case of non-indexed loans, however, it is the nominal interest rate which determines interest expense.

Part of the nominal interest cost on non-indexed loans results from the expected decrease in the value of money during the

Chart 1
Real payments¹



1. The chart shows real payments when inflation is either higher or lower than expected.
Source: Central Bank of Iceland.

1. See, for instance, an article published on the web of the Financial Supervisory Authority (FME) on 15 May 2012. This can be found at: <http://www.fme.is/utgefid-efni/frettir-og-tilkynningar/frettir/nr/1526>

term of the loan, i.e. expected inflation. If inflation proves to be in accordance with expectations, and the real yield on non-indexed loans is equal to the real interest rate on indexed loans, then their repayment curves are equivalent, whether lenders have negotiated indexed or non-indexed loans, i.e. their net present value (NPV) is equal. The interest rates on the indexed loan are lower by the rate of the expected inflation, i.e. if risk premium of non-indexed loans is not taken into account. The amount of interest and instalments paid is lower on the indexed loan early in the loan term but later becomes higher (Chart 1).

Unexpected inflation causes a change in the value of future payments which have been agreed upon with respect to a certain price level. Chart 1 shows that, if inflation proves to be lower than anticipated, payments on a non-indexed loan will be of greater value than originally intended. In this case the borrower loses while the lender gains. On the other hand, if inflation proves to be greater than anticipated, the payments on a non-indexed loan will be of less value than originally intended. In that case the borrower gains while the lender loses. The value of the indexed loan, on the other hand, remains the same regardless of inflation and repayments will be unchanged if converted to fixed prices. This clearly shows the main advantage of indexation, i.e. that the real value of repayments is known for the entire term. Theoretically, therefore, indexed loans should bear lower real interest rates than similar non-indexed loans, since the non-indexed loans contain an additional degree of uncertainty as to the value of repayments, or in other words, non-indexed loans are riskier than indexed ones, both for the lender and the borrower.

Real value of repayments

As previously mentioned, a lower debt service burden initially is one of the advantages of indexed loans. This advantage can, however, become a disadvantage if a lower debt service encourages high indebtedness, and in turn increases the risk of default by the borrower. The debt service on non-indexed loans, on the other hand, is heavier at the beginning of the loan term. Since the principal of such loans decreases rapidly in real terms, there is some leeway for higher interest at the end of a fixed-interest period.

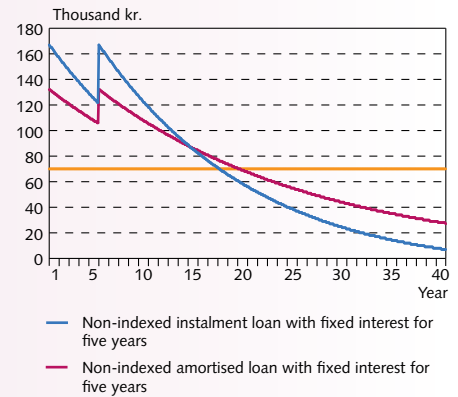
Simple examples can help shed some light on the potential advantages and disadvantages of non-indexed loans. Firstly, it is worth examining how much interest rates need to increase upon the expiration of a fixed-interest period for the real payment to be the same or higher than it was initially. Secondly, an examination needs to be made of the varying effects of an unexpected inflation spike on the principal and real payments on non-indexed and indexed loans.

Example I

An individual intends to take out a non-indexed 40-year loan of 20 m.kr. but is not sure whether to fix the interest rate or not. Inflation is assumed to be 4.6% for the duration of the loan period, as this has been the average annual inflation rate over the past 20 years. It should be pointed out that the wage index has risen by 6.3% during the same period. Wages have therefore increased considerably more than price levels on average, despite periods, especially at the end of 2008 and beginning of 2009, when prices rose more than the wage index. We assume that the fixed 5Y interest rate is 7.5%, which is the average of the lowest 5Y fixed interest rate on non-indexed loans currently offered on the market.

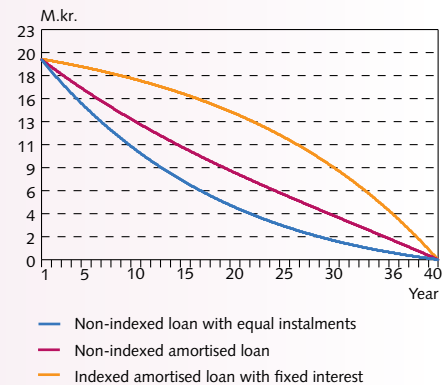
Based on the previous assumptions, the interest rate on a non-indexed loan with equal periodic instalments can rise to 11.5% in

Chart 2
Real payments¹



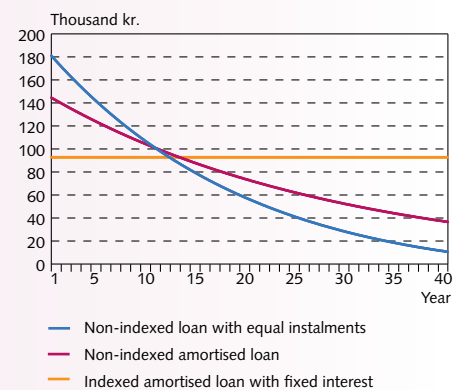
1. The chart shows how much the real payment can rise for the non-indexed loans, without exceeding the first payment.
Source: Central Bank of Iceland.

Chart 3
Real principal amount when inflation is 3.5% throughout the loan period



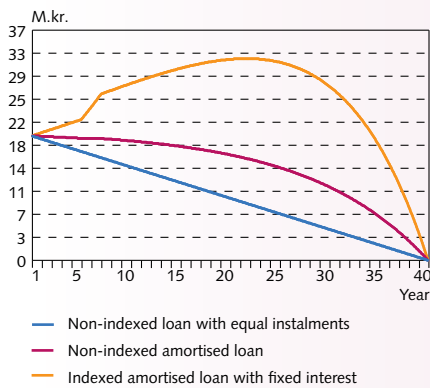
Source: Central Bank of Iceland.

Chart 4
Real payments when inflation is 3.5% throughout the loan period



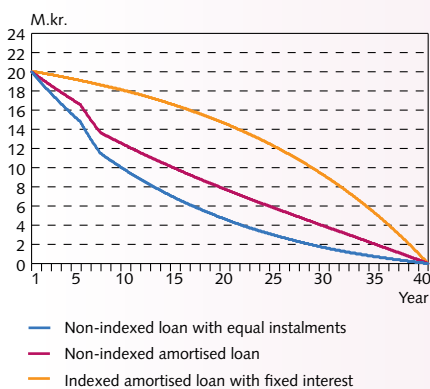
Source: Central Bank of Iceland.

Chart 5
Nominal principal amount when inflation rises temporarily from 3.5% to 10%¹



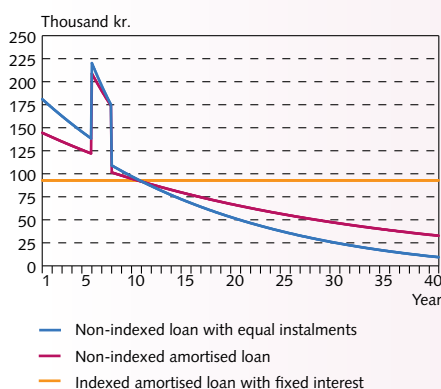
1. Inflation rises to 10% when five years of the loan period have passed then falls again to 3.5% after two years.
Source: Central Bank of Iceland.

Chart 6
Real principal amount when inflation rises temporarily from 3.5% to 10%¹



1. Inflation rises to 10% when five years of the loan period have passed then falls again to 3.5% after two years.
Source: Central Bank of Iceland.

Chart 7
Real payments when inflation rises temporarily from 3.5% to 10%¹



1. Inflation rises to 10% when five years of the loan period have passed then falls again to 3.5% after two years.
Source: Central Bank of Iceland.

five years' time and to 9.8% in the case of an amortised loan, in order for the real payment to be the same as it was initially, i.e. by 167,000 kr. for the loan with equal instalments and by 132,000 kr. for the amortised loan (Chart 2). The reason for this is that part of the principal has been repaid during the five years, around 29.7% of the real value of the loan with equal instalments and around 21.7% of the amortised loan. In the case of a comparable, indexed amortised loan, with fixed real interest of 2.8%, the principal would decrease in real terms by almost 7.2% over the five years.² If inflation were, for example, 2.5%, the interest rate could rise to 10.1% for the loan with equal periodic instalments and to 8.8% for the amortised loan. Similarly, the interest rate on the loan with equal instalments could rise to 12.7% and that on the amortised loan to 10.8% if inflation is 6.3%. In addition it could be pointed out that, if the relative development of wages and prices in the next 40 years is the same as during the past 20, the interest rate could rise still more for the borrower's real debt service to remain unchanged.

Example II

It is also useful to examine how the real value of repayments on non-indexed loans can change when inflation rises suddenly. We assume that the real interest rate on the indexed loan is fixed at 4.7% and that inflation is 3.5% to begin with then 10% after five years of the loan term have passed. Two years later inflation drops again to 3.5% and remains unchanged after that. The non-indexed floating interest rate is 8.4% initially, but is changed to 15.2% when inflation rises to 10%.³ The interest rate decreases again to the same level as before when inflation drops and then remains unchanged for the duration of the loan term.⁴

Charts 3 and 4 show the development of the loan principal and repayments in real terms when inflation remains steady at 3.5% for the duration of the loan term. Charts 5 to 7 show how the nominal and real value of the principal and repayments on the loan in question change in response to an inflation spike. The impact of inflation on the principal of an indexed loan is obvious, as it increases considerably more in nominal value than when inflation remains at 3.5% annually throughout the loan term. In real terms its course is not changed at all. Since inflation has no direct impact on the nominal value of the principal of non-indexed loans, this increases little for the amortised loan and not at all for the loan with equal instalments. However, the principal of the non-indexed loans decreases rapidly in real terms when inflation is 10%, as Chart 6 shows. This is because the value of the principal shrinks more when inflation is higher. Similarly, inflation boosts the real value of repayments on non-indexed loans due to interest rate increases on revision dates. Examination of the real value of repayments on non-indexed loans reveals two things (Chart 7): Firstly, the real payment rises enormously for both types of repayments, becoming much higher than at the beginning. Real payments on the equal instalment loan increase from around 138,000 kr. per month to

- To compare the real cost of non-indexed and indexed loans, the following equation is used in determining the real interest rate of indexed loans: $r = (1+i)/(1+\pi) - 1$, where r = real interest rate, i = nominal interest rate and π = inflation rate. The interest rates of most credit institutions are higher than that used in this example. If a real interest rate of 4.7% is used, as has been available from the Housing Financing Fund, the principal of the indexed loan decreases by just over 4.7% in five years.
- Non-indexed interest is calculated using the same equation as was used to calculate real interest in Example I.
- As in Example I, the loan term is 40 years. This is a rather extreme example, as inflation rises and falls by 6.5% between two interest dates. Nonetheless, it shows clearly the different effects of inflation on indexed and non-indexed loans.

just over 220,000 kr. per month; the initial payment was around 181,000 kr. The real payment therefore increases by 59.4%, and is also 21.5% higher than for the first payment. A similar story can be told of the amortised loan: here the real payment is around 43% higher following the inflation spike than it was initially. However, as Chart 7 shows, the real value of repayments on non-indexed loans falls more rapidly with this inflation spike. In other words, the real payment curves of the non-indexed loans are steeper when inflation is higher and intersect the curve of the indexed loan slightly earlier than before.

Importance of choice

It is evident from the above that both indexed and non-indexed housing mortgages have advantages and disadvantages, and it is important for borrowers to be able to choose which route they wish to follow. Credit institutions have made their choice easier by offering so-called mixed loans. Indexed and non-indexed loans are combined in proportions which suit each individual case. By this means the risk involved in possible fluctuations in the real payments on non-indexed loans is reduced and borrowers can take partial advantage of the more stable payments on indexed loans. Whatever route is chosen, the primary consideration is for borrowers to be able to meet the payments on the loan which is selected. Those who want a non-indexed loan must also be prepared for the real payment to increase, but to protect themselves temporarily against this risk it can be advantageous to fix the interest rate for three to five years. As the former example shows, interest on non-indexed loans can rise considerably during the fixed-interest period without the real payment being greater than it was initially. Fixing the interest rate ensures a certain reduction to the principal.

General

The global financial crisis which struck in the autumn of 2008 and the economic contraction which followed in its wake soon caused a debt crisis in many countries. Both households and corporates have come under pressure, in part due to decreased economic activity and lower real incomes. In few countries has the transformation of the household debt position been as extensive and difficult to deal with as in Iceland, where a major drop in purchasing power occurred in tandem with falling household assets and soaring debt, resulting from an inflation spike and sharp depreciation of the króna.

The indebtedness of Icelandic households, whether assessed relative to disposable income or to GDP, is among the highest in the world. When making such an international comparison, however, it must be borne in mind that the proportion of owner-occupied housing is also considerably higher than average; this, together with the relatively young age of the population and its large pension fund assets, explains to a large extent the high debt ratio in Iceland. Studies¹ have shown that increased household indebtedness deepens the economic contraction and slows recovery following a

Box IV-2

Debt, income and debt service based on tax returns

1. See, for example, the report "Household Leverage and the Recession of 2007 to 2009", compiled by Mian and Sufi (<http://www.nber.org/papers/w15896>), the report "Consumers and the Economy, Part II: Household Debt and the Weak US Recovery" by the same authors (<http://www.frbsf.org/publications/economics/letter/2011/el2011-02.html>) and the report "Is a Household Debt Overhang Holding Back Consumption?" by Karen Dynan, published by the Brookings Institution http://www.brookings.edu/~media/Files/Programs/ES/BPEA/2012_spring_bpea_papers/2012_spring_BPEA_dynan.pdf.

Chart 1

Debt as a % of assets and income, by age group, 1995, 2004, 2010 and 2011¹

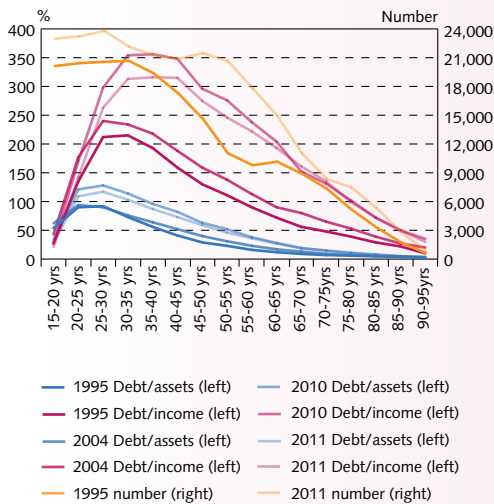


Chart 2

Net asset position by age group, 2012 price levels

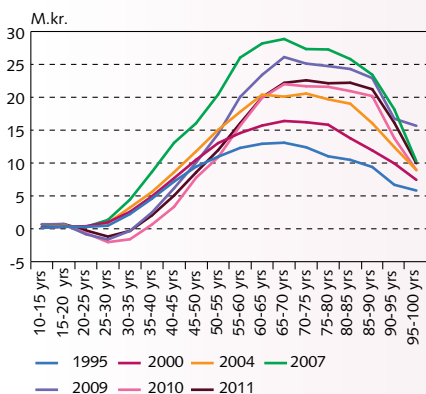
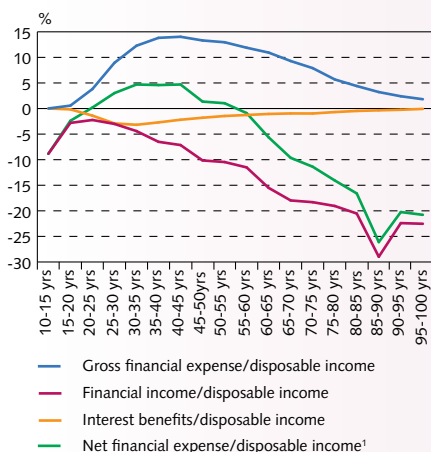


Chart 3

Financial expense, homebuyers' interest benefits and financial income as a % of disposable income



financial and banking crisis, i.e. the contraction can be expected to be deeper and to last longer the greater the indebtedness. This makes it important to monitor carefully household indebtedness and equity, and what groups are worst set and most vulnerable to external shocks. In recent years Central Bank publications on financial stability have focused on the situation of households. Furthermore, the bank has published detailed analyses of households' situation, based on information from a database comprised of most household loans, their assets and income.² In a previous issue of Financial Stability in 2012/1, the article in Box III-2 on household debt was based on tax return data compiled by Statistics Iceland. These are average figures for the period 1995-2010. The data has been updated by Statistics Iceland and new parameters added, making it more detailed.³ Taxpayers are now classified into five income groups.

Distribution of assets and liabilities by age of taxpayer

The tax return data shows that the youngest age groups are the most heavily indebted, whether indebtedness is measured relative to assets or to income (Chart 1). At year-end 2010, the 20-35-year age group had a negative asset position, i.e. total debts exceeded assets. This includes around 32% of individuals filing a tax return in 2010 who are aged 20 years and older (Chart 2). The same age group had a negative equity position at year-end 2011, although the debt ratio improved considerably that year, dropping from 120% at year-end 2010 to 109% a year later. The decrease is both due to a decrease in debt in 2011 as well as an increase in assets. Indebtedness can be expected to continue to decrease in 2012, as liabilities were practically unchanged in nominal terms between year-end 2011 and 2012, while real estate valuation rose by 7.4%.

The age group 65-70-years always has the highest net asset position (Chart 2). The reason for this is probably that after individuals retire from employment they finance their living expenses partly from their assets and often distribute assets to relatives. Since 1995, the increase in assets has been by far the greatest among individuals 60 years of age and older, both in relative and absolute terms. The net assets of the 20-50-year age group, however, decreased from 1995 to 2011, with the group aged 20-40 years especially hard hit. Persons aged 35-40 years in 2011, for example, have only half the equity that those persons who were 35-40 in 1995 had. The status of individual age groups, with respect to net assets, has therefore changed radically since 1995, i.e. the situation of younger people has worsened while the status of older individuals has improved considerably.

The 30-45-year age group had the highest ratio of debt to disposable income at year-end 2011. At year-end this ratio was around 360%, but decreased to 320% by year-end 2011 (Chart 1). The decrease is primarily the result of an increase in income, but lower debts also have some effect. This ratio can be expected to drop still further in 2012, as debt was practically unchanged YoY in 2012, while wages rose by 7.4% during the same period.

2. For details see the report "Households' Position in the Financial Crisis in Iceland", compiled by Þorvarður Tjörvi Ólafsson and Karen Áslaug Vignisdóttir, published in June 2012 (<http://www.cb.is/library/Skráarsafn---EN/Working-Papers/Working%20Paper%2059.pdf>).

3. Some effects of the tax treatment of assets and liabilities are likely to affect data from tax returns. There is an incentive to report debts which fulfil the requirements for homebuyers' interest benefits, as well as an incentive to underreport assets. Furthermore, assets are undervalued to the extent that share capital is recognised at nominal value and bonds at nominal value plus accrued interest and indexation as of year-end. The market value of securities can therefore differ considerably from assets according to tax returns.

The 30-45-year age group has the highest net financial expense relative to disposable income, i.e. interest expense net of homebuyers' interest benefits and financial income⁴ (Chart 3). The 40-45-year age group, however, has the highest gross financial expense. Financial income and homebuyers' interest benefits of individuals over 55 years of age exceed their interest payments. At age 65 years, net financial income has become around 10% of disposable income, and this percentage increases with increasing age.

Taxpayers by income group

Taxpayers are divided into five income groups in the data of Statistics Iceland. Table 1 shows average annual income of individuals in 2011, adjusted to 2012 price levels, together with the age distribution for each income group. The lowest income group includes individuals with incomes, for example, less than 50% of unemployment benefits; a major portion of this group is 29 years of age or younger and some are therefore students. Most old age pensioners belong to the next-lowest income group, while only a very small percentage of them belong to the highest income group. Most persons aged 30-70 years belong to the two highest income groups.

Table 1 Average income and age distribution of income groups 2011

Age	Income group 1	Income group 2	Income group 3	Income group 4	Income group 5
Average income ¹ (m.kr.)	0.8	2.1	2.8	3.9	7.2
29 years or younger (%)	65.6	31.8	24.3	29.9	20.4
30-49 years (%)	18.1	19.7	31.9	45.7	56.9
50-69 years (%)	10.8	24.2	29.3	22.2	21.5
70 years or older (%)	5.5	24.3	14.5	2.2	1.2

1. 2012 price levels.

Sources: Statistics Iceland, Central Bank of Iceland.

At year-end 2011 total debts of individuals were spread over the five income groups with around 10% of the debt belonging to the lowest income group, 13% to income group 2, 18% to income group 3, 25% to income group 4 and 34% to the highest income group. Similarly, around 9% of the assets belong to the lowest income group, 16% to income group 2, 18% to income group 3, 22% to income group 4 and 35% to the highest income group. Around 59% of debt and 57% of assets therefore belong to individuals in the two highest income groups (Chart 4).

Financial expense

In 1995, individuals in the lowest income group had the lowest net financial expense relative to disposable income (Chart 5). Since 1997, however, the highest income group has had the lowest net financial expense and, in fact, its financial income together with interest benefit by far exceeds interest expense practically every year since that time. As an example, in 2007 net financial income⁵ comprised around 45% of disposable income in this income group. The situation has, however, changed drastically in the highest income group, as net financial income was 3% and 4% respectively of disposable income in 2010 and 2011. Individuals in the second-

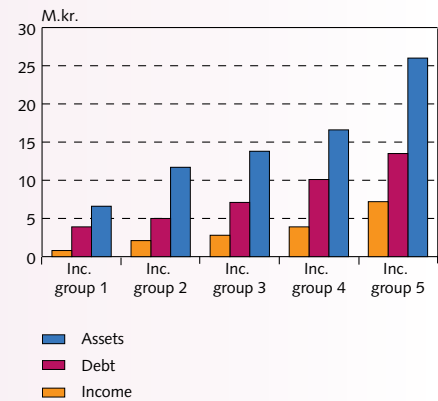
4. Figures for financial income are exclusive of financial income tax, but the tax is taken into consideration in calculating disposable income.

5. The concept of net financial income is used here for negative net financial expense.

Chart 4

Distribution of income, debt and assets at year-end 2011

Avg. figures at 2012 price levels, by age group

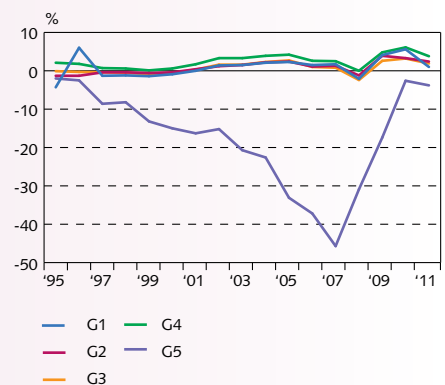


Sources: Statistics Iceland, Central Bank of Iceland.

Chart 5

Net financial expense as a % of disposable income¹

By income group



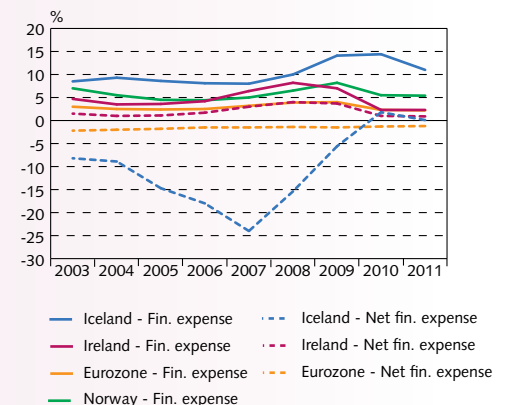
1. Where financial income plus homebuyers' interest benefit exceeds financial expense, the outcome is a negative figure.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart 6

Financial expense, net financial expense as a % of disposable income¹

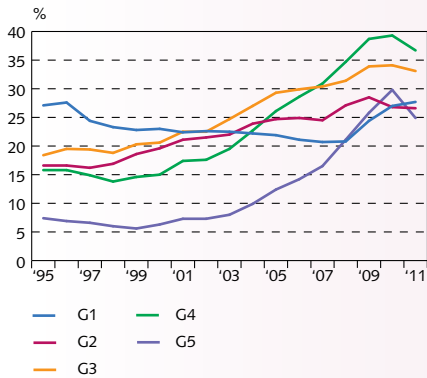
2003-2011



1. Net financial expense is financial expense net of financial income and homebuyers' interest benefit.

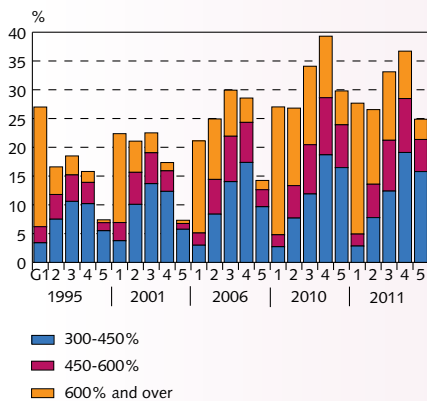
Sources: Statistics Iceland, Central Bank of Iceland, Central Bank of Ireland, Central Bank of Norway.

Chart 7
% of taxpayers owing more than 300% of disposable income
By income group



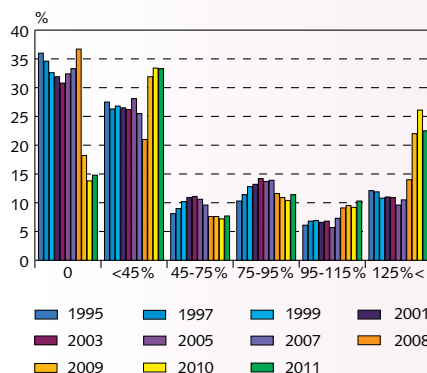
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 8
% of taxpayers owing more than 300% of annual income
By income group



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 9
Debt/asset ratio
% of taxpayers in each debt range



Sources: Statistics Iceland, Central Bank of Iceland.

highest group always have the highest net financial expense, the primary reason being that gross interest expense is highest for individuals in this group.

Since the collapse of the financial system the economic situation in Iceland has frequently been compared with that of Ireland, as both countries suffered major setbacks resulting from a large banking system relative to the size of the economy. Since 2003 (Chart 6) financial income plus interest benefit far exceeded financial expense right up until 2010, when financial expense exceeded financial income. In Ireland financial expense was always higher than financial income during this period. Only in 2010 does individuals' net financial expense in Iceland exceed that in Ireland. Authorities in western countries responded to the collapse of financial institutions in 2008 and the ensuing economic contraction by cutting policy rates and attempting to increase liquidity in the economy. Chart 6 shows that individuals' financial expense in Ireland, Norway and on average in the Eurozone decreased relative to disposable income from 2008/2009 until 2011. The situation was different in Iceland than in these countries, as the policy rate was increased substantially in late 2008, or to 18%. In the spring of 2009, the Central Bank began a series of rate cuts which concluded at the beginning of 2011 with a policy rate of 4.25%. In Chart 6 it is striking how great the increase in interest expense was in Iceland relative to disposable income, compared to the decrease in comparison countries at this time. The proportion even increases in 2010 over that of 2009, despite a sizeable drop in the policy rate at that time. The reason for the opposite trend in Iceland compared to that in Ireland, Norway and Eurozone countries is that in Iceland most loans are indexed with fixed real interest rates. From 2008 onwards, debt increased greatly while real wages fell during this same period. It is evident that the authorities' possibilities of reducing individuals' debt service resulting from the economic contraction in 2008 were therefore much more limited than in neighbouring countries.

Debt and income

High indebtedness or a negative equity position does not necessarily imply financial difficulties. For example, around 60% of household debt is owed by the 40% of individuals with the highest incomes. It could also be pointed out that individuals in the second highest income group have both the highest gross and net financial expense. If those individuals are examined especially whose debt amounts to over 300% of reported annual income, the proportion is highest in the second highest income group at year-end 2011, while the proportion is lowest in the highest income group (Chart 7). The situation of these income groups, however, has changed greatly since 1995, when the proportion of individuals owing more than triple their annual income was by far the highest in the lowest income group. From 1995 until the financial system collapse this proportion increases in all income groups except the lowest one, where it declines. At year-end 2011, the proportion in the lowest income group was similar to what it had been in 1995. However, the proportion in the three highest income groups was about twice what it had been or more. Tax return data shows that, in proportional terms, the increase in individuals with high indebtedness relative to their income has been greatest in the highest income groups.

In 2010, almost 31% of tax payers owed more than three times their annual income; this proportion dropped to 29% in 2011. This is an indication that the debt service of the parties with the highest debt relative to their income is improving. It does not apply to all income groups, however, since the proportion increases in the lowest income group. From the years 1995 and 2000, the greatest

increase in debt has been among individuals owing more than six times their reported income (Chart 8).

Indebtedness

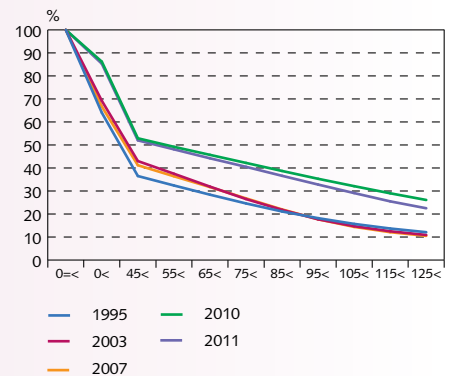
From 1995 until the financial system collapse, the majority of taxpayers had low debt, with around 60% of taxpayers on average owing less than 45% of their assets during this period (Chart 9). Only half of taxpayers fell into this category in 2009 and over the next two years the proportion decreased yet further (Chart 10). On average, around 35% of individuals were debt free up until the financial system collapse, but this group decreases sharply in number thereafter and in 2010 and 2011 the proportion had fallen to 15%. It appears that many persons who had no debt at year-end 2008 had to respond to a loss of income and increased expenditure by borrowing. It is evident that the financial system collapse has resulted in an increase in indebtedness (Chart 10). The situation does improve, however, between 2010 and 2011, especially in the case of individuals who are highly indebted.

From 1995 up until 2007 around 1/5 of household debt was owed by taxpayers who owed less than 45% of their assets (Chart 11). From 2008 onwards this proportion decreases sharply, as does the proportion of household debt owed by taxpayers who owed 45-95% of their assets. During this same period, however, the debts of the most heavily indebted individuals increased, especially those of persons owing more than 125% of their assets. At year-end 2010, for example, 47% of household debts were those of taxpayers who owed over 125% of their assets. If persons owing 95%-125% of their assets are added to this group, then 65% of individuals' debt was owed by individuals who can be regarded as having a negative equity position (i.e. debt equivalent to 95% or more of their assets). The situation improved between 2010 and 2011, especially among persons owing over 125% of their assets; at year-end 2011 around 36% of debts belonged to this group.

A breakdown of indebtedness by income group shows that the highest proportion of debt-free individuals are in the lowest income group (Chart 12). Roughly speaking, persons with the lowest incomes either owe little or nothing or are highly indebted relative to their assets (over 125%). In fact, most of those persons who were most highly indebted at year-end 2011 belong to the lowest income group. Debt free individuals have decreased substantially in the three highest income groups since 1995, with the proportion dropping from around 14% of taxpayers to just over 2%. It is evident that indebtedness grows with increasing income. As in the above respects, the situation improved in 2011 over that of 2010, with the largest change (i.e. decrease) in the number of taxpayers with highest debts and highest incomes.

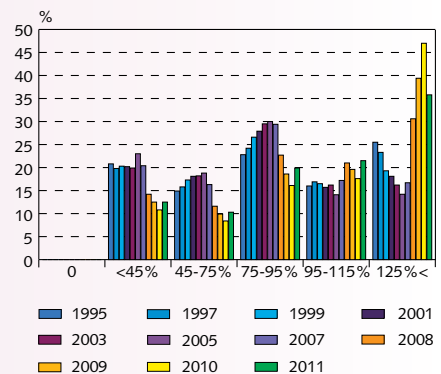
Clearly, both debt and assets increase with increasing income. It therefore comes as no surprise that the proportion of total debt belonging to each debt interval increases with increasing income (Chart 13). It is surprising, however, that around 60% of the debts of the lowest income group belong to individuals owing the equivalent of 125% or more of their assets. This can be attributed in part to their low asset position rather than high indebtedness, with the result that it is not certain that for many persons debt service is extremely high relative to income. Examination of the change in debt position in 2011 from that of 2010 shows that the debt ratio is increasing for individuals who owe 45-125% of their assets while debts decrease significantly among persons who owe 125% or more. At 2012 price levels, debts of persons owing 125% or more of their assets totalled 1,030 b.kr. at year-end 2010, but dropped to 710 b.kr. by year-end 2011. Of this 320 b.kr. decrease in debt,

Chart 10
Percent of taxpayers with debt/asset ratio above a certain level¹



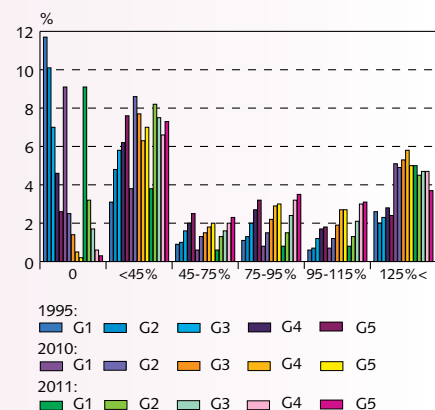
1. Cumulative. In the chart, percent of taxpayers for year 2010 are for example: 100% of taxpayers owe nothing or more, 86% of taxpayers are in debt, 53% owe 45% or more relative to assets, etc. Sources: Statistics Iceland, Central Bank of Iceland.

Chart 11
Debt/asset ratio
Debt relative to total assets



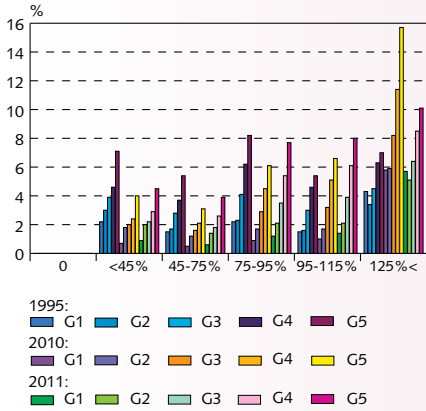
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 12
Taxpayers in each debt ratio range as a % of total individual taxpayers for the year
By income group



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 13
 Debt in each debt ratio range
 as a % of total debt for the year
 By income group



around 225 b.kr. was debt owed by persons in the two highest income groups. Clearly, the debt position of those with the highest incomes has improved the most by year-end 2011 from that of year-end 2010. Most of the improvement in the debt position can be attributed to write-downs (e.g. of illegal exchange-rate-linked loans), write-offs (e.g. the 110% route) and instalments paid. The real debt position improved YoY in 2011 for all income groups except the lowest income group, where the debt position is unchanged.

Sources: Statistics Iceland, Central Bank of Iceland.

V Funding and liquid funds

Revised liquidity rules set higher requirements for liquid funds

Commercial banks and savings banks in Iceland are financed primarily by deposits. The share of other types of funding has grown slowly in recent years. Íslandsbanki and Arion Bank have added to their issuance of covered bonds. At the beginning of this year Arion Bank held the first offering by an Icelandic bank of bonds on foreign credit markets in five years, and Íslandsbanki issued the first commercial bank bills since 2008. Landsbankinn's bonds issued to LBI comprise the largest portion of other borrowing by the banks. The banks' liquidity risk is primarily linked to possible withdrawals of deposits. Changes have been made to liquidity rules which require the banks always to be able to repay all deposits of financial undertakings in winding-up proceedings with a withdrawal period of less than one month. The overall review of liquidity rules and introduction of new liquidity rules this year increases still more the precautionary requirements made of the banks concerning liquid funds.

Banks funded by deposits

Deposits and foreign comparison

The commercial banks and savings banks in Iceland are financed primarily by deposits. The share of other borrowing has, however, gradually been increasing in recent years and that of deposits has decreased in the commercial banks' funding. At year-end 2012 deposits comprised 57% of the banks' funding, a YoY drop of almost 3 percentage points from year-end 2011.

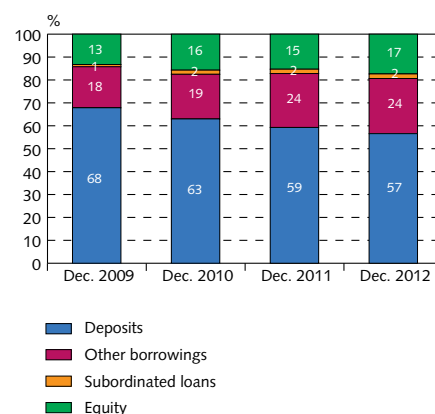
The share of retail deposits in the total funding of the three largest commercial banks (excluding derivatives) is fairly similar to that of Nordic commercial banks of a comparable size (Chart V-2). Landsbankinn's share is lower than that of Arion Bank and Íslandsbanki due to its bonds issued to LBI. Despite having the lowest deposit percentage of domestic banks, Landsbankinn's deposits as a share of funding are nonetheless higher than what is usual among the largest Nordic commercial banks, as their access to other funding is considerably greater.

Since year-end 2011, deposits with the commercial banks have decreased by almost 70 b.kr. Last year deposits of non-residents decreased by over 30 b.kr., attributable primarily to the transfer of deposits to other investment options and the Central Bank's actions in connection with relaxing capital controls. Only about 14% of non-residents' deposits are in currencies other than krónur.

Equity has increased

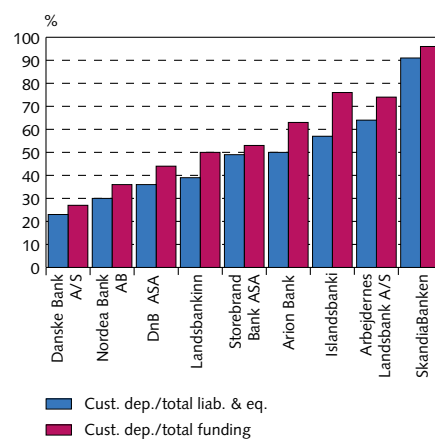
Since the financial collapse, the commercial banks have not paid dividends, and their positive performance in recent years has boosted their equity. At year-end 2012, the commercial banks' equity amounted to over 500 b.kr., an increase of 61 b.kr. from year-end 2011. At year-end 2012, equity amounted to around 17% of the commercial banks' funding and subordinated loans to 2%.

Chart V-1
Commercial banks' funding¹



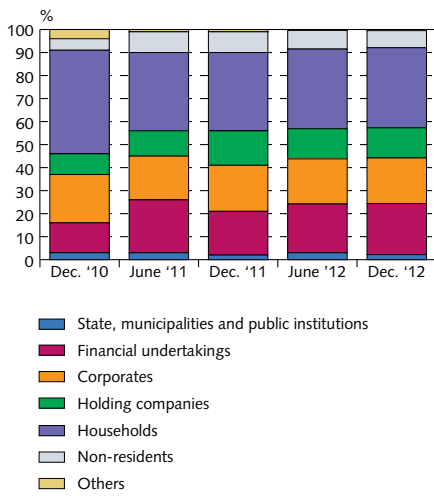
1. Parent companies.
Source: Central Bank of Iceland.

Chart V-2
Nordic banks' deposits as a % of total funding



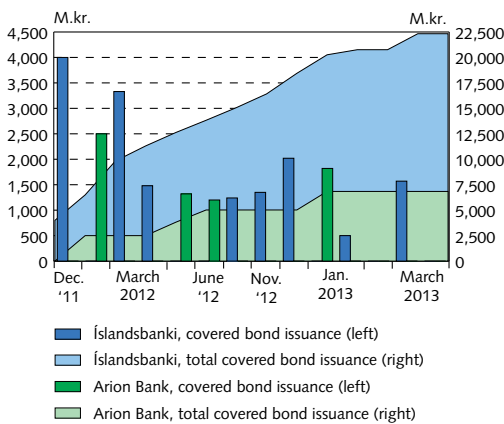
Source: Bankscope, Arion Bank hf. financial statements.

Chart V-3
Deposit holders¹



1. Parent companies of commercial banks.
Source: Central Bank of Iceland.

Chart V-4
Commercial banks' covered bonds issuance¹



1. New issues (columns) and total outstanding (shaded areas).
Source: Nasdaq OMX Iceland.

Other borrowing and market funding

Borrowing by the banks apart from deposits is as yet a rather limited proportion of their funding. Arion Bank and Íslandsbanki have been authorised by the Financial Supervisory Authority to issue covered bonds to finance housing mortgages. This authorisation is granted in stages and currently provides for issues by the two banks totalling up to 45 b.kr. At mid-April this year, the total issued was 22.3 b.kr., or only around 1% of the banks' balance sheets. Arion Bank has issued two bond series, one indexed and one non-indexed, for a total nominal amount of 6.8 b.kr. while Íslandsbanki has issued four series totalling 15.5 b.kr. The largest portion of the issue is indexed bonds with a 7-22-year maturity. The bonds are listed on NASDAQ OMX Iceland and their secondary market monthly turnover YtD has averaged 4% of total outstanding stock. Covered bonds are not eligible for collateralised lending from the Central Bank of Iceland and owners of impatient króna assets, offshore krónur, are not permitted to invest in them.

Íslandsbanki concluded an auction at the end of March of 3- and 6-month bills for a total amount of 3 b.kr., the banks' first bill auction on NASDAQ OMX Iceland since 2008.

In February this year Arion Bank concluded a bond issue abroad, the first by an Icelandic financial undertaking since 2008. Bonds totalling NOK 500 m nominal value, or the equivalent of 11.2 b.kr., were sold to foreign investors. The 3Y non-indexed bond, which bears a 5% premium on the NIBOR rate, will be listed on Oslo Børs. Trading in the bonds has been considerable and on 20 April the premium was 480 bp over NIBOR, 20 bp lower than at issuance.

Although borrowing other than deposits remains a relatively small portion of the banks' total funding, there are some indications that their market funding is gradually picking up and diversity growing. The largest share of other borrowings as yet, however, is Landsbankinn's bonds issued to the old bank and the takeover by Arion Bank of a portfolio of covered bonds.

Arion Bank's takeover of covered bonds

A major portion of Arion Bank's funding is the result of its housing mortgage portfolio, which was acquired from Kaupthing at year-end 2011. The acquisition was financed by Arion Bank's takeover of covered bonds, originally issued by Kaupthing in 2006-2008. At year-end 2012, the net outstanding stock of the covered bonds amounted to 119.8 b.kr. and were secured by housing mortgages and bank deposits in a special fund, Arion Bank Mortgages Institutional Investor Fund. The bonds were issued in four series, two with a maturity of 25 years and two with a 40-year maturity, CPI indexed and with fixed interest rates of 3.75% and 4.00%. The total repayments, including instalments on the principal, interest and indexation, amount to 7.4 b.kr. annually.

Landsbankinn's foreign currency bonds

Landsbankinn has the highest proportion of funding other than deposits, primarily because of the 10Y bond issued by the bank in its settlement with the old Landsbanki of the difference in the

value of assets and domestic deposits transferred to the new bank. Landsbankinn also issued a 6Y bond, the value of which was conditional upon changes in the valuation of the excess value of specified assets from the fall of the bank until year-end 2012.

Both the bonds are issued in foreign currencies, with quarterly instalments to be made on them from 2014-2018. In the first half of 2012 an agreement was reached between the old Landsbanki and new Landsbankinn for an advance payment of one-quarter of the principal of the settlement bond. The pre-payment was equivalent to 73 b.kr. in euros, US dollars and sterling. The amount outstanding on the bond was therefore around 222 b.kr. at year-end 2012.

At year-end 2012, the contingent bond was recognised in Landsbankinn's accounts at just over 87 b.kr., after being recognised at 69 b.kr. in June of the same year. The new bank's debt to the old bank therefore totalled around 310 b.kr. at year-end 2012. The contingent bond was issued on 11 April this year with a value of 92 b.kr.

Landsbankinn's debt to the old Landsbanki comprises the largest portion of the three largest banks' bond issuance and accounts for the major portion of the banks' repayment profile in the next few years. Around 75% of instalments and interest due in the next five years, 291 b.kr., are in foreign currency. All of the banks need to extend their funding by increasing the term of deposits and refinancing loans maturing in the short term.

Banks' liquid funds and stress tests

Liquidity position

The Central Bank sets the rules on credit institutions' minimum liquidity ratio, in accordance with an authorisation in the Central Bank Act. According to the rules, claims and obligations maturing within one year are classified into four time periods and weighted according to risk. Liquid assets and claims must exceed obligations in the next month and the next three months. The rules were last amended in October 2012, when deposits of financial undertakings in winding-up proceedings were classified as deposits of financial undertakings, rather than as retail deposits, as previously. The rules were tightened, and now require a ratio of 100% liquid assets to deposits of financial undertakings. Work on new liquidity rules has now been underway for some time, reporting from the banks has begun and the aim is to have the new rules come into effect later this year, cf. Box V-1 on new liquidity rules.

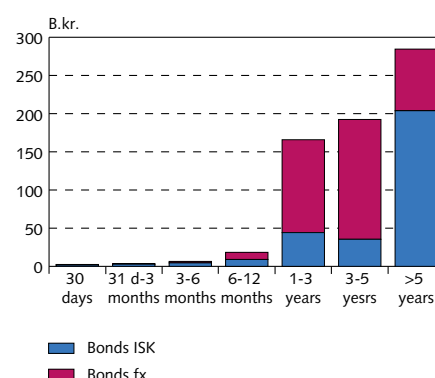
All the commercial banks more than satisfy the Central Bank's liquidity rules, as well as requirements of the Financial Supervisory Authority, according to which commercial banks and savings banks must have secure liquid assets amounting to at least 20% of all deposits and liquid funds equivalent to a minimum of 5% of demand deposits.

The banks' FX liquidity is strong and they could, for instance, repay all foreign currency deposits. The liquidity position, however, only reflects their short-term position and the banks vary in a longer term perspective with regard to payments which fall due on foreign loans.

Chart V-5

Bond maturities¹

Three largest commercial banks as of 31 March 2013

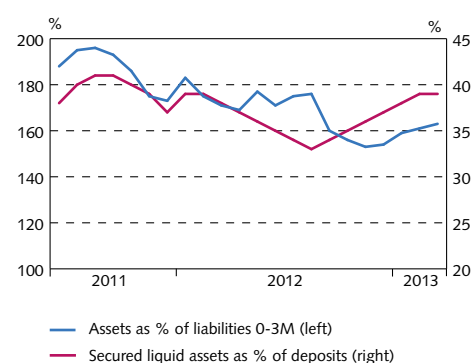


1. Instalments and interest.
Source: Central Bank of Iceland.

Chart V-6

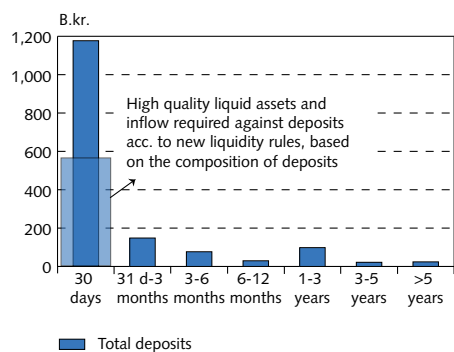
Liquidity of the largest commercial banks¹

Monthly data April 2011 - March 2013



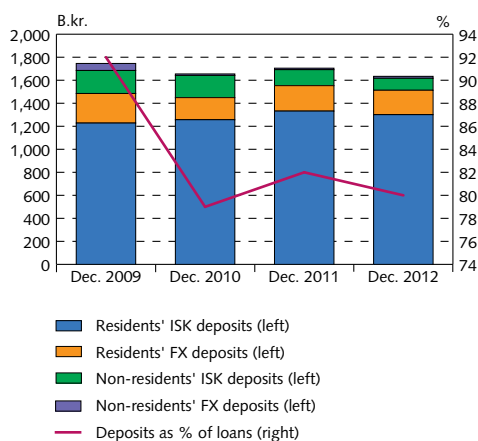
1. Parent companies. Calculated according to Central Bank liquidity rules and Financial Supervisory Authority requirements. The liquidity rules were amended in October 2012, revising the definition of deposits of financial undertakings in winding-up proceedings.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart V-7
Term profile of deposits and liquidity requirements
Three largest commercial banks as of 31 March 2013



Source: Central Bank of Iceland.

Chart V-8
Deposits with commercial banks in FX and ISK¹



1. Parent companies, commercial banks. Deposits of customers and financial undertakings. Customer deposits as a % of loans to customers and asset-leasing agreements.
Source: Central Bank of Iceland.

Higher requirements for liquid funds in the Central Bank's new liquidity rules

As previously mentioned, the commercial banks are funded primarily by demand deposits. Around 75% of deposits can be withdrawn within one month's time, 85% within three months and around 90% within six months. The new liquidity rules will set higher requirements for liquid assets to cover demand deposits, increasing the incentive to lock in deposits. According to the new liquidity rules, high quality liquid assets (HQLA) are required to cover all deposits with a withdrawal period of less than one month, from domestic and foreign financial undertakings, pension funds, financial undertakings in moratorium or winding-up proceedings, and from non-residents if the deposit is not covered by a deposit insurance scheme. This is around one-third of all deposits of the three largest banks which can be withdrawn within one month's time.¹

The banks also have to be able to pay out part of other deposits available for withdrawal. Overall, the banks must be able to pay out close to half of all deposits with a withdrawal period of less than one month under the new liquidity rules, based on their current deposit composition. Since demand deposits are a large proportion of the banks' financing, the rules mean that the banks should be able to reduce their balance sheets by 20% within a month, although such a shock can be expected to significantly impact the markets and the banks' position in the longer term.

Both those deposit categories where 100% coverage is required are non-stable deposits, which are a large proportion of total deposits, where the depositor concentration is very high. The share of the ten largest depositors in each category is as high as 100%, i.e. only a few actors are involved who have large deposits, as might be expected e.g. in the case of financial undertakings and pension funds.

The concentration in other deposit categories, household deposits and SMEs' deposits, is considerably less; the 10 largest depositors in these categories hold around 2-3% of deposits. These two categories account for around 43% of all deposits of the three largest banks.

Stress testing of liquidity position

The liquidity rules comprise a certain stress test. The banks are required to be able to withstand a period of difficulties in the liquidity market and the new rules in many respects increase the stress applied. The banks are only allowed to depend upon HQLA, provisions are recognised for derivative contracts, and no inflows are expected except on those loans which are fully performing. As pointed out previously, the banks are also expected to be able at any time to repay all deposits of certain parties available for withdrawal over the next month.

Lifting of capital controls will in all likelihood result in a certain portion of the banks' deposits seeking to exit the country. Twice during the past year the Central Bank requested more detailed deposit data from the large commercial banks; analysis of deposits has now become part of the banks' monthly data reporting.

1. New liquidity rules require liquid assets in excess of net outflows. They therefore take inflows into consideration in addition to liquid assets, as do the current rules, cf. further Box V-1 on the details of the liquidity ratios.

Stress tests which have been performed on the liquidity position of the large commercial banks to assess the impact of conceivable withdrawals upon the relaxation of currency controls have, for instance, included a scenario of increasing pressure: 1) non-residents would withdraw all of their deposits; 2) financial undertakings in winding-up proceedings would withdraw all of their deposits; 3) pension funds and mutual funds would withdraw all of their deposits; and 4) Icelandic residents would withdraw all of their foreign-denominated deposits. Most of this stress test is included in the new liquidity requirements which the banks will have to fulfil at any given time. There is no specific requirement in the liquidity rules, however, that the banks have liquid assets enabling them to repay all foreign-denominated deposits of parties other than financial undertakings and non-residents; the impact of such is among those aspects examined when the banks' liquidity is tested under increased stress. Among the other aspects examined in stress tests is the banks' position in the next interval following a shock, making it important to have information on longer-term contractual payment flows.

Banks' funding cost

While the banks are funded by deposits the cost of their financing is low. There is, however, a certain cost involved in funding banks with demand deposits rather than e.g. term deposits or longer-term bond issuance. Banks must, under the liquidity rules, have secure liquid assets to cover a large portion of their deposits. It could therefore be said that increased liquidity requirements raise their cost of funding by deposits. Since other investment options, however, remain extremely limited, there are greater possibilities of passing on this cost to depositors in the form of low deposit interest rates.

Some portion of deposits can be expected to head elsewhere when capital controls are relaxed in Iceland. Funding cost can therefore be expected to rise when more investment options become available and access to deposits decreases. The banks therefore need to be prepared for their funding cost to increase when capital controls are relaxed.

Rules in effect since 1999

The Central Bank of Iceland adopted new rules on liquidity in 1999. The current liquidity rules were set by virtue of an authorisation in the Act on the Central Bank of Iceland and with reference to the bank's role in encouraging an efficient and sound financial system.¹ The rules classify financial undertakings' assets, claims and obligations according to their nature and duration, weighting them according to their risk. A financial undertaking's liquid assets and claims due in less than one month and less than three months must exceed its obligations, taking weighting into consideration.²

1. Central Bank of Iceland Act, No. 36/2001.

2. Rules on Liquidity Ratio, No. 782/2012.

Box V-1

New liquidity rules

Some changes have been made in recent years to adapt the Rules, most recently in the autumn of 2012. Credit institutions were then required to have sufficient liquid funds to be able to pay out in full deposits of banks in liquidation or winding-up, and all the units derived from them.

An overall review of the rules has been in the planning for some time. The current rules, for instance, only apply to the parent company, further distinction needs to be made of deposit risk by deposit holder, and insufficient consideration is given to risk in connection with off-balance-sheet items. Credit lines are also too heavily weighted in the current rules in view of the real situation when a liquidity crisis develops. The revised rules take into consideration the work which has been carried out internationally.

New international rules

Following the global liquidity crisis, demands grew for the harmonisation of liquidity supervision and increase in requirements concerning banks' liquidity position. The new harmonised standards of the Basel Committee on Banking Supervision therefore also cover liquidity, not just equity as previously.³

The Basel Committee issued new and updated recommendations on best practice in liquidity management in 2008, and in 2009 announced that new, harmonised minimum standards were being drafted. A draft of the minimum standards was published at the end of 2010. These included two ratios: firstly, the Liquidity Coverage Ratio (LCR), which is to ensure sufficient liquid funds to meet commitments for the next 30 days, under a liquidity stress scenario, and secondly, the Net Stable Funding Ratio (NSFR), which focuses on the structure of longer-term funding. This ratio is to encourage stable funding and reduce the likelihood of liquidity crises.⁴

This was followed by a large-scale review process, in which financial undertakings expressed their comments and suggestions. Emphasis has been placed on the former ratio (LCR) and in tandem with modifications to the LCR published by the Basel Committee in January this year, the Committee announced that the rules were practically final on their part. According to the modifications, financial undertakings must have a minimum LCR of 60% as of 1 January 2015. This minimum will then increase by 10 percentage points each year until an LCR of 100% will be required from 1 January 2019.⁵ The NSFR is to come into effect in 2018, when it will be a minimum of 100%.

Up until now, supervision of liquidity has varied from one country to the next. In some countries there have been no requirements for reporting of liquidity data, or for minimum liquid funds. The Icelandic rules were based on liquidity rules adopted by the German central bank. In Switzerland rules on liquidity were adopted in 1988 and reviewed for the largest banks in 2010. In the Netherlands, liquidity rules have been in force since 2003, but in the UK quantitative liquidity rules were set in 2008. Sweden has introduced liquidity rules based on the LCR which entered into force at the beginning of this year. They apply to all banks over a certain size.

The Basel liquidity standards will eventually become requirements practically everywhere and preparation for their introduction

3. Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools, January 2013. <http://www.bis.org/publ/bcbs238.pdf>
4. Basel III: International framework for liquidity risk measurement, standards and monitoring, December 2010. <http://www.bis.org/publ/bcbs188.pdf>
5. The changes involved, among other things, a broader definition of liquid funds and lower proportion of outflows on deposits of large undertakings. Additional points were also added on provisioning in connection with derivative contracts.

is underway. In many countries, compiling of data in accordance with the Basel standards has begun, although the frequency of reporting varies. In some places it is still only the largest banks which submit reports. In most instances the rules will enter into force in 2015, in accordance with the introduction process proposed by the Basel Committee.

The European Banking Authority (EBA) has had to undertake extensive harmonisation work and impact assessments for the introduction of the Basel rules have been carried out twice annually based on data from member states. Reporting under the new rules will be demanded from 1 January 2014, while the rules will enter into effect in 2015. The Central Bank of Iceland is a participant in EBA's subgroup on liquidity, which is working on the preparation and harmonisation of the rules. Work is in the final stages regarding LCR and other supervisory instruments which will be introduced in tandem with it. They are also based on recommendations of the Basel Committee and concern analysis of concentration and the cost of capital and a maturity ladder of claims and obligations.

Icelandic banks began to submit LCRs and NSFRs at the beginning of 2013

In Iceland, impact assessments have been carried out in which the largest banks have participated. Commercial banks and later savings banks have delivered reports and harmonisation work has been underway with financial undertakings. Commercial banks and savings banks then began to deliver new liquidity reports, in tandem with reports as provided for in current rules, at the beginning of this year. The intention is to have the new rules take effect later this year.

As previously mentioned, the ratios as defined by the Basel Committee are minimum levels. The main modifications which have been made in Iceland are the addition of deposit classes in connection with risk linked to deposits of banks in liquidation or winding-up; deposits of non-residents are also listed separately with a higher outflow weighting. Financial undertakings are expected to satisfy the ratios both overall and in foreign currency, since FX liquidity requirements are extremely important, especially in view of the fact that domestic banks have no liquidity access to foreign currencies in central banks.

The LCR form covers only 30 days, but additional time periods were added in order to obtain a better picture of cash flows and liquidity risk which could occur in the short term due to cash flow imbalances. The time periods are therefore the next 30 days, 31 days to 3 months, 3-6 months, 6-12 months, 1-3 years, 3-5 years and over 5 years. The possibility is being examined of having the LCR rules apply to both the 30-day and 3-month period, as the Central Bank's current rules do.⁶ In addition, a special deposit summary was added to facilitate further analysis and risk assessment. In this, deposits are classified by amount, currency and number of depositors, and the 10 largest deposits in each classification are specified.

Comparison of LCR and current rules

The current rules measure liquidity risk using a mixed approach, i.e. regard is had both for ensuring that a bank has a portfolio of liquid assets to meet scheduled commitments and unexpected outflows, and claims and obligations are also classified into time periods. That is the same sort of approach as the LCR is based upon. In both

Chart 1

Work of the Basel Committee on Banking Supervision on liquidity issues



6. The requirement for a longer period during which the banks are to be able to withstand liquidity pressures also gives more leeway to respond if the liquidity shortage persists for a longer period. In addition, half of the 30-day period has already passed when reports are delivered, which leaves little scope for a response.

$$(1) \text{ Current ratio} = \frac{\text{Liquid assets} + \text{inflows}}{\text{outflow}}$$

$$(2) \text{ LCR} = \frac{\text{Liquid assets}}{\max \{25\% \text{ outflow}; \text{outflow-inflow}\}}$$

instances, the rules involve a certain stress test, claims and obligations are weighted by risk and banks are expected to be able to withstand outflows when there is pressure on liquidity markets.

The principal difference in the structure of the ratio is that in the current rules liquid assets plus inflows are regarded as a ratio of outflows (see Equation 1). In the LCR, high quality liquid assets (HQLA) are viewed as a ratio of net outflow. The net outflow is calculated, however, with the limitation that the inflow deducted from outflow may never exceed 75% of outflow (Equation 2).⁷ It depends upon the composition of the ratio whether this limitation comes into effect for a financial undertaking. Since deposits in other banks are considered as inflow, banks cannot keep all their liquid funds in this manner, because these deposits together with other inflows are included in calculations only up to 75% of possible outflows. This is intended as a possible barrier to financial market contagion.

The new liquidity rules are comparable to those requirements which will be made internationally from 2015 onwards. To some extent they are not unlike the liquidity rules already in effect in Iceland. There is an important difference, however, as they make greater demands for the quality of liquid assets, deposits are classified in more detail and weighted according to risk. In addition, consideration is now given to risk from off-balance-sheet items, such as additional margin calls on derivative contracts and changes in their value. Last but not least, they apply to consolidations and not only to parent companies. The LCR rules have also been designed with the aim of limiting financial system contagion due to shocks to one part of it or even to only one financial undertaking. Thus securities issued by financial undertakings are not defined as liquid assets and, as previously mentioned, there are limits to how much banks can depend upon deposits in other banks to cover expected outflows. Term deposits for over 30 days are not included in the LCR, unlike the current applicable rules, but deposit analysis and time periods will also cover them.

The new rules will therefore include risk factors which the rules currently in effect have not covered sufficiently well. However, it is evident, regardless of what new rules are adopted, that banks' internal liquidity management, their effective supervision and the authorisation for enforcement will always play a key role.

7. There are additional limiting aspects of the LCR. Liquid assets are classified according to quality and Level 2 assets may not exceed 40% of the total liquid asset portfolio.

VI Operations and equity¹

Uncertain operating environment calls for strong equity

In 2012 the large commercial banks returned a good profit, with high imputed ROE. Calculations show, however, that the profitability of core operations is considerably lower and cost-cutting measures await the banks. Due to the varying composition of the large banks' balance sheets, revaluation of their loan portfolios has been retained to a greater or lesser extent in each bank. Some difference remains between the claim value and book value, especially of loans in default, offering some leeway to conclude the restructuring of loan portfolios. In 2012 the large commercial banks' currency imbalance decreased greatly but their indexation imbalance remains high. The equity position of the large commercial banks is strong and their indebtedness moderate. MP Bank is a special case among commercial banks, with a low capital ratio. Some uncertainty remains as to the real value of the banks' loans and various types of uncertainty characterise their operating environment. An uncertain operating environment calls for strong equity.

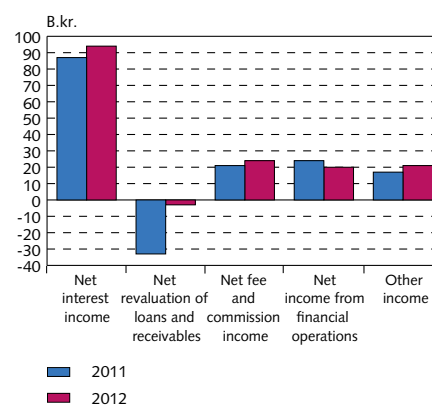
The operations of the large commercial banks were very successful last year, as they reported a combined profit of 66 b.kr. In total, the banks' balance sheets shrank somewhat YoY, in particular due to disposal of companies taken over and an advance payment of part of Landsbankinn's debt; in addition, deposits decreased. As before, the banks' financial statements contain a number of estimated items, and the valuation methods used differ in many ways. The main estimated items pertain to the real value of transferred loan portfolios. There is still some uncertainty as to the value of loans, and therefore about operating results, key financial ratios and equity.

Imputed profitability increased year-on-year ...

The large commercial banks' combined imputed return on equity (ROE) was 14% in 2012, and return on total assets was over 2%, an increase over the previous year. By Nordic comparison the Icelandic banks' profitability was high, as return on total assets for Nordic banks typically ranged from 0.3-0.6%.² Net interest income in 2012 totalled 94 b.kr. and the combined interest rate margin was 3.3%. The Icelandic banks' interest margins vary, in part due to different accounting practices, and are considerably higher than interest margins of Nordic banks. Last year a larger proportion of the banks' assets on average was interest-bearing debt than in the preceding year, but inflation during the year also boosted margins because of the indexation imbalance of assets and liabilities. The banks' assets are funded largely through liabilities at non-indexed interest rates, particularly deposits. Interest rates on non-indexed deposit and loan options vary, with deposit interest rates 3 to 4% and lending rates 5 to 6%. The difference between the lowest non-indexed lending rates and the highest non-indexed deposit interest rates on average is 2-3%.

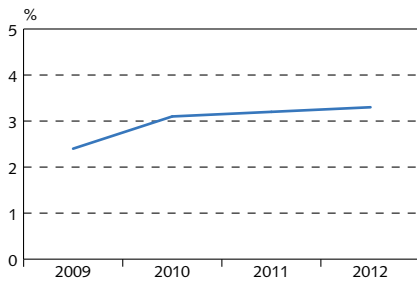
1. The discussion in this chapter is based on the consolidated accounts of the three largest commercial banks for 2012 and comparison figures for 2011. Figures represent the aggregate position of the commercial banks unless otherwise stated. Discussion of their aggregate position may diverge from that of individual financial undertakings.
2. The source for Nordic comparison data in this chapter is Bankscope, see Appendix I.

Chart VI-1
Three largest commercial banks'
operating income¹



1. Consolidated accounts.
Sources: Commercial banks' annual financial statements.

Chart VI-2
Three largest commercial banks' interest margin¹



1. Consolidated accounts.
Sources: Commercial banks' annual financial statements.

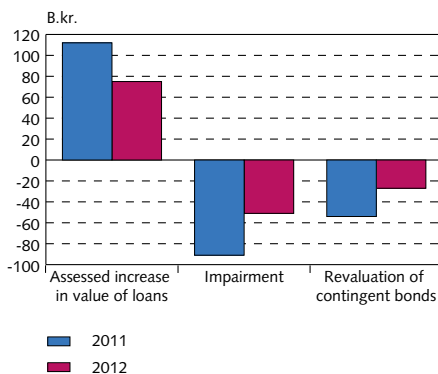
In 2012, the commercial banks' fees and commissions amounted to around 25 b.kr., with income from payment cards and payment mediation, asset management and investment banking activities the largest factors. The relative share of asset management and investment banking activities is likely to increase as the economy and financial markets gain strength. Income from financial activities amounted to over 20 b.kr., in particular due to profit on equities and exchange rate gains arising from króna depreciation, as there was a strong imbalance between exchange rate-linked assets and liabilities most of the year. Finally, other income amounted to 21 b.kr., including income from real estate, minority interest in associates and sales of companies taken over.

... especially due to lower negative revaluations of loans

The item revaluation of loans changed radically from that of the previous year. Net revaluations of loans were negative by over 3 b.kr. in 2012, compared with negative revaluations of some 33 b.kr. in 2011.³ Sizeable amounts expensed in Q4 2011 as a result of the Supreme Court's interest rate judgement in February 2012 are the main explanation for the difference YoY. In 2012 the increase in the value of loans was almost 75 b.kr., compared to a decrease in the value of loans of 51 b.kr., excluding the valuation adjustment of contingent bonds. This comprises quite a significant reduction in the revaluation amounts from that of the previous year. As before, part of the increase in the value of loans was recognised through interest income. Since 2009, net revaluation of loans, excluding expensing of contingent bonds and income recognised through interest income, amounts to 115 b.kr. Generally speaking, it could be said that corporate lending has been revalued upwards while household lending has been revalued downwards. Due to the varying composition of the large banks' balance sheets, revaluation of their loan portfolios has been retained to a greater or lesser extent in each bank. Thus the combined net increase and more in value of loans of Landsbankinn and Arion Bank has all accrued to the old banks, while the increase in value of Íslandsbanki's loans has boosted the bank's profit and equity, see Table VI-1 for details. In coming quarters fluctuations of the item loan revaluations will probably decrease as restructuring of loans proceeds and valuation of loans becomes clearer following resolution of court cases.

In 2012 the banks' operating expense as a ratio of net interest and fee and commission income was 63% and operating costs as a ratio of total assets was 2.7%, an increase from the previous year.⁴ In general, operating expense as a ratio of total assets of Icelandic banks is high compared to Nordic banks, where operating expense may be even less than 1% of total assets. The principal explanations for the increase in operating expense YoY are higher wage expenditures, a variety of expenses in connection with mergers with other financial undertakings, Financial Activities Tax on wages, etc.

Chart VI-3
Three largest banks' income and expenses due to revaluation of loans and receivables¹



1. Consolidated accounts.
Sources: Commercial banks' annual financial statements.

3. Net decrease in value of loans and expense entries in connection with contingent bonds.
4. Based on 2011 operating expense net of 17.9 billion in write-offs of goodwill at Íslandsbanki.

Table VI-1 1 Income and expense of large commercial banks in connection with revaluation of loans

<i>Landsbankinn hf.</i>	2009	2010	2011	2012	Total
Increase in value of loans	23,772	49,702	58,489	37,320	169,283
Loan impairment	-6,577	-32,794	-47,760	-14,380	-101,511
Revaluation of contingent bonds	-10,241	-16,269	-34,316	-27,331	-88,157
Total impact on income	6,954	639	-23,587	-4,391	-20,385
Profit for the year	14,332	27,231	16,973	25,494	84,030

Íslandsbanki hf.

Increase in value of loans	18,419	42,305	15,249	24,739	100,712
Loan impairment	-19,501	-28,312	-16,469	-19,029	-83,311
Revaluation of contingent bonds	0	0	0	0	0
Total impact on income	-1,082	13,993	-1,220	5,710	17,401
Profit for the year	23,982	29,369	1,866	23,418	78,635

Arion Bank hf.

Increase in value of loans	20,199	40,269	38,368	12,824	111,660
Loan impairment	-9,939	-26,787	-27,424	-17,514	-81,664
Revaluation of contingent bonds	-10,556	-11,604	-19,593	0	-41,753
Total impact on income	-296	1,878	-8,649	-4,690	-11,757
Profit for the year	12,871	12,557	11,094	17,056	53,578

Large commercial banks

Increase in value of loans	62,390	132,276	112,106	74,883	381,655
Loan impairment	-36,017	-87,893	-91,653	-50,923	-266,486
Revaluation of contingent bonds	-20,797	-27,873	-53,909	-27,331	-129,910
Total impact on income	5,576	16,510	-33,456	-3,371	-14,741
Profit for the year	51,185	69,157	29,933	65,968	216,243

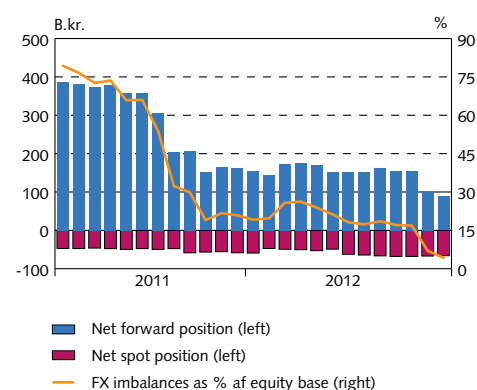
Sources: Commercial banks' annual financial statements, Central Bank of Iceland, Financial Supervisory Authority.

In recent quarters the banks' results have been characterised by various extraordinary income and expense items, e.g. profit on companies taken over, revaluation of loans taken over etc. Generally speaking, net interest income and fees and commissions comprise the banks' core income while trading gains on financial activities are more uncertain. Based on 2012 operations, and assuming a 3% interest margin and 1% net reduction in the value of loans as well as fee and commission income for the year but with unchanged operating cost, it is evident that the profitability of the banks' core operations is not satisfactory. ROE would be over 3.5% and return on total assets around 0.6%. It is clear that cost-cutting measures await the banks, especially regarding wages, IT and expert services purchased.

Currency imbalances have been substantially reduced ...

In recent quarters the large commercial banks' FX imbalances have decreased considerably. At the beginning of 2011 their combined currency imbalance relative to their capital base was over 79%, while at the beginning of 2013 the imbalance was just over 4%. A major factor in the decrease in 2012 was the recognition of Landsbankinn's contingent bond in foreign currency in the bank's accounts at the end of last year. The nominal value of the bond was conditional upon changes in the valuation of the excess value of specified assets from the fall of the old bank until year-end 2012. Furthermore, recalculations and currency conversions of exchange rate-linked loans to indexed or non-indexed loans in króna following the Supreme Court's judgement have reduced the imbalance.

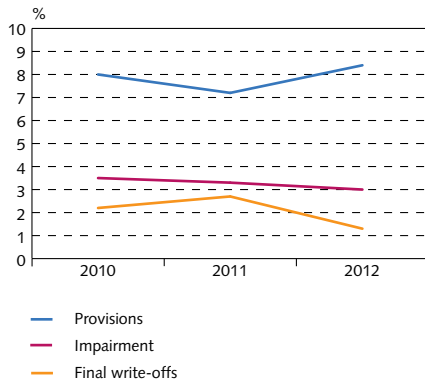
Chart VI-4
Three largest commercial banks' foreign currency imbalances¹



1. Parent companies.
Source: Central Bank of Iceland.

Chart VI-5

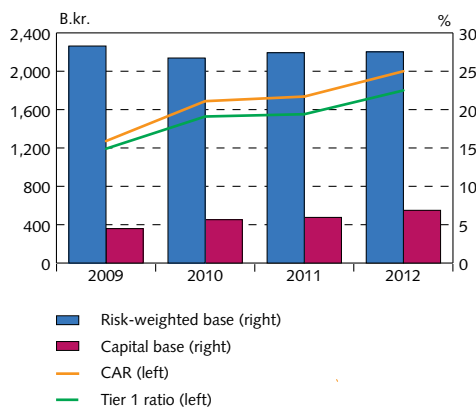
Three largest commercial banks' provisions for impairment, impairment and final write-offs¹
% of loans to customers



1. Consolidated accounts.
Sources: Commercial banks' annual financial statements.

Chart VI-6

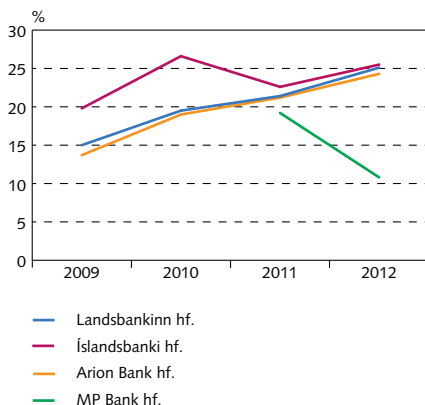
Three largest commercial banks' capital and risk-weighted base and capital adequacy ratios¹



1. Consolidated figures.
Sources: Commercial banks' annual financial statements.

Chart VI-7

Commercial banks' capital adequacy ratios¹



1. Consolidated figures.
Sources: Commercial banks' annual financial statements.

According to a Temporary Provision in its Rules on Foreign Currency Balance, No. 950/2010, the Central Bank's authorisation to grant credit undertakings a temporary exemption from the rules on foreign balance expired on 1 January 2013. Due to the circumstances which still prevail following the collapse of the Icelandic banking system, the Central Bank decided to accommodate the undertakings to some extent and on 21 December last year issued Rules No. 1171/2012, amending the Rules on Foreign Currency Balance. These state that the Central Bank may grant credit undertakings a temporary exemption for three months at a time from the rules on currency balance until 1 January 2014. At the end of March this year all of the commercial banks satisfied the Central Bank's rules on currency balance.

... but indexation imbalances remain high

The commercial banks' combined indexation imbalance rose YoY. At year-end 2012, the imbalance between the large commercial banks' indexed assets and liabilities was positive by over 192 b.kr., compared to an imbalance of 163 b.kr. at year-end 2011. The banks' indexation imbalance varies greatly: Landsbankinn is in a class by itself, with an imbalance equivalent to 66% of its capital base; Arion Bank's imbalance was 28% of its capital base, while Íslandsbanki's indexation imbalance was negligible. The principal explanations for the continuing increase in the total indexation imbalance YoY are the conversion of exchange rate-linked loans to indexed loans in tandem with debt restructuring, the conclusion of swap contracts, changes in the banks' consolidations as well as inflation during the period. A further discussion of the banks' indexation imbalance is available in Box IV-1.

Credit loss provisions and assessment of credit quality

The impairment reflected in the banks' provisioning shows the estimated impairment of loan portfolios from book value after the new banks were established (impairment in excess of the write-downs or "discount" from the value of the claims). It should be borne in mind, however, that the balance on credit loss accounts decreases when the loans which the provisions cover are finally written off. Therefore, the development of credit loss provisions on the book value of loan portfolios does not tell the entire story regarding the quality of loans and valuation when the value of claims for a considerable portion of loan portfolios is somewhat higher than the book value. At year-end 2012, the banks' provisions for credit losses on customer loans totalled 150 b.kr., or 8.4% of the book value of loans to customers, which is an increase of 1.2 percentage points from the previous year. In 2012 gross impairment on loans and claims amounted to 53 b.kr., and final write-offs were 24 b.kr. Final write-offs were considerable in 2010 and 2011, then decreased somewhat last year. In 2012 increased gross impairment was especially visible on loans to households and holding companies. Methodology applied by the banks in assessing the book value of loans, impairment and provisioning can vary in many respects. Some difference remains between the claim value and book value, especially of loans in default, offering some leeway to conclude the restructuring of loan portfolios.

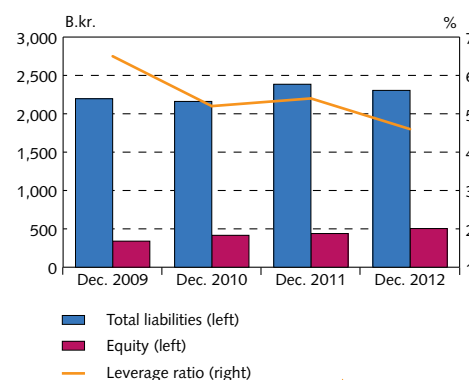
The banks' equity position is strong ...

The large commercial banks strengthened their capital position between 2011 and 2012. Their capital ratios rose by over 3 percentage points YoY, to 25% as of year-end 2012, including 22.5% in Tier I capital.⁵ The banks' capital ratios are well above the Financial Supervisory Authority's required minimum.⁶ The large commercial banks' capital base totalled 550 b.kr. at the end of 2012, after increasing by 74 b.kr., or 16%, from the previous year. The capital base consists primarily of share capital and retained earnings, while subordinated loans amounted to only around 10%. The banks' risk base was just over 2,200 b.kr. at year-end 2012, a YoY increase of 9 b.kr. Generally speaking the banks' risk base is comprised of credit risk, market risk and operational risk. Credit risk is the banks' most salient risk factor, comprising over 80% of the risk base. The credit risk base increased slightly YoY, while market risk decreased. The operational risk base rose; all the large commercial banks calculate this based on their average net operating income for the past three years.⁷ Due to their strong equity position and good operating profits last year, two of the three large commercial banks plan on paying dividends on 2012 profits equivalent to a total of 13 b.kr. MP Bank is somewhat of a special case among commercial banks, with a low capital ratio. The bank's capital ratio was only 10.8% at year-end 2012, decreasing markedly YoY, especially due to strong lending growth.

... and leverage ratios moderate

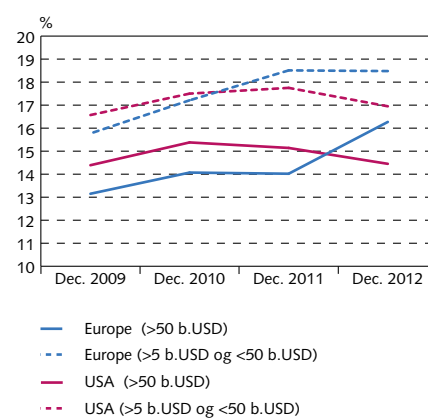
Credit institutions' risk bases take risk weights into account. For instance, if the composition of risk-weighted assets changes, the capital ratio can rise, even if both the capital base and the value of total assets remain unchanged. The more the ratio of risk-weighted assets to total assets falls, the less capital the bank must hold against assets, and the more debt it can take on. As a result, financial supervisors have given increasing consideration to leverage ratios (debt-to-equity ratios) and how they evolve. At year-end 2012, the ratio of debt to the book value of equity of the largest commercial banks was close to 460%, i.e. their leverage ratio was just under 4.6 compared to 5.4 at year-end 2011. It could be mentioned that the old banks' leverage just prior to their failure in 2008 was over 16, i.e. debts were more than 16 times the value of equity (around 30 if adjustment is made for equity which was financed by loans from the banks themselves, which is no longer permissible).

Chart VI-8
Liabilities, equity and leverage ratios
of the three largest commercial banks¹



1. Consolidated figures.
Sources: Commercial banks' annual financial statements.

Chart VI-9
Capital ratios of European and US banks¹



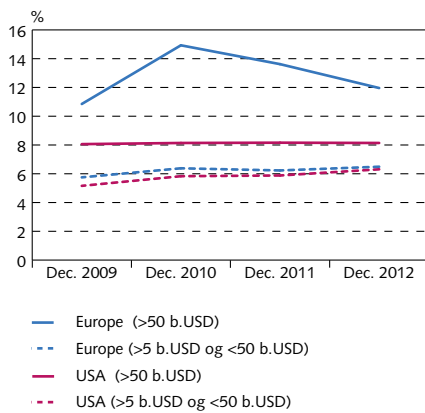
1. Average for banks in the EU and US based on total assets.
Source: Bankscope.

5. Capital ratio defined according to the Act on Financial Undertakings and the FME Rules on Capital Requirement and Risk-Weighted Assets of Financial Undertakings. Tier 1 capital consists of share capital, retained earnings, etc., as well as deductions; cf. Article 84 of the Act on Financial Undertakings.

6. According to Act No. 161/2002, on Financial Undertakings, the capital base of a financial undertaking must be equivalent to a minimum of 8% of its risk base, but the Financial Supervisory Authority has, by virtue of an authorisation in this same Act, prescribed a higher ratio. The commercial banks themselves assess their capital requirements (following the ICAAP procedure), after which the Financial Supervisory Authority reviews this assessment (SREP) and sets minimum capital requirements for the banks.

7. Cf. the Basic Indicator Approach in the Financial Supervisory Authority's Rules on Risk-Weighted Assets.

Chart VI-10
Leverage of European and US banks¹



1. Average for banks in the EU and US based on total assets.
Source: Bankscope.

Capital ratios and leverage of foreign banks⁸

In recent quarters European banks' capital ratios have risen, especially due to a higher capital base. At year-end 2012, the average capital ratio of larger European banks was over 16%, and around 18.5% for medium-size banks; these ratios had increased by some three percentage points since year-end 2009. Capital ratios of US banks are generally around 1.5 to 2 percentage points lower than those of European banks, and the respective ratios were 14.5% and 17% at year-end 2012. In the wake of the financial crisis, regulators pressed the banks strongly to boost their capital base and thereby their capital ratios. Furthermore, many regulators have already increased or intend to increase capital requirements for systemically important banks. As an example, Switzerland will demand a minimum capital ratio of 19% for systemically important banks and in Sweden banks of this type will be required to have a minimum capital ratio of 15.5% when new capital ratio requirements have fully entered into force.⁹

In general, smaller banks have a lower leverage ratio than larger ones. At year-end 2012, US banks' leverage ratios were 6-8, while leverage ratios of European banks were 6-12. Large European banks had the highest leverage ratios, although they had decreased somewhat from a peak at year-end 2010 in tandem with equity increases. The Icelandic banks have somewhat higher capital ratios than medium-size European and US banks, following their recent restructuring and also have lower leverage ratios, although the difference there is not as great. It can be argued that the position of the Icelandic banks will need to be strong in coming quarters due to uncertainty of various types.

Uncertainty of various types remains concerning loan quality

Some uncertainty still prevails regarding the actual value of the banks' loans. Defaults, for instance, remain high, uncertainty concerning the legality of loan contracts has not been completely resolved, loan restructuring is still not complete and there is considerable political uncertainty etc. Furthermore, it is conceivable that some undertakings will have to undergo debt restructuring a second time. In addition, the removal of capital controls could result in exchange rate volatility and swings in inflation, which could affect borrowers' ability to fulfil their commitments. Increased impairment could make a substantial impact on the banks' capital ratios. A strong equity position is therefore necessary until the above-mentioned uncertainty subsides.

8. Source: Bankscope

9. See, for instances, the report of the Committee on Systematically Important Financial Institutions in Denmark. Final Report; Introduction and summary, 14 March 2013.

An inflation-indexation imbalance develops when there is a mismatch between DMBs' indexed assets and liabilities. DMBs' indexation imbalance has been the subject of discussion for at least two decades, attracting increased interest when the imbalance becomes substantial or if inflation deviates substantially from its expected course. Attention has centred especially on DMBs' gains or losses on the imbalance. Through the years there have been both periods when the indexation balance was negative, i.e. when DMBs' funding was indexed to a greater extent than their assets, and periods with a positive balance, i.e. where DMBs' indexed assets exceeded their indexed obligations.

Indexation imbalance and interest margin

Banks profit on lending activities by charging an interest margin, i.e. lending at higher rates than they pay on deposits and other funding. If knowledge of future inflation developments were perfect, it would make no difference whether an imbalance existed between the indexation of funding and lending, or whether it was positive or negative. On the other hand, if inflation takes an unexpected turn, an imbalance between their indexed assets and liabilities impacts the banks' performance, depending on which type the imbalance is.

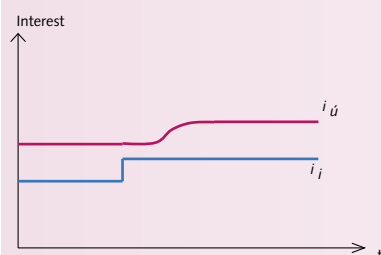
Box VI-1

Indexation imbalance

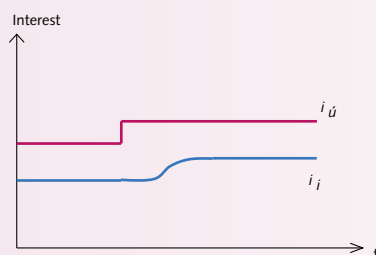
Chart 1

Unexpected increase in inflation

a) Negative balance

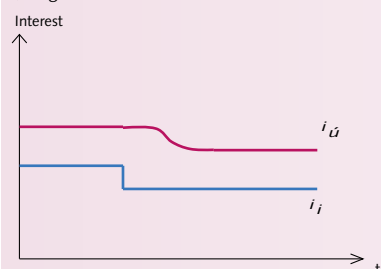


b) Positive balance

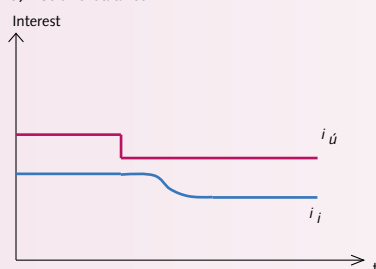


Unexpected decrease in inflation

c) Negative balance



d) Positive balance



Source: Central Bank of Iceland.

Chart 1. Change in inflation and impact on the interest margin of indexation imbalance. The upper chart shows an unexpected increase in inflation while the lower one shows an unexpected decrease in inflation. In the charts on the left (a and c) the inflation balance is negative, while it is positive in the charts on the right (b and d). Interest rates on loans are indicated by i_u and deposit rates by i_i . The area between the lines represents the interest margin.

The four charts show how banks' average deposit interest rates and average lending rates develop. To begin with, a balance exists and inflation develops in line with expectations; the interest margin, i.e. the difference between deposit rates (the lower blue line) and lending rates (the upper red line) is a measure of the bank's income. Inflation then takes an unexpected course. In Chart 1a, deposits are indexed but not loans, in other words, the indexation balance is

negative. A sudden rise in inflation results in an immediate increase in the bank's interest cost on deposits. The bank responds to this unexpected rise in inflation by raising its lending rates. Interest rates on all loan contracts cannot be revised immediately, but rates for new loans take the higher inflation rate into consideration. In time, interest on outstanding loans gradually increases, in addition to which loans at lower interest rates are gradually repaid while new loans are granted at higher rates. The interest margin, which shrank considerably due to the unexpected rise in inflation, gradually increases once more. How rapidly this occurs depends upon how rapidly the bank can revise its lending rates. An unexpected increase in inflation therefore causes the bank's income to temporarily decrease, i.e. it suffers a loss, if the inflation balance is negative.

Chart 1b shows what happens if inflation unexpectedly increases when the indexation balance is positive, i.e. when lending is indexed and not deposits. Interest rates on loans then rise immediately when inflation increases while interest rates on deposits take time to adjust. An unexpected increase in inflation therefore in this case boosts the bank's income temporarily.

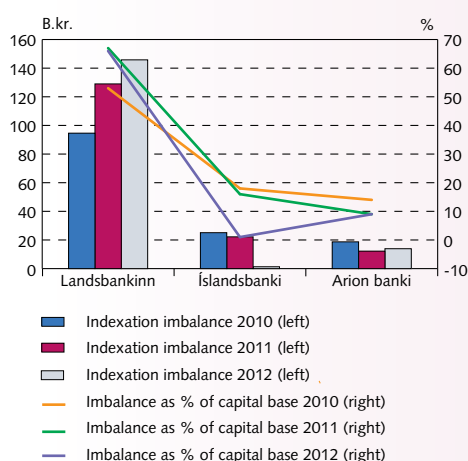
The impact of an unexpected drop in inflation is shown in Charts 1c and 1d. Chart 1c shows that if the indexation balance is negative an unexpected decline in inflation lowers funding cost and increases the interest margin. On the other hand, with a positive indexation balance, an unexpected drop in inflation results in a temporary contraction in the interest margin and thereby in income, until deposit rates have been lowered (Chart 1d).

An indexation imbalance therefore creates uncertainty concerning the bank's income. An unexpected increase in inflation, when the balance is positive, and unexpected drop in inflation when it is negative results in a temporary increase in the interest margin, with higher income than otherwise. An unexpected increase in inflation when the balance is negative or an unexpected drop in inflation when the balance is positive causes the interest margin to fall and income to drop temporarily. The conclusion is that if a bank has an inflation imbalance, whether positive or negative, it increases the uncertainty of its performance. The uncertainty is greater the longer the time it takes to revise interest rates on non-indexed agreements. As a result of this uncertainty, the bank can be expected to attempt to reduce its potential loss, in part by maintaining a higher interest margin than otherwise. Other things remaining equal, the stiffer the competition on the banking market, the less opportunity there is to maintain a high interest margin and therefore it becomes more important to balance indexed assets and liabilities.

DMBs' indexation gains and losses

High inflation was a persistent problem until just over 20 years ago. When inflation fell the most rapidly during the latter half of 1983 and in 1984, the banks' positive indexation balance caused them losses, as deposit rates lagged behind. Once the banks' rate decisions were liberalised around the middle of the 1980s indexation of deposits grew and the banks' indexation balance turned negative. The indexation balance was reversed in 1987 because of an increase in indexed lending and the banks' obligatory assets with the Central Bank were moved to an indexed account. In addition, competition for savings grew with the sale of indexed savings bonds as an alternative to savings accounts. The response to the positive indexation balance was to ban indexation of lending for a shorter term than two years, instead of three months. At the same time, the minimum length of indexed term deposits was extended from three months to six. These actions resulted in a persistent negative indexation

Chart 2
Indexation imbalance of the largest commercial banks



Source: Commercial banks' annual financial statements.

balance.¹ In the ensuing years, overall policy remained aimed at reducing indexation by lengthening the minimum term of indexed deposits and lending. The last change was made at the beginning of 1998, when the minimum length of indexed term deposits was extended from one year to three, while indexed bonds cannot be granted for a period shorter than five years. In recent years the banks' indexation balance has been positive, i.e. their indexed assets have exceeded their indexed liabilities. The inflation balance of Arion Bank, Íslandsbanki and Landsbankinn over the last three years is shown in Chart 2.

The banks' positive indexation balance gives cause to assess what impact this has on their operations. As previously mentioned, it is unexpected inflation developments which primarily determine whether the banks gain or lose on their indexation imbalance. Assessing such "gains" on the banks' positive inflation balance requires a comparison of their inflation expectations with actual inflation developments. The gain on the indexation balance is then:

$$\Pi_V = \left[\left(\frac{1 + \pi_t}{1 + \pi_{t-1,t}^e} \right) - 1 \right] * (E_V - S_V)$$

where Π_V is the gain on the indexation balance, E_V is indexed assets and S_V indexed liabilities, π is inflation during the period and π^e is the expected inflation. To calculate the outcome of such an example requires a decision on the basic assumptions, making the outcome rather dependent upon those assumptions. These assumptions include inflation expectations and also how long it takes to revise the interest rates on non-indexed liabilities, here in the case of the three large commercial banks.

For example, if the banks' inflation expectations for 2012 accorded with the Central Bank's inflation forecast in *Monetary Bulletin 2011/4*, the actual inflation that year was 1.1% higher than expected, or 5.2%. If it is assumed that revision of interest rates on non-indexed liabilities takes at least a year, then Íslandsbanki, which had an insignificant imbalance between indexed assets and liabilities, can be estimated to have profited by only 15 m.kr. on the unexpected inflation. Arion Bank, which had an inflation imbalance of 45 b.kr., would have gains of some 500 m.kr. while Landsbankinn, which had a somewhat higher imbalance of 146 b.kr., would have gains of around 1.5 b.kr. The proviso must be added that these calculations reflect the assumptions on which they are based.

1. Björgvin Sighvatsson (1994), DMBs' indexation imbalances 1980-1993, *Fjármálatíðindi* XLI (1), pp. 38-50. Central Bank of Iceland.

Box VI-2 Countercyclical capital buffer

In economic downturns, when asset prices and banks' equity drops, e.g. due to higher credit losses, banks have two possible routes to boost their capital ratios. Firstly, they can increase their capital base with a share capital increase or take out subordinated loans and, secondly, they can reduce their risk base by selling assets and cutting back lending. As banks often have difficulty in obtaining new capital at a time of falling asset prices, they respond to decreasing capital ratios by selling assets and reducing lending. Such responses can then result in deepening the economic contraction. The Basel Committee has proposed additions to its current capital requirements, called Basel III. The changes are primarily comprised of two aspects, firstly, a 2.5% general capital conservation buffer and, secondly a countercyclical buffer, based on economic cycles and systemic risk in the banking system.

The purpose of a countercyclical capital buffer is not to prevent default by financial undertakings but rather to ensure that the financial system has sufficient capital to maintain a normal supply of credit through business cycles.¹ Capital requirements are increased in an upswing, when lending growth is high and other indications point to an increase in systemic risk. In a downturn the capital buffer is removed or reduced. Banks thereby become better prepared to meet downturns without having to reduce lending or sell off assets.

According to a proposal for an EU Directive (CRD IV), banks are to assess their countercyclical capital buffer based on the following factors:

- assessment of the credit to GDP gap;
- other parameters which indicate an increase in systemic risk in the economy.

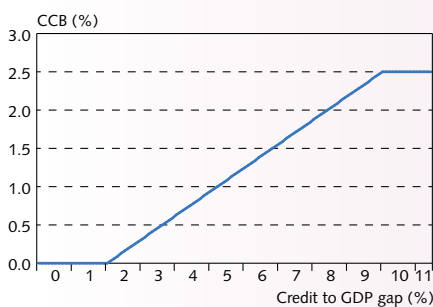
If the credit to GDP gap is more than the limit L, then a countercyclical buffer is applied to capital requirements. When the deviation has exceeded the upper limit H, the countercyclical capital buffer is at a maximum. The Bank for International Settlements (BIS) recommends that the lower limit for the deviation be 2% and the upper limit 10%.² The maximum of the countercyclical capital buffer is generally expected to be 2.5%. Between the lower and the upper limits, the buffer is increased linearly, as is shown in Chart 1.

BIS recommends measuring the long-term trend using a Hodrick-Prescott (HP) filter. Using the HP filter requires choosing a parameter λ , which affects the variability of the trend. The higher the value of λ the closer the trend is to a straight line. In analysing economic fluctuations λ is commonly set at 1600 for quarterly data while for analysis of fluctuations in lending growth it is recommended that λ be 400,000,³ because fluctuations in the lending ratio have been longer. Using 400,000 for quarterly data is equivalent to having λ equivalent to 1,600 for annual data.⁴ In assessing the long-term trend in Icelandic data the parameter λ was given the recommended values. Although calculations were made using parameters as low as 100, the selection of parameter did not greatly affect the size of the countercyclical capital buffer.

Assessment of capital buffers based on the Credit to GDP gap

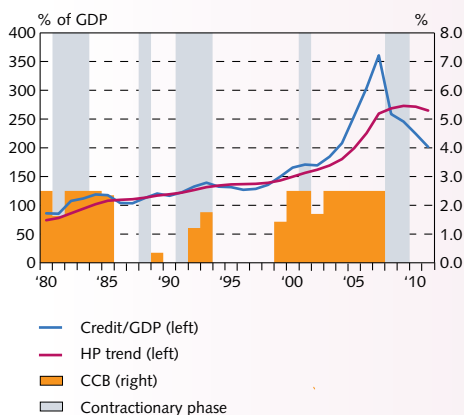
The Central Bank has annual data on household and corporate debt in Iceland from 1970 onwards. Debts owed by Icelandic households and corporates to domestic and foreign financial undertakings,

Chart 1
Credit to GDP Gap and countercyclical capital buffer



Sources: IMF, Central Bank of Iceland.

Chart 2
Credit to GDP ratio, HP trend and CCB



Sources: Statistics Iceland, Central Bank of Iceland.

- "Guidance for national authorities operating the countercyclical capital buffer". (2010) Bank for International Settlements
- See e.g. "The Macroprudential Toolkit". IMF Economic Review. (2011)
- See Drehman et al. (2010). Countercyclical Capital Buffers: Exploring Options. Bank for International Settlements.
- See Ran and Uhlig (2002). On adjusting the Hodrick-Prescott Filter for the Frequency of observations. The Review of Economics and Statistics.

including pension funds and the Housing Financing Fund (HFF), have grown from 81% of GDP in 1970 to 361% of GDP in 2007. Since 2008, household and corporate debt has declined, and its book value is currently around 200% of GDP.

Chart 2 shows the development of the lending ratio and contractions in the Icelandic economy since 1980.⁵ Data since 1970 was used to assess the trend and the need for a countercyclical capital buffer. It was assumed that the maximum countercyclical capital buffer would be 2.5%. In assessing the trend only data which existed at that point in time was used (a one-sided HP filter). Gross corporate and household debt has grown strongly in recent decades and applying the above-mentioned method indicates that additional capital would have been required in 18 of the last 32 years. Chart 2 shows that in some cases a downturn coincided with an assessed need for a countercyclical capital buffer. In those cases, the assessment that there was need for a buffer could result from changes in GDP rather than a lending increase and greater systemic risk. In other words, the lending ratio is increasing because of a decrease in the denominator of the ratio, GDP, rather than an increase in the nominator, total lending. Fluctuations in GDP are greater in Iceland than in other developed countries, which can require increased caution in the use of a ratio with GDP in the denominator.⁶ For this the upper and lower limits of deviation might need to be different here. It is also necessary to consider other factors in addition to Credit to GDP gap.

Chart 3 shows that the growth of the credit to GDP ratio in 2004–2007 was considerably more than 10%, indicating that a countercyclical capital buffer equal to 2.5% of risk-weighted assets, as proposed in the EU draft Directive (CRD IV), could be too low for Iceland. During those years the buffer should probably have been increased more, and additional actions taken to restrain lending growth.

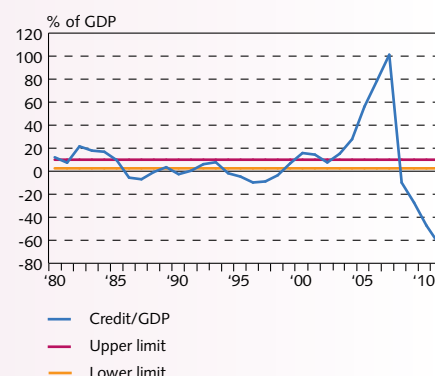
Other data indicating growing systemic risk

Current account: Chart 4 shows the current account balance from 1980 to 2012. In the 1980s, the current account deficit averaged 3.1% annually, in the 1990s it averaged 2.1% but in 2004–2008 it was on average 17.9%. A current account deficit is a common forerunner of financial crisis.⁷ A study has shown that the rapid lending growth in 2000–2005 only created increased risk of a banking failure in those countries where there was also a current account deficit.⁸ Ásgeir Daniélsson has shown that large fluctuations in terms of trade have had a major impact on economic cycles in Iceland.⁹ Developments in terms of trade are therefore, in addition to a current account deficit, data which could be useful to consider in assessing risk in the Icelandic banking system.

Real estate prices: In Iceland housing prices rose sharply in 2004–2008, well exceeding general wage rises. Chart 5 shows the development of the wage index and housing price index for the capital area from the beginning of 1994. Following the drop in housing prices in the wake of the banking collapse, the overall increase in wages and housing prices has been practically the same

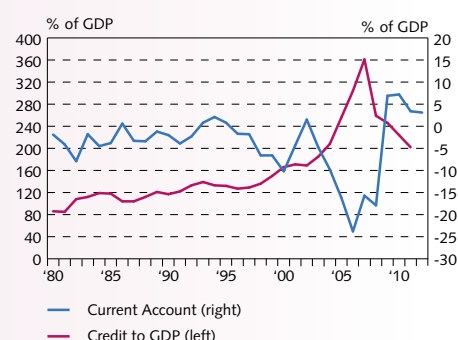
5. Bjarni G. Einarsson et al. On our own? The Icelandic business cycle in an international context. (2013) Central Bank of Iceland
6. Iceland's currency and exchange rate policy options, Special Publication no. 9.
7. See e.g. Kaminsky and Reinhart (1999). The twin crises: the causes of banking and balance of payments problems. *American Economic Review* 89, pp. 463–500.
8. Karlo Kauko. (2012). External deficits and non-performing loans in the recent financial crisis. *Economics Letters*.
9. Ásgeir Daniélsson (2008). The Great Moderation Icelandic Style. Central Bank of Iceland.

Chart 3
Credit to GDP gap



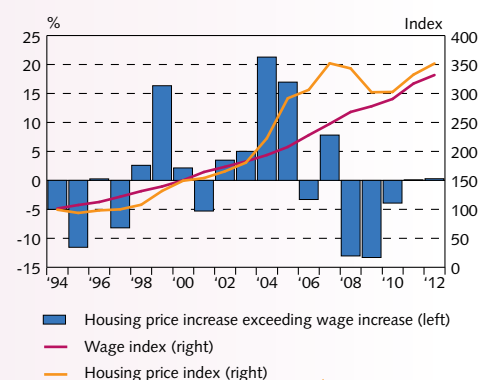
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 4
Credit to GDP ratio and current account balance¹



1. Current account excluding DMBs in winding-up proceedings and Actavis.
Sources: Statistics Iceland and Central Bank of Iceland.

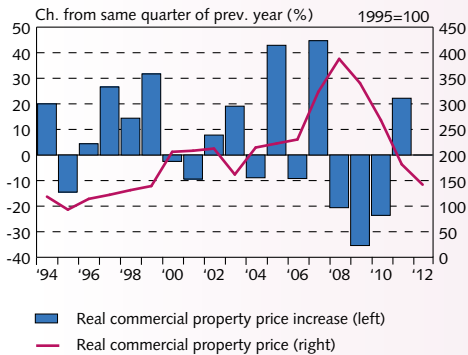
Chart 5
Wage index and housing price and housing price increase exceeding wage increase



Sources: Statistics Iceland, Registers Iceland, Central Bank of Iceland.

Chart 6

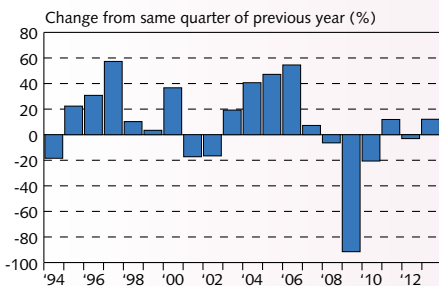
Real commercial property price in greater Reykjavík, deflated by CPI¹



1. Weighted average of industrial, retail and office properties. Data subject to uncertainty due to sparsity and divergence of measurements. Sources: Registers Iceland, Central Bank of Iceland.

Chart 7

Annual increase in NASDAQ OMX Iceland share index, deflated by CPI



Sources: Statistics Iceland, Nasdaq OMX Íslands, Central Bank of Iceland.

Table 1 Indicators used in deciding on a countercyclical capital buffer

Indicators	
Norway	Four main indicators: (1) Total household and corporate lending as a ratio of GDP, (2) real estate prices as a ratio of disposable household income, (3) real prices of commercial and industrial real estate, (4) credit institutions' ratio of wholesale funding. The indicators are compared to historical averages and deviation from the trend. More emphasis is placed on expert assessment, having regard to these indicators. The indicators are considered of little use to assess when requirements for a countercyclical capital buffer should be relaxed. Then other indicators should be considered, such as (1) increased market unrest and (2) higher probability of banking system losses.
Sweden	Ideas of using (1) Credit to GDP and the gap, (2) funding of lending growth, where the increased role of short-term funding is an indication of unsustainability, (3) risk appetite of financial markets, (4) household and corporate debt. Indicators as to when the requirements should be relaxed could be e.g. the index of the Swedish central bank measuring the stress on financial markets, i.e. bond, equity and FX markets.
Denmark	Ideas of considering (1) Credit to GDP and the gap, (2) lending to corporate and households, (3) real estate market developments, (4) losses and write-offs, (5) leveraging of credit undertakings, (6) conclusions of lending surveys etc.
Finland	Ideas of considering (1) Credit to GDP and the gap. Studies show that this indicator would not have served well historically in Finland, regard should have rather been had for the current account balance, housing prices, indebtedness and LTV ratios. Generally speaking, it is recommended that other indicators connected to micro- and macro-prudential measures and to financial markets be considered as possible warning signs.
Switzerland	Four indicators: (1) Real estate lending as a ratio of GDP, deviation from trend, (2) growth in mortgage lending, deviation from average, (3) real estate prices as a ratio of rent, deviation from average, (4) real change in real estate prices, deviation from average.
England	Ideas of using 17 different indicators. Eight indicators are directly connected with banks' balance sheets, e.g. leverage ratio, ROA, average risk weight, CDS spreads. Four market indicators such as volatility index (VIX) and long-term real interest rate. Five other indicators, e.g. total lending as a ratio of GDP and the gap, net international investment position as a ratio of GDP and current account balance.
Germany	Ideas of using (1) Credit to GDP and the gap, (2) interest on loans and interest margin, (3) lending requirements, (3) measures of risk appetite.

Sources: Norwegian Central Bank (2013), "Criteria for an appropriate countercyclical capital buffer", Research thesis No., 1, Riksbank (2012), "Countercyclical capital buffers as a macroprudential instrument", Research thesis December, Harmsen (2010) "Basel III. Macroprudential regulation by means of countercyclical capital buffers" Danmarks nationalbank monetary review Q4. Kauko (2012) "Countercyclical capital buffers in Finland" Finlands Financial stability 2-2012, Bank of England (2013), "The Financial Policy Committee's powers to supplement capital requirements", Bundesbank (2012), "Countercyclical capital buffer for credit exposures to German counterparties" Financial stability review 2012.

from 1994. Chart 5 also shows how much housing prices in the capital region rose in excess of general wage increases. In 2005 and 2006, housing prices in the capital region rose by a total of 42% more than the wage index.

Commercial and industrial real estate prices: Chart 6 shows the increase in commercial and industrial real estate prices in the capital region since 1994. After a sizeable increase during the period 2003-2007, prices subsequently fell by almost 60% in real terms. Chart 6 also shows the annual real increase in commercial and industrial real estate in the capital region. In both 2005 and 2007, prices for such property rose by over 40% in real terms.

Equity prices: Chart 7 shows the annual increase of the equity index of NASDAQ OMX Iceland since the beginning of 1993. As it shows, real equity prices rose steeply in 2002-2006 (19%, 41%, 47%, 55%). In the latter half of 2007, equity prices then began to

fall. A price decline on the equity market can result in direct credit losses by financial undertakings if the equities are pledged. The decrease can also be an indication of deteriorating corporate performance, which subsequently could result in credit losses by financial undertakings. Whether an increase in equity prices implies increased systemic risk depends, among other things, on whether the equities are pledged and whether the companies concerned are highly leveraged. It is important to gather data on corporate indebtedness and pledging of equities.

In most neighbouring countries, consideration is had for real estate market developments and private sector indebtedness in assessing systemic risk, see Table 1. Generally speaking, however, it is considered important to base a decision on countercyclical capital charges on an expert assessment as well as indicators.

On 13 February the Swiss central bank proposed that a countercyclical capital charge of 1% be adopted for Swiss banks. The charge, which is to take effect on 30 September, applied only to mortgage lending. On 14 March 2013 the Norwegian central bank proposed that a countercyclical capital charge be applied to all Norwegian banks. Further development of this was to be announced later this year.

Although it is possible to list a large number of indicators which it is important to monitor in assessing systemic risk, it would be inadvisable to allow statistical measures to completely determine the course in assessing systemic risk in the banking system. In addition to analysis of statistical data, therefore, good judgement must always be applied in assessing a countercyclical capital buffer.¹⁰

10. There seems to be a general consensus on this point, see for example: "Guidance for national authorities operating the countercyclical capital buffer" (2010) Bank for International Settlements.

VII Settlement of the failed banks' estates

Impact of the winding-up of Glitnir, Kaupthing and LBI on the economy

Based on the book value of the failed banks' assets and the breakdown of their claims between foreign and domestic parties according to their lists of claims, their distributions are estimated to create a disequilibrium in the balance of payments equivalent to -45% of GDP. Glitnir, Kaupthing and SPB (previously Icebank) aim at concluding compositions. In parallel with this, creditors will take over administration of the estates. Exemptions from the Act on Foreign Currency, however, have not been granted. In parallel with concluding compositions, it is necessary to minimise the upset to the balance of payments resulting from the estates' distributions as far as possible, and the cash flow imbalance over time. LBI (formerly Landsbanki Íslands) has continued distributions to priority creditors and has now paid about half of the estate's priority claims.

Settlements of Glitnir, Kaupthing and LBI

Concluding the winding-up of Glitnir, Kaupthing and LBI (formerly Landsbanki Íslands) will involve distributing the value of their assets to creditors or turning over control of those assets to them, as provided for by law. Because the assets will not cover all the claims on the failed banks, the outstanding amount will be written off. Creditors will never be able to recover more of their claims than the selling price of the estates' assets. Obligations may develop, however, between domestic and foreign parties in the winding-up process if the relative proportions of the estates' domestic and foreign assets do not match those of their claims. To get a picture of possible obligations, therefore, both the estates' assets and claims need to be examined.

Domestic claims and foreign claims

Although non-residents own the majority of the claims against the estates, domestic parties also hold claims. The largest domestic creditors are, firstly, the Central Bank's holding company, Eignasafn Seðlabanka Íslands, and secondly SPB hf. (previously Icebank). These claims are for the most part connected to collateralised lending (repos) in the years prior to the banking system collapse in 2008. Other domestic creditors include pension funds, securities and investment funds and the commercial banks.

Right up until the time the Central Bank published its Special Publication no. 9, entitled *Iceland's underlying external position and balance of payments*, this past March, the bank based its assessment of the division between domestic and foreign claims on the summaries of assets and liabilities submitted to the Central Bank by the Winding-up Boards of the failed banks and which reflect outstanding claims, both those which have been recognised and those which are disputed. Part of the domestic claims are from other Icelandic financial undertakings in winding-up proceedings and the beneficial owners of these claims are to a large extent foreign creditors of the financial undertak-

ings in question. The Central Bank therefore made a detailed analysis of the underlying owners of the domestic claims of Glitnir, Kaupthing and LBI. Table VII-1 gives a breakdown of claims as recognised in the estates' list of creditors at the end of last year. An estimated 5.3% of the underlying claims are in fact from domestic parties while around 94.7% are from non-residents.¹ This is a considerable reduction in the share of domestic claims from that of previous analyses.² Some uncertainty still remains, however, in this analysis. A considerable number of claims are still disputed and parties often negotiate a settlement between themselves both through voluntary agreements and set-offs. There is also uncertainty concerning the transfer of claims until distributions are made. Claims are bought and sold. The creditor group has undergone major changes from the beginning of the winding-up, and there have even been considerable changes in recent months. Almost all recent transactions have been between foreign parties, while domestic parties have also to some extent sold their claims in the past few months. This could alter the proportions of domestic and foreign creditors still further.

Table VII-1 Breakdown of claims on Glitnir, Kaupthing and LBI as recognised in the estates' list of creditors as of year-end 2012

	<i>Domestic claims</i> (%)	<i>Foreign claims</i> (%)
Glitnir	14.4	85.6
Kaupthing	11.6	88.4
LBI, priority claims	0.1	99.9
LBI, general claims	10.7	89.3
Total: weighted	9.5	90.5

Central Bank's analysis of the claims¹

Glitnir	6.2	93.8
Kaupthing	8.5	91.5
LBI, priority claims	0.1	99.9
LBI, general claims	5.8	94.2
Total: weighted	5.3	94.7

1. Part of the domestic claims are from credit institutions in winding-up proceedings. The underlying and beneficial owners of those claims are analysed.

Sources: Lists of claims of Glitnir, Kaupthing and LBI, Central Bank of Iceland.

Assets of the failed banks

The majority of the failed banks' assets are foreign, but the estates own substantial domestic assets as well. Most significant among the latter are claims on the new banks and holdings in them. Considerable uncertainty remains as to the value of both the domestic and foreign assets of the failed banks. The estates' assets, taking into consideration interim distributions, have risen as more claims have been collected and assets realised. As the estates can recognise the book value of their assets in varying ways, it is not certain that the book value of the estates is completely comparable. Table VII-2 gives a summary

1. Regard is had for priority claims against LBI and the weighting is based on the size of the estates.
2. See, for example, analyses in *What does Iceland owe?*, *Monetary Bulletin* 2012/2 and *Financial Stability* 2012/1.

Table VII-2 Book value of assets of Glitnir, Kaupthing and LBI at year-end 2012

B.kr.	Domestic assets		Total	Foreign assets		Total assets
	in ISK	in FX		in FX ¹		
Deposits with DMBs	66	60	126	640	766	
Loans to customers	67	43	110	598	708	
Loans to financial institutions	0	11	11	38	49	
Securities	56	54	110	411	521	
Derivatives	15	0	15	39	54	
Compensation bonds from new bank for asset transfer	0	315	315	0	315	
Holdings in subsidiaries and affiliates	228	13	241	14	255	
- thereof stakes in the new banks	226	0	226	0	226	
Other assets	7	14	21	10	31	
Total	439	510	949	1,750	2,699	
- thereof domestic appropriated assets with foreign pledges	10	32	42	0	0	
Position in escrow accounts	8	0	8	43	51	
Assets and position in escrow accounts	447	510	957	1,793	2,750	

1. An insignificant portion of foreign claims are in ISK.

Sources: Financial information Glitnir, Kaupthing and LBI, Central Bank of Iceland.

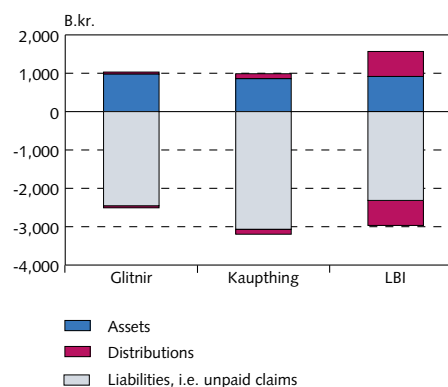
of the book value of the estates' assets as of year-end 2012, as recognised by the Winding-up Boards. Total assets are reported to be around 2,699 b.kr., in addition to which the estates had around 51 b.kr. in escrow accounts to cover distributions on priority claims which are still disputed. This amount is still a separately designated asset of the estates. Assets were therefore recognised as 2,750 b.kr. or 161% of GDP in 2012.³ The estates have already begun making distributions, and have paid 836 b.kr. to priority creditors (see Box VII-1 for further details). Total assets of the estates, including these distributions, amounted to almost 3,600 b.kr. at year-end 2012, equivalent to around 210% of GDP.

Domestic assets are now 957 b.kr., of which 447 b.kr. are recognised in krónur and 510 b.kr. in foreign currencies. Around 42 b.kr. of the domestic assets are appropriated assets secured by pledges abroad. Domestic assets have decreased from the previous year, primarily due to a prepayment of over 73 b.kr. by Landsbankinn on its A-bond issued to the old bank and a transfer by Kaupthing in September last year of a deposit of over 300 b.kr. from the Central Bank of Iceland to foreign financial undertakings. These deposits were exempt from the restrictions of the Act on Foreign Currency when amendments were made to the Act in 12 March 2012. Despite the distributions, the banks' foreign assets grew considerably YoY, if the transfer of Kaupthing's deposit is excluded, and currently amount to 1,793 b.kr.

Last year there were considerable changes in the domestic assets of the failed banks. Loans in Glitnir's asset-backed portfolios Haf and Holt are now classified as loans to customers instead of holdings in subsidiaries and affiliates. Most of these loans were restructured in 2012, and foreign-denominated loans to domestic parties without foreign currency income were converted to krónur. Derivative claims

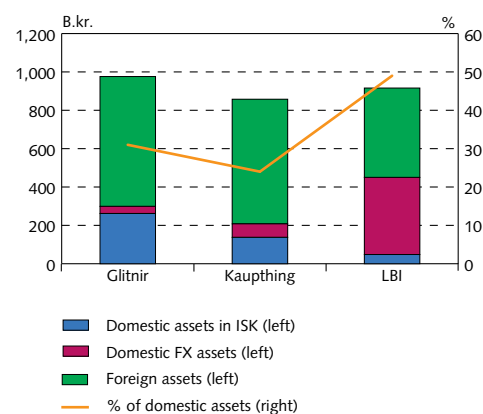
3. Based on reports of assets and liabilities of failed banks submitted to the Central Bank and financial information Glitnir, Kaupthing and LBI.

Chart VII-1
Assets, claims and distributions
of DMBs in winding-up proceedings
Book value 31/12 2012



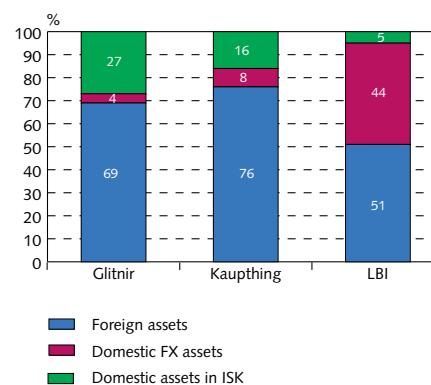
Sources: Financial informations Glitnir, Kaupthing and LBI, Central Bank of Iceland.

Chart VII-2
Estimated domestic/foreign breakdown of
assets of DMBs in winding-up proceedings
Book value 31/12 2012



Sources: Financial informations Glitnir, Kaupthing and LBI, Central Bank of Iceland.

Chart VII-3
Estimated % of domestic/foreign assets
of DMBs in winding-up proceedings
Book value 31/12 2012



Sources: Financial informations Glitnir, Kaupthing and LBI, Central Bank of Iceland.

Chart VII-4
Estimated domestic/foreign breakdown
of assets and claims of DMBs in winding-up
proceedings

Book value 31/12 2012



Sources: Claims lists and financial informations Glitnir, Kaupthing, and LBI, Central Bank of Iceland.

also decreased YoY, from 60 b.kr. to 15 b.kr. after some pension funds concluded agreements on settlement with Glitnir and Kaupthing. Securities in foreign currencies increased from 8 b.kr. to 54 b.kr. in connection with settlement of the banks' subsidiaries in Luxembourg and delivery of assets from their estates to the parent companies in Iceland. These assets were previously classified as claims on foreign financial undertakings. Domestic deposits also increased, reflecting the estates' increasing recoveries and growing liquid funds.

The relative share of domestic and foreign assets varies somewhat among the estates; LBI's domestic assets are the highest, at almost one-half, and Kaupthing's lowest, at around 24% (Chart VII-3). It should be borne in mind that LBI has made the highest distributions of the three estates and a relatively greater portion of foreign assets than domestic. If only domestic króna assets are considered, LBI's króna assets are the least while Glitnir's are the highest; this is due mostly to the holdings in Arion Bank and Íslandsbanki. The variation in the estates' proportions of domestic assets is explained mainly by the original split of assets between the new and the old banks. In Glitnir's case, domestic assets remained in asset-backed bond portfolios, Haf and Holt, and similarly in LBI domestic assets were in the Avens portfolio. This can be seen on the asset side of the estates.

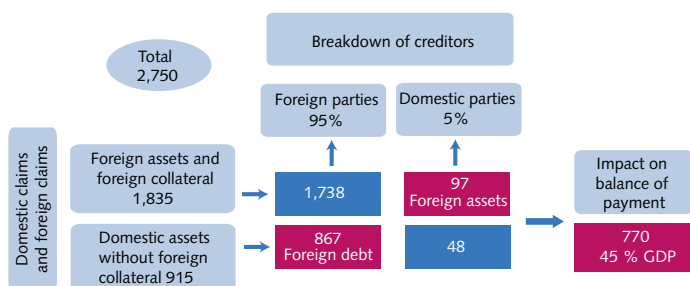
Impact of settlement of the estates on the balance of payments

Based on the above-mentioned book value of the estates' assets, as shown in Table VII-2, and having regard for domestic appropriated assets which are secured with pledges abroad, the estimated breakdown of the estates' assets is 33% domestic and 67% foreign. The breakdown of claims against the estates, 5.3% domestic and 94.7% foreign, differs significantly from their asset breakdown (Table VII-1). As a result of this difference, other circumstances remaining unchanged, in the distributions resulting from the estates' winding-up or composition, domestic assets accruing to foreign creditors will be greater than foreign assets accruing to domestic creditors, which will negatively impact the balance of payments. An estimated 2,604 b.kr. in assets will accrue to foreign creditors and around 146 b.kr. to domestic creditors, which means around 867 b.kr. of domestic assets will be acquired by foreign creditors and create a foreign debt. On the other hand, around 97 b.kr. of foreign assets will accrue to domestic parties and create a foreign asset. The net result is foreign debt amounting to 770 b.kr. or the equivalent of around 45% of GDP (Chart VII-5). This is a slightly better outcome than was arrived at in the Central Bank's Special Publication No. 9 of March this year, where the net position was estimated to be negative by 797 b.kr. The difference is due primarily to a lower proportion of domestic assets, 33% now instead of 35% in March. That in turn is due, firstly, to the fact that the estates' escrow accounts are now included in their assets and, secondly, to a slight overestimation of the value of domestic assets.

As Table VII-1 shows, the proportion of domestic claims against the estates varies considerably: for Kaupthing this is estimated at 8.5%, 6.2% for Glitnir and substantially lower for LBI. The propor-

Chart VII-5

Estimated impact of the winding-up of Glitnir, Kaupthing and LBI on the external position



Amounts in b.kr. Breakdown of creditors is based on recognised claims in the banks' lists of claims. Based on asset portfolios as of year-end 2012. Domestic appropriated assets secured by foreign collateral are classified as foreign assets. The estates' assets may not be recognised in a manner which makes them fully comparable.

Sources: Financial information and lists of claims of Glitnir, Kaupthing and LBI, Statistics Iceland, Central Bank of Iceland.

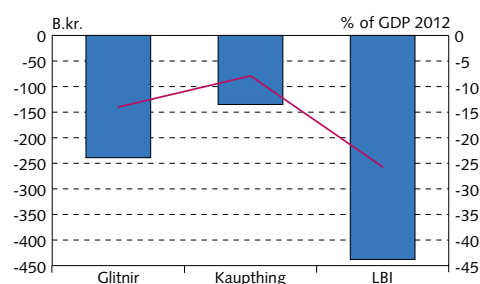
tion of the estates' domestic assets, without regard to foreign pledges of domestic appropriated assets, also varies somewhat: it is highest for LBI at 49%, 31% for Glitnir and lowest for Kaupthing, 24%. Kaupthing thus has the highest share of domestic claims and the lowest proportion of domestic assets. The estimated payments by the estates all create a foreign debt. The impact of Kaupthing is estimated to be negative by the equivalent of 8% of GDP (Chart VII-6), of Glitnir 14% and of LBI by almost 26% of GDP, or in total 48% of GDP if foreign pledges of domestic appropriated assets are not taken into account. In addition, LBI has already distributed to foreign parties a substantial amount of domestic assets which are not included here.

The above figures are based on book value according to the estates' results. The estates' assets include domestic assets in krónur recognised at 447 b.kr. and domestic assets in foreign currencies recognised at 510 b.kr. Holdings in Íslandsbanki and Arion Bank are the largest of the estates' domestic assets in krónur. The book value of the holding in Arion Bank is equivalent to its equity while the holding in Íslandsbanki is recognised at just over 80% of equity. Each 10% decrease in recoveries on the estates' holdings in the banks by sale to domestic parties reduces the impact of the estates' winding-up on the net external position by just over 1% of GDP. The impact would be similar if the proportion of domestic claims were to increase from current expectations. For each two percentage points that the share of domestic claims increases, the impact of the estates' winding-up on the net external position decreases by the equivalent of just over 3% of GDP (Chart VII-7).

Distributions by the estates and their impact

As previously mentioned, the Central Bank now uses the failed banks' lists of claims to analyse the share of domestic and foreign claims, instead of the estates' summary of assets and liabilities as previously. The share of foreign claims has increased over previous analyses, from around 87% previously to 95% now, with the result that a greater share of the estates' assets will accrue to foreign creditors. The estates' principal assets are claims on domestic parties in Icelandic

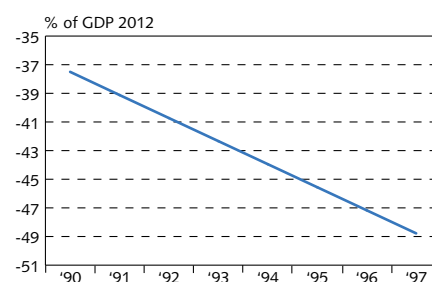
Chart 6
Estimated impact of settlement of DMBs' winding-up on net IIP
Year-end 2012



■ Impact on balance of payments (left)
— % of GDP 2012 (right)

Sources: Claims lists and financial informations Glitnir, Kaupthing, and LBI, Statistics Iceland, Central Bank of Iceland.

Chart VII-7
Impact of foreign claims on DMBs in winding-up proceedings on net IIP



Sources: Claims lists and financial informations Glitnir, Kaupthing, and LBI, Statistics Iceland, Central Bank of Iceland.

krónur, claims on domestic parties in foreign currencies, foreign assets in foreign currencies and holdings in the new banks (Table VII-2 and Chart VII-8).

Claims on domestic parties in Icelandic krónur

These assets are recognised at a book value of 221 b.kr. Just over one-third of this amount, some 85 b.kr., is already liquid funds, most of which is on deposit with commercial banks in savings accounts and to a limited extent in short-term Treasury paper. Apart from liquid funds, the largest asset items are loans to customers, 67 b.kr., and securities, 56 b.kr., mostly listed and unlisted equities and Treasury bonds.

Claims on domestic parties in foreign currencies

These assets are recognised at a book value of 510 b.kr. Of this amount, around 60 b.kr. is on deposit in foreign currency accounts with the commercial banks. Apart from this, Landsbankinn's bonds are 315 b.kr., state guaranteed securities are 54 b.kr. and loans to customers and financial undertakings another 54 b.kr.

Claims on foreign parties in foreign currencies

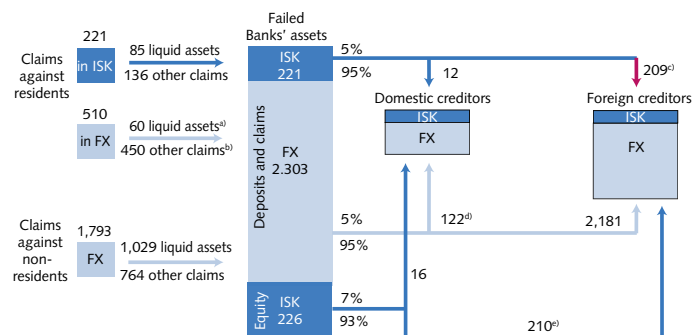
The book value of these assets is ISK 1,793 b.kr. Of this amount, 1,029 b.kr. or 57% is liquid funds. All of this is kept abroad, partly in liquid bonds and bills, which are classified as securities in Table VII-2. Other claims on foreign parties amount to 764 b.kr. or 43% of the estates' foreign assets. Loans to customers are by far the greatest share of this, totalling 598 b.kr. or 78% of foreign assets, which gradually becomes liquid funds as loan books are run off. These loans are in many instances also connected to the estates' holdings in the companies in question, i.e. shareholdings. Just over 100 b.kr. of the loans are subordinated loans against assets in a subsidiary in Luxembourg.

Holdings in the new banks

The book value of Glitnir's 95% holding in Íslandsbanki and Kaupthing's 87% stake in Arion Bank is 226 b.kr.

Chart VII-8

The failed commercial banks: assets, claims against residents and non-residents, and estimated disbursements. Estimated in April 2013 based on asset portfolios as of year-end 2012 and claims lists. Amounts in b.kr.¹



1. The estates' assets may not be recognised in a manner which makes them fully comparable.

a) Foreign-denominated deposits.

b) A portion of these claims, but not all of them, are against parties with some foreign-denominated income some pressure on the exchange rate.

c) New offshore krónur; pressure on the exchange rate.

d) Uncertain whether creditors will convert to krónur.

e) Possible pressure on the exchange rate, depending on which currency is used to pay for the holdings.

Sources: Financial information and lists of claims Glitnir, Kaupthing and LBI, Central Bank of Iceland.

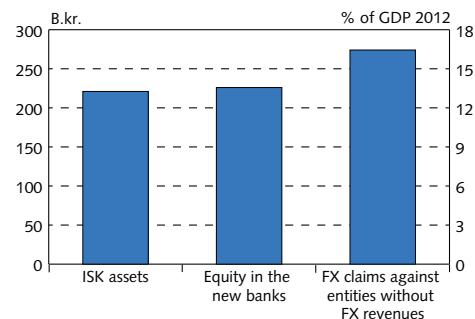
The amount of the debt which will be owed by domestic parties to foreign parties upon the conclusion of the winding-up proceedings is not easy to predict. One approach to estimating the figure is to examine what the outcome would be if currently existing domestic and foreign assets are divided between domestic and foreign creditors based on their current proportions. This would result in foreign creditors receiving an estimated 209 billion Icelandic krónur, of which around 80 b.kr is already in liquid funds. The remaining amount which is still tied up in assets is not all liquid and will be released over a period of some years. If these funds were distributed, it would increase the króna assets of foreign parties under capital controls. In addition, around 2,181 b.kr. of assets in foreign currencies would accrue to foreign creditors, 1,031 b.kr. of which is already liquid funds. Based on the Winding-up Boards' book value of holdings in the new banks, 210 b.kr. of their sales value would accrue to foreign creditors.

Domestic parties owing foreign-denominated debt to the failed banks have partial access to foreign credit markets to refinance those claims or a considerable amount of liquid assets to cover the banks' claims. It is currently estimated that, of the estates' 510 b.kr. in foreign-denominated claims on domestic parties, less than 274 b.kr. are claims against parties who have no foreign assets with which to pay the claims or have no access to foreign credit markets (Chart VII-9). The estates' domestic assets recorded in Icelandic krónur total 447 b.kr., of which 419 b.kr. belong to foreign creditors. If this amount is to be paid to foreign creditors in foreign currencies, the entire amount will have to be refinanced. The above-mentioned amounts of domestic assets which must be paid to foreign creditors could decrease substantially if agreements are reached on the distributions.

Conclusion of winding-up

A statutory amendment of 12 March 2012 placed DMBs in winding-up proceedings within the scope of the Act on Foreign Currency, No. 87/1992. They are therefore governed by the restrictions in the Act, although exempt from certain provisions such as repatriation obligations, foreign investment, foreign borrowing and lending etc. Capital movements in foreign currency were restricted, with the exception of their cash balances in foreign currency on deposit with foreign financial undertakings or the Central Bank of Iceland, as of close of the day on 12 March 2012. In addition, an exemption provision was cancelled which had allowed cross-border transfers in domestic currency in connection with payment of claims from the insolvent estates and payment of contractual claims provided for in compositions. The estates therefore can only pay creditors those funds which were exempt from the restrictions of the Foreign Currency Act, unless granted an exemption by the Central Bank of Iceland. According to the most recent amendment to Act No. 87/1992, on Foreign Currency, which was adopted on 9 March this year, the Central Bank is to consult with the Minister on exemptions concerning individual parties with balance sheets totalling over 400 b.kr. if the exemption could have a substantial impact on the nation's debt position and concern ownership of the commercial banks. All three estates, Glitnir, Kaupthing and LBI, fall into this category.

Chart VII-9
Domestic assets of the failed banks
which need to finance
Book value 31.12.2012



Sources: Financial informations Glitnir, Kaupthing and LBI, Statistics Iceland, Central Bank of Iceland.

Winding-up of the estates can conclude in one of two ways after guaranteed and priority claims have been paid. The estates must then either be placed in liquidation, as provided for by law, and the liquidator will endeavour to realise the estates' assets and distribute them to creditors, or the estates can seek composition with creditors, who take over the administration of the estates and determine their future vision. Both Glitnir and Kaupthing intended to reach compositions in the final quarter of 2012. They did not manage to do so and the Winding-up Boards issued notification to this effect in November last year. The approval of the Central Bank of Iceland of exemptions from the Foreign Currency Act, to enable the estates to seek composition, has not been granted. Both estates have, however, applied for such an authorisation. It is evident that the estates have a way to go yet before compositions can be achieved, even if the Central Bank's approval were available. LBI will continue to convert assets into liquid funds and make distributions to priority creditors. After that a decision can be taken as to whether the estate's winding-up should conclude with composition or liquidation.

Distributions of the estates must be placed in a firm framework

Based on the current book value of the failed commercial banks' assets and their estimated distributions, this will cause a major disequilibrium in the balance of payments, which can be limited, however, by agreements. If the estates had not been brought under the Act on Foreign Currency on 12 March 2012, making it possible to control their distributions, these payments could have created major instability on the FX market. Three main aspects need to be considered in connection with the estates' distributions, in order to limit the disequilibrium in the balance of payments:

- At a certain point in time, the failed banks are likely to dispose of their holdings in the new banks. The book value of these holdings is more than half of Glitnir's and Kaupthing's ISK-denominated domestic assets. If the holdings are sold at their current book value, some 210 b.kr. of their sales price will accrue to foreign creditors.
- Other ISK-denominated domestic assets amount to around 221 b.kr. Of these, 85 b.kr. are liquid funds, which upon their distribution will boost somewhat the already existing volatile króna assets of foreign parties in the economy and possibly delay the removal of capital controls.
- The estates hold substantial foreign-denominated claims on domestic parties, principally Landsbankinn. Sufficient liquid FX assets or access to refinancing do not exist to cover these obligations in full.

The intention is to remove capital controls without causing major instability on the FX market. This depends in part on how successfully the continuation of the failed banks' winding-up can be arranged. In the first place, the repayment profile of the bonds issued between the new Landsbankinn and the old bank needs to be extended, with refinancing or by other routes. As pointed out in Chapter II, Iceland's

debt repayment profile is extremely heavy in coming years. Given the uncertainty of the new bank's access to foreign refinancing, it is not certain that it will be able to make the payments on these bonds, at least not without creating considerable pressure on the exchange rate. Furthermore, if the terms of the bonds are not modified there will be little scope for additional outflows during the instalment period, e.g. of non-residents' liquid króna assets or their holdings in the failed banks, or for the relaxation of capital controls unless this is offset by other capital inflows. In addition to extending the Landsbankinn bonds, a firm framework needs to be established for distributions to the estates' foreign creditors.

Ranking of claims

The time limit for lodging claims against the estates of the three failed banks, Glitnir, Kaupthing and LBI (previously Landsbanki Íslands) expired in the latter part of 2009. Claims were lodged in those currencies in which the obligations between the parties were originally concluded. The priority of claims against the estates is determined by the general rules of the Act on Bankruptcy etc.¹ Claims were lodged in accordance with their ranking as provided for in Articles 109-114 of the Act. The priority of the claims varies according to the number of the article which applies to them. Claims lodged with reference to Articles 109-111 include: i) proprietary claims (Art. 109), where a creditor has managed to prove its ownership of a specific asset in the custody of the estate; ii) claims for the cost of administration of the estate (Art. 110) and iii) secured claims (Art. 111), which enjoy lien rights or other security interests in the estate's assets. Priority claims lodged with reference to Art. 112 are mainly claims for salaries and wage-related fees. The ranking of claims was altered, however, by the emergency legislation, making deposits also priority claims. Claims with reference to Art. 113 are general claims, and subordinated claims are lodged with reference to Art. 114. It is evident that no payment will be made towards subordinated claims. Claims with reference to Articles 109-111 will usually be paid in those currencies in which the obligations between the parties were originally concluded. Claims with reference to Articles 112-114 are converted to krónur based on the exchange rates as of 22 April 2009, as provided for in Act No. 44/2009, amending the Act on Financial Undertakings.² This prescribed in detail how the winding-up proceedings of financial undertakings should be carried out. Thus it makes no difference in what currency the obligation was originally created when payments are made towards claims with reference to Articles 112-114. These claims will then probably be paid in the currencies in which the estates make payment. Disputes have arisen as to how amounts disbursed in foreign currencies should be converted to krónur, i.e. whether the exchange rates as of 22 April 2009 should be used, the exchange rates on the date of payment, or the exchange rates in Central Bank auctions. Judgements in this dispute will be pronounced by the Supreme Court before the end of this year.

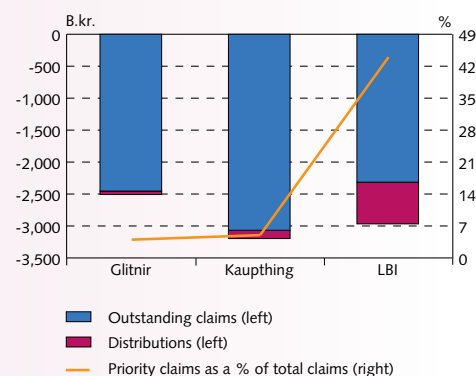
Proprietary claims, with reference to Art. 109, and claims for the administration of the estate, with reference to Art. 110, can be lodged at any time during the winding-up process, regardless of time limits for lodging claims. The estates are still receiving claims lodged with reference to these Articles, and notification has been given that still more will be lodged.

1. Act No. 21/1991.
2. Act No. 161/2002.

Box VII-1

Claims on the failed banks, distributions and the amount of outstanding claims

Chart 1
Claims, distributions and proportion of priority claims of DMBs in winding-up proceedings
Year-end 2012



Sources: Financial information Glitnir, Kaupthing and LBI, Central Bank of Iceland.

Claims against the failed banks' estates have decreased steadily as their winding-up has proceeded. Many creditors, for instance, originally lodged claims for the highest possible amounts, but have accepted decisions by the winding-up boards to reject or reduce the claim amounts. Claims have been cancelled through set-offs and voluntary agreements have been reached on a large number of disputed claims. A good number of unresolved disputes concerning the legitimacy of claims still remain, however, and it is clear that many of them will only be settled by the courts.

Distributions

The estates have already commenced distributions to creditors for priority claims. LBI has made three interim distributions, totalling 652 b.kr., Glitnir paid the majority of recognised guaranteed and priority claims in March 2012 totalling 54 b.kr. and even before the time limit for lodging claims expired Kaupthing paid its so-called EDGE account deposits for which the parent company in Iceland was responsible, totalling 130 b.kr. The estates have made payments totalling 836 b.kr. Part of this was paid from domestic recoveries, including 18 billion in Icelandic krónur and an advance payment by Landsbankinn to LBI in June last year amounting to over 73 b.kr. in foreign currency. However, the major portion of the distributions were paid from foreign recoveries. In addition to the above mentioned distributions, some 51 b.kr. is in escrow accounts to cover disputed priority claims. This amount is still a separate asset of the estates. The largest share of this amount is related to disputes as to whether money market facilities between financial undertakings should be priority claims or general claims. This dispute will be resolved before the Supreme Court.

Amount of outstanding claims

Net outstanding claims on the failed banks' estates, which have been lodged with reference to Articles 109-113, amounted to a total of 7,836 b.kr. as of the end of last year (Table 1). However, it must be borne in mind that the estates' classification of their outstanding claims is not completely comparable and one estate's disputed claims may be underreported. In these figures consideration has been given to estimated set-offs. Claims for which payments have been deposited to escrow accounts due to disputes are considered to be still outstanding. The amount of general claims is 7,096 b.kr. and the amount of guaranteed claims and priority claims is 740 b.kr. The largest factor here is priority claims of 666 b.kr. against the estate of LBI, of which 586 b.kr. are Icesave deposit claims. Considerable uncertainty remains concerning the amount of outstanding claims. The Winding-up Board of LBI, for instance, has only made final decisions on around one-quarter of general claims, some 7% of outstanding claims in Kaupthing's estate are disputed and over 13% of outstanding claims in Glitnir's estate are disputed.

Table 1 Outstanding claims against the estates of Glitnir, Kaupthing and LBI as of year-end 2012¹

<i>B.kr.</i>	<i>Glitnir</i>	<i>Kaupthing</i>	<i>LBI</i>	<i>Total</i>
Specific claims (Art. 109)	7	8	0	14
Claims on estate (Art. 110)	0	0,2	0	0
Collateral claims (Art. 111)	12	5	0	17
Priority claims (Art. 112)	39	4	666	709
General claims (Art. 113)	2,397	3,050	1,649	7,096
Total	2,454	3,067	2,315	7,836

1. The estates' classification of outstanding claims is not fully comparable.
Sources: Financial information of Glitnir, Kaupthing and LBI.

Several financial undertakings are currently in winding-up proceedings in Iceland. In addition to the failed commercial banks Glitnir, Kaupthing and LBI, which are discussed in Chapter VII, Saga Capital, VBS, Drómi (previously SPRON), EA fjárfestingarfélag (previously the former MP Bank) and SPB (previously Icebank) are being wound up. The winding-up proceedings of ALMC (formerly Straumur-Burðarás investment bank) concluded with composition in 2010. Two estates, those of SPB and Drómi, as well as ALMC, have substantial assets. The stage which these estates have currently reached in their winding-up varies greatly.

Drómi's asset portfolio substantially mortgaged

The holding company Eignarhaldsfélagið Drómi was established for the estate of the savings bank SPRON and subsidiaries upon their failure in the spring of 2009. There is little publicly available information on Drómi's situation apart from the company's annual financial statements for 2011. Its assets were recognised at a book value of over 85 b.kr. The largest portion of this asset portfolio, around 75%, were loans granted to a large extent through the subsidiary Frjálsi fjárfestingarbankinn. Considerable uncertainty prevails as to the value of these assets following Supreme Court judgements on unlawful exchange rate indexation and the validity of final receipts for payment. Other substantial assets of the company include unsettled derivative contracts, appropriated assets and lots, and other assets. By far the largest portion of the assets of Drómi and subsidiaries are assets from retail banking activities. The duration of the asset portfolio is not shown in the annual financial statements, but there are many indications that this is considerably longer than those of other estates, whose asset portfolios derived mostly from their investment banking activities. It is therefore likely to take a good while to convert the assets to liquid funds. By far the largest portion of the company's debts are connected to the transfer of its deposits to Arion Bank upon the collapse of SPRON. At year-end 2011 this debt was 73 b.kr. All of Drómi's assets are pledged to secure this debt.

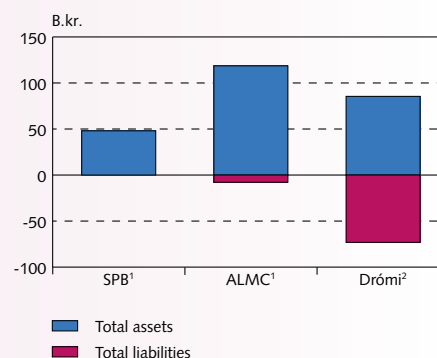
Winding-up of ALMC concluded with composition

The winding-up proceedings of ALMC concluded with composition with its creditors in 2010, although several claims against the estate are still disputed. The composition resulted in the issuance of a new EUR-denominated bond to creditors, secured with the company's assets. Since that time the company has worked on converting assets to liquid funds and repaying debts. Upon the collapse of the bank its deposits were transferred to Islandsbanki and nearly all assets are pledged to secure the deposits. The company refinanced this debt, which was denominated in krónur, in March 2012, with a loan in EUR amounting to over 28 b.kr. One disbursement of just over 3 b.kr. has been made by the company to general claims in consultation with creditors in March 2011. At year-end 2012, the company's total assets were almost 119 b.kr. and its borrowing in connection with refinancing was close to 8 b.kr. The company therefore made a substantial payment on borrowing in connection with the deposits in 2012. The duration of assets and liabilities in its annual financial statements suggests that the company is aiming at repaying the loan in full in 2013 and at least half of its asset portfolio will be converted to liquid funds over the next three years. According to its annual financial statements, the major share of the company's assets are in loans and equity positions in companies, primarily in Central and Western Europe and Nordic countries. About 12% of the company's assets are ISK-denominated.

Box VII-2

Smaller financial undertakings in winding-up proceedings

Chart 1
Total assets and liabilities of SPB, ALMC and Drómi



1. As of 31 December 2012. 2. As of 31 December 2011.
Sources: ALMC and Drómi Financial Reports and financial informations SPB.

SPB proposes a scheme of arrangements

Like Drómi and ALMC, SPB was placed in winding-up proceedings in March 2009. At year-end 2012 the book value of its assets was just over 48 b.kr. after set-offs and precautionary write-downs. Of this amount, almost 36 b.kr. is liquid funds, 23 b.kr. of which is in foreign currencies.

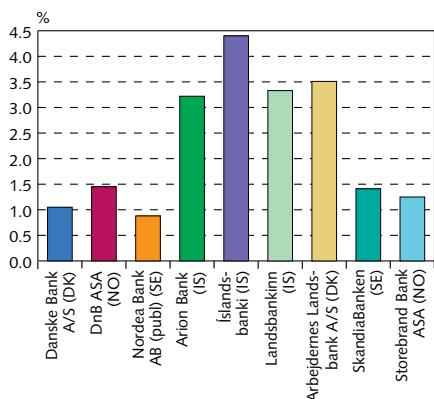
The highest claims lodged in the estate come from the Central Bank's portfolio, Eignasafn Seðlabanka Íslands (ESÍ). ESÍ's claims are secured claims with reference to Art. 111 of the Act on Bankruptcy etc.,¹ totalling over 225 b.kr. The claims arise for the most part from SPB's repos with the Central Bank. Although SPB's Winding-up Board has rejected the majority of these claims, ESÍ has appropriated pledged assets amounting to 45 b.kr. Other outstanding recognised claims as of the end of June 2012 were practically all general claims with reference to Art. 113, totalling over 84 b.kr. SPB has proposed a scheme of arrangements. If accepted, this will also settle the dispute on ESÍ's claims.

1. Act No. 21/1991.

Appendix I

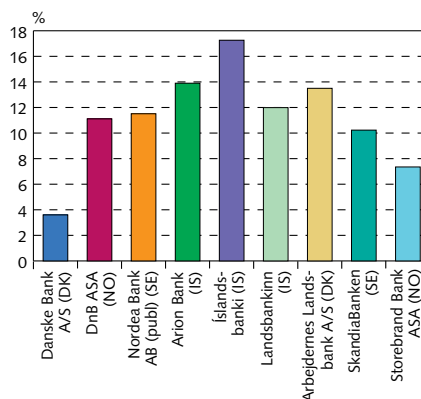
Nordic comparison

Chart 1
Net interest margin¹



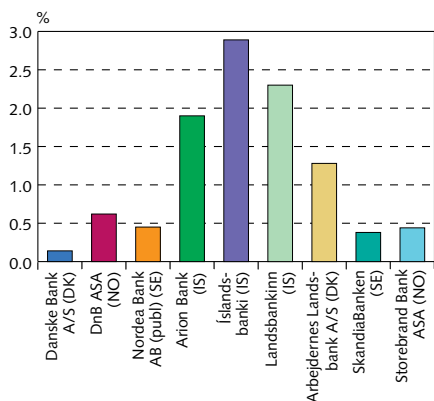
1. Islandsbanki's large net interest margin is due largely to a difference in financial reporting methods used by the banks; Islandsbanki uses a different method for redemption of interest income from transferred loans.
Source: Bankscope.

Chart 2
Return on equity



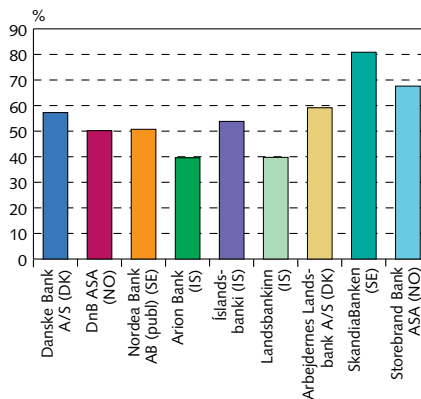
Source: Bankscope.

Chart 3
Return on total assets



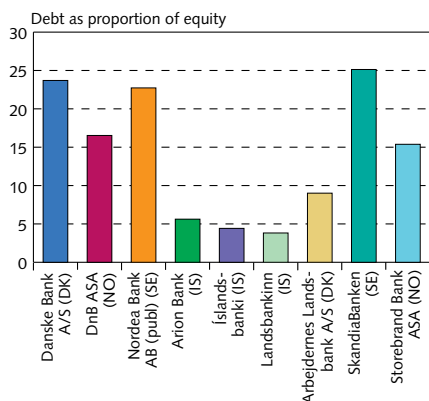
Source: Bankscope.

Chart 4
Cost-to-income



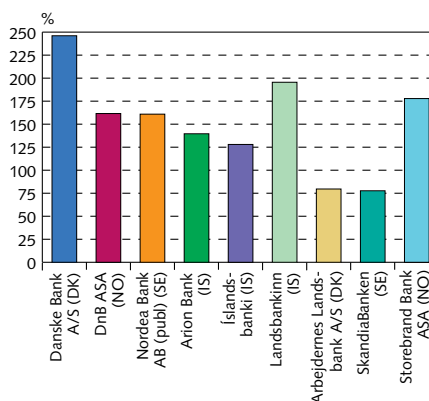
Source: Bankscope.

Chart 5
Equity/liabilities



Source: Bankscope.

Chart 6
Loans/customer deposits



Source: Bankscope.

Appendix II

FSI core indicators for the three largest commercial banks¹

%	2011				2012			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Regulatory capital to risk-weighted assets ²	21.4	23.2	23.9	21.1	21.1	22.7	22.9	24.6
Regulatory Tier 1 capital to risk-weighted assets ²	19.7	21	21.8	19.4	19.2	20.9	21.1	22.6
Return on assets ²	3.0	3.3	2.7	1.1	2.5	2.5	2.1	2.4
Return on equity ²	19.0	20.2	15.7	6.7	16.5	15.5	12.8	13.8
Interest margin to gross income according to EBA definitions ²	57.2	47.1	53.4	53.9	56.7	50.3	53.3	48.8
Non-interest expenses to gross income according to EBA definitions ²	75.9	88.8	86.5	108.1	72.9	79.0	80.7	79.9
Liquid assets to total assets ³	19.2	18.2	21.3	18.0	18.0	17.5	19.5	20.7
Liquid assets to short-term liabilities ³	32.3	30.8	35.2	30.0	31.4	30.3	34.1	35.8
Net open position in foreign exchange to capital ³	68.1	61.1	29.1	22.6	25.9	18.2	18.4	7.7

1. The Central Bank intends to publish core indicators of financial stability in collaboration with the IMF. All definitions used by the Central Bank accord with IMF definitions or have been approved by the IMF. These are still provisional figures, which could change, and comprise only part of the indicators. Results for Q1 and Q3 are unaudited. 2. Consolidation, operating expenses and net operating income calculated in accordance with definitions of the European Banking Authority (EBA). 3. Parent company, definitions differ from those in the Central Bank's rules.

Sources: Financial Supervisory Authority, Central Bank of Iceland.

