SEÐLABANKI ÍSLANDS

FINANCIAL STABILITY

2012 • 1

Contents

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.

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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

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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

Risk has diminished, but vulnerability remains

Financial system risk, both generated within the system itself and between it and the real economy, has diminished since the publication of the Bank's last *Financial Stability* report, in December 2011. The economic recovery has continued, and real wages and employment have risen. Financial conditions of households and businesses have therefore improved, and the low domestic real interest rate and the reduction in private sector debt have improved borrowers' position. Treasury access to foreign credit has been confirmed, and Iceland's foreign liquidity position is strong. The banks' capital position has remained strong in spite of shocks due to court decisions on exchange rate-linked loans, and non-performing loan ratios are on the decline, although still too high.

The situation is still fragile, however. At this juncture, the main risk factors are related to capital account liberalisation, the global economy, refinancing of the foreign debt of others than the Treasury, the settlement of the failed banks and their interaction with the capital controls and the new banks, legal uncertainty, and possible effects of political decisions on financial institutions and loan portfolio quality. In addition, there is some uncertainty about the quality of the banks' loan portfolios and the restructuring process. Worst-case scenarios would involve several of these risks materialising simultaneously and combining to create a negative spiral. In such scenarios, the exchange rate would fall significantly, the position of debtors and the banking system would deteriorate again, domestic Treasury financing would become much more expensive, and funding the banking system would prove more difficult. If worse comes to worst, confidence in Iceland could deteriorate again. The likelihood of such a turn of events is very small, however, and it should be easy to avert it by making the right decisions.

The capital controls were imposed as a necessary evil, in order to arrest the depreciation of the króna after the banks collapsed and create the latitude for economic policy to mitigate the contraction and contribute to subsequent recovery. Over time, however, they have a negative impact on economic growth, in part because of their detrimental effect on the dynamism and efficiency of the financial system. In the long run, they could therefore make the banks' loan portfolios more vulnerable to shocks than they would be otherwise. In addition, the controls are likely to undermine the banks' competitiveness because, in the shelter of the controls, their funding is cheaper and they can maintain wider interest rate differentials and higher service charges than would be possible in a more open environment. Moreover, the controls distort financial markets and asset prices by limiting the supply of investment options available. It is clear, for instance, that turnover and returns in the domestic bond market have been significantly affected by the controls. As yet, however, there are no clear signs of a bubble in the domestic real estate market. It must be borne in mind that a low real interest rate contributes to higher asset prices, and a negative real interest rate can foster imprudent investment decisions, but there are other contributing factors than capital controls – in particular, monetary policy. In short, it can be said that the capital controls have long-term implications that could weaken the financial system. For the short term, however, the signs of negative effects on financial stability are less clear. On the contrary, while the controls remain in effect, they reduce the likelihood of a run on the banks' and the Treasury's funding – which is, for example, a source of grave concern in the euro area.

The removal of the capital controls will make domestic financing more expensive for the Treasury and the banks, and it could cause temporary fluctuations in liquidity. As a result, it is important that both parties prepare themselves thoroughly for what may lie ahead. It is necessary to reduce the Treasury's borrowing as much as is feasible, pre-finance its borrowing need, and lengthen its maturity profile. To this end, it is extremely important to adhere to plans to achieve

a surplus on Treasury finances in 2014. As for the banks, it is important that they maintain strong liquidity and bring their foreign exchange balances within set limits prior to liberalisation. The objective is to set new prudential rules on foreign exchange risk and cross-border banking operations. Furthermore, other ways to reduce the risk associated with free movement of capital will be sought in advance of the general liberalisation of restrictions on residents' capital outflows.

The greatest risk related to the capital controls, however, centres on potential foreign exchange market instability. A steep drop in the exchange rate due to errors in removing the controls could weaken the banks' loan portfolios and increase the share of non-performing loans. As global financial market conditions and other conditions for foreign direct investment and other capital inflows improve, it will become easier to lift the controls without excessive risk to the exchange rate. Iceland's good foreign liquidity position, domestic entities' access to foreign credit markets, and broad-based confidence in Iceland all pull in the same direction. As a consequence, it is essential to continue building external confidence in advance of a general lifting of restrictions on capital flows.

The tightening grip of the financial crisis on the euro area could turn what was expected to be a relatively shallow contraction in 2012 into a much more severe economic crisis. It is conceivable that some countries will splinter off from the euro area, and some analysts think it not impossible that the euro collaboration will be dissolved entirely. There is reason to be concerned about the potential impact of such a development on Iceland's economic outlook and financial stability. The initial effects on the stability of the financial system will not be as direct as could be expected, however, because the capital controls and the relatively simple, home market-oriented banking system protect the financial system and the Treasury's financing to a degree. On the other hand, the value of foreign assets held by Icelanders (such as the pension funds) could be affected, it could take longer for domestic borrowers other than the Treasury to gain access to foreign capital markets, and foreign direct investment could be delayed. This would have a negative effect on investment, in addition to the conventional negative impact on output growth through exports and poorer terms of trade. Given the capital controls and the current structure of the financial system, it is therefore most likely that the effects on the real economy and on Treasury finances will be negative but will not jeopardise financial system stability. In addition, the financial crisis in the euro area and increased risk aversion globally could delay the removal of the capital controls.

As usual, this issue of *Financial Stability* contains an appraisal of the main factors that are considered at present to affect risk in the financial system. The Bank had meetings with the large commercial banks prior to the preparation of this report. In addition, the Financial Supervisory Authority and the Central Bank met early in May to discuss financial system risk, in accordance with the cooperation agreement between the two institutions. The meeting and a wide range of information from the Financial Supervisory Authority have proven useful in the preparation of this report. The Central Bank is solely responsible for the contents of *Financial Stability*, however.

The financial system: outlook and major risks

Private sector indebtedness continues to decline

The three large commercial banks' combined capital position has grown stronger in the past year, in spite of shocks due to court decisions on exchange rate-linked loans and recalculation of the loans concerned.[1] At year-end 2011, their combined capital adequacy ratio was just under 22%, considerably above the 16% regulatory minimum required by the Financial Supervisory Authority. The 15 February Supreme Court judgment is a significant factor but will not threaten financial stability. Even if the worst-case scenario set forth by financial supervisors were to materialise, the banks' capital ratios would remain over 16%.

The economic recovery continues, with output growth measuring just over 3% in 2011 and forecast at 2.5-3% for 2012. Real wages have risen, unemployment has declined, and investment has increased concurrent with low real interest rates. Total household debt as a share of GDP declined by about 11% in 2011, and real wages and private consumption grew. Concurrent with this, households' equity position improved, primarily due to marked increases in house prices. Progress has been made in debt restructuring, with the default ratio on household debt falling from 20% to 18% in 2011.

There are clear signs that corporate debt restructuring efforts are bearing fruit and that the number of operable firms is on the rise again. Corporate debt fell by 30% relative to GDP in 2011. Non-performing corporate loans declined by half during the year. Restructuring of corporate loans focused to a greater degree on write-offs, whereas in 2010, lengthening of maturities was almost the only restructuring measure employed.

At present, the main risks to the financial system are capital account liberalisation, refinancing risk, mounting instability in Europe, and legal and administrative uncertainty about political decisions.

Legal uncertainty and uncertainty about administrative decisions adversely affects growth and loan portfolio quality

The value of deposit money banks' (DMB) loan portfolios remains uncertain. In addition to high default levels, there is legal uncertainty about the value of exchange rate-linked loans. These uncertainties have affected developments in default ratios and, to some extent, explain the slow-down in debt restructuring in Q1/2012. Uncertainty about the legality of loan agreements creates uncertainty about actual indebtedness and thereby affects both firms' investment decisions and the demand for credit. It can be assumed that uncertainty surrounding proposed amendments to the Fisheries Management Act has a similar dampening effect on investment.

Clouds gather in Europe

Unrest has mounted in the euro area in recent weeks, and the growth outlook has deteriorated. Uncertainty about Greece's continued participation in the European Monetary Union (EMU) has escalated, and the banking crisis in Spain has intensified as well. The capital controls and a simple, home market-oriented banking system protect Iceland to a degree from the direct effects of global financial market unrest on the financial system and the Treasury's financing. On the other hand, a severe and protracted crisis in the euro area, Iceland's most important export market, could delay the domestic economic recovery, inevitably affecting Icelandic financial institutions.

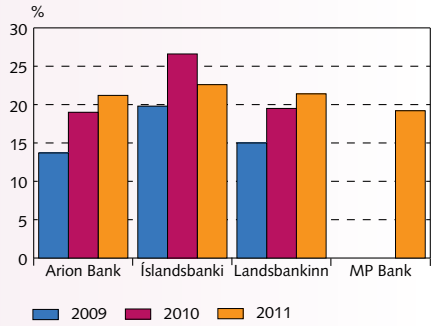
Foreign refinancing risk

A large group of Icelandic entities (excluding the Treasury) owe substantial amounts in foreign currency but have negligible foreign-denominated assets and income. Payments of instalments and interest on this debt could cause instability in the foreign exchange market, irrespective of the capital controls, in view of the fact

1. For more information on court decisions on exchange linked loans, see Box V-2.

Chart 1

Commercial banks' capital adequacy ratios 2009-2011[1]

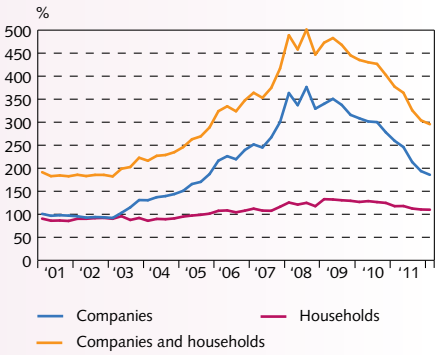


1. Largest banking groups 2009-2010. Commercial banking groups 2011.

Sources: Commercial banks' annual accounts.

Chart 2

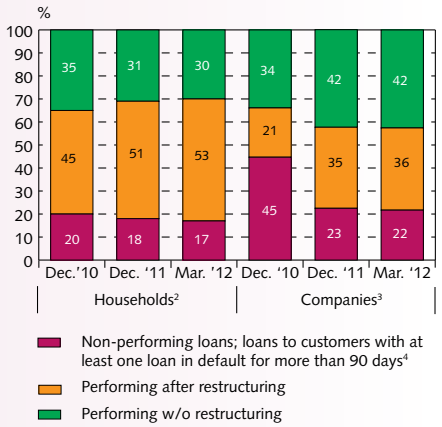
Private sector debt



Source: Central Bank of Iceland.

Chart 3

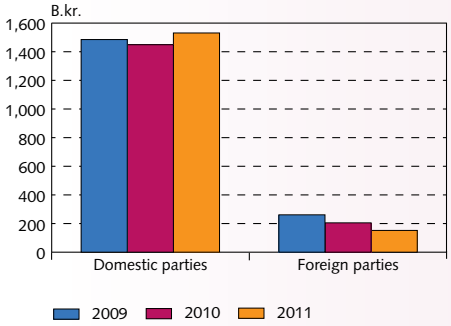
Status of loans[1]



1. Parent companies, book value. 2. Loans to households include loans from the three largest commercial banks and the Housing Financing Fund. 3. Loans to companies include loans from the three largest commercial banks. 4. 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; i.e., if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.

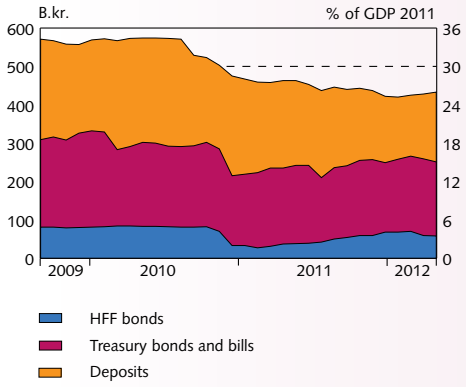
Source: Financial Supervisory Authority.

Chart 4
Deposits with commercial banks[1]



1. Parent companies, commercial banks. Deposits of customers and financial institutions. Deposits with Byr hf. included as of 2010. Deposits with SpKef included as of 2011.
Source: Central Bank of Iceland.

Chart 5
Offshore krónur



Source: Central Bank of Iceland.

that access to foreign credit is still tight and refinancing is difficult in many cases. Accumulation of foreign currency for these payments played a role in weakening the króna in 2011 and through Q1/2012. This underlines how important it is that domestic borrowers regain access to foreign credit markets and refinance their debt or extend their loan maturities.

Undesirable effects of the capital controls

Restrictions on movement of capital have a deleterious effect on the financial system in the long run. These effects are both direct and indirect, through the real economy. For example, the controls directly affect the banks' competitive environment. Deposits are sizeable even though real deposit rates are very low, owing to the limited number of domestic investment options and the fact that non-residents are not permitted to move funds out of Iceland. The banks' profitability could be due in part to low financing costs, and the capital controls could therefore delay streamlining of operations and lengthening of their funding profile.

Low market interest rates and a shortage of investment options could also distort asset prices. Real estate prices rose by 10% last year, and stocks and bonds appreciated strongly as well. At this point, the rise in real estate prices is more or less in line with growth in disposable income, but there is the risk that the detrimental effects of the capital controls and the distortion of asset prices will be magnified as the controls remain longer in effect.

Risks accompanying capital account liberalisation

Lifting the capital controls could cause instability in the foreign exchange market, and capital outflows could be substantial. The main impediment to quick and early liberalisation is the stock of liquid króna assets held by non-residents. At present, these assets are estimated at 425 b.kr., or about 26% of GDP. In addition, it is estimated that foreign creditors will receive domestic currency in the amount of 190 b.kr. from the estates of the failed banks.[2] The most recent amendments to the Foreign Exchange Act reduce the likelihood of severe instability as a result of these payments. Offsetting these are foreign-denominated payments to Icelandic residents, in the amount of 270 b.kr.

The risk related to this unstable capital is of three types. First, there is the risk of foreign exchange market instability because of capital outflows. This could weaken credit institutions' loan portfolios and trigger a rise in default. Second, a liquidity shortage could develop within the DMBs as a result of the outflows, although stress tests on their liquidity show that the DMBs should be relatively well prepared for this. Finally, the cost of domestic financing will rise when the controls are lifted, particularly for the public sector, but also for financial institutions. Broader effects on the financial system would depend on residents' response to liberalisation.

Positive signs on the horizon, but vulnerability remains

The economic environment and the financial conditions of businesses and households continue to improve, but the situation remains delicate. Many firms and households are still heavily indebted, and it is not certain that they could service their debt in the event of adverse economic developments.

Financial institutions also face great uncertainty. The banks must be prepared for increased competition; they must also lengthen their domestic funding profile and prepare to seek out capital abroad. Default is still widespread and loan values uncertain. It is therefore necessary, as before, that financial institutions' capital and liquidity positions be strong enough to withstand possible shocks.

2. Furthermore, the stakes in the new banks, which will revert to foreign creditors, are recognised at about 170 b.kr.

I Macroeconomic environment and financial markets

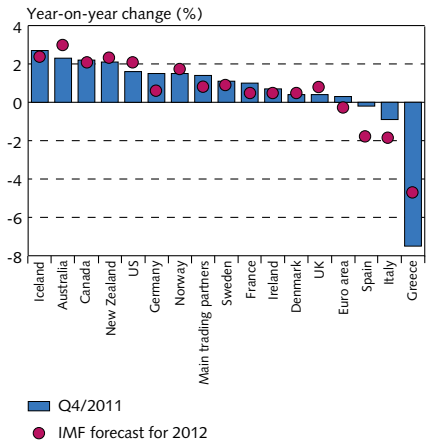
Global environment and foreign markets

Uncertain global output growth outlook

The outlook for global economic growth is highly uncertain, particularly in the euro area, Iceland's most important export market. The uneasy situation in Europe in the wake of the banking and sovereign debt crisis poses the chief risk to global financial stability at present. The outlook is particularly bleak for the southern part of the euro area. Increased uncertainty is reflected partly in CDS spreads, which have begun to rise in Spain, Italy, and Portugal, owing to mounting fears about these countries' ability to service their debt. Furthermore, concerns about Greece's sovereign debt have escalated again in response to increased political uncertainty (see Box 1). A serious setback in the global economy could slow down Iceland's recovery or stop it entirely if exports to Europe contract and conditions for foreign financing of domestic investments deteriorate.

Chart I-1

GDP growth in Q4/2011 and outlook for 2012



Sources: Eurostat, IMF, OECD, Statistics Iceland.

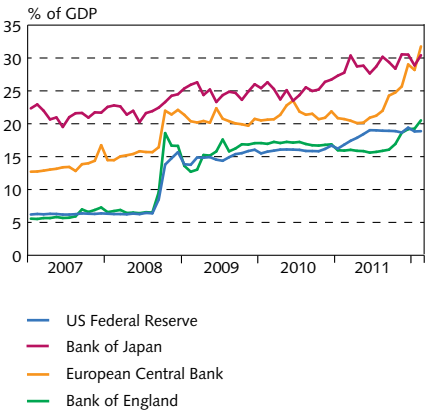
Central banks maintain a lax monetary stance

The global markets took a turn for the worse in the latter half of 2011, as concerns about financial stability in the euro area escalated and European banks' access to funding became tighter as a result. In order to counteract the trend, the European Central Bank (ECB) offered three-year euro-denominated loan facilities, relaxed its rules on eligibility of collateral, and reduced reserve requirements. At the same time, central banks in other developed countries expanded their balance sheets still further (see Chart I-2). The ECB cut its policy rate to 1% in late December. Policy rates in industrialised countries have been low since the beginning of 2009. Real rates in the euro area, the US, and the UK have been negative since the beginning of 2010 (see Chart I-3); thus monetary policy has been extremely lax. The action taken by the ECB eased concerns somewhat, and market functioning improved as a result. But events in Europe in the past few weeks have fuelled another surge in uncertainty.

Chart I-2

Expansion of central bank balance sheets

January 2007 - February 2012



Source: IMF.

Euro area vulnerability affects European banks

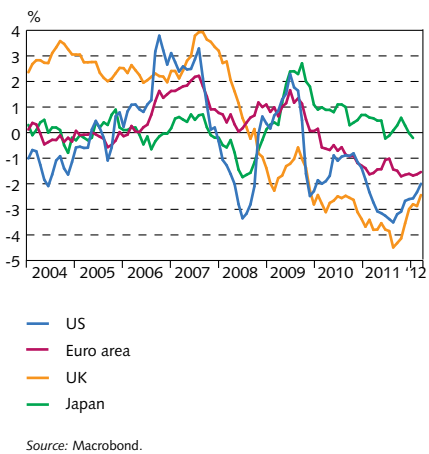
In 2011, investors were concerned about the effects of possible sovereign default on European banks that were still righting themselves after a severe liquidity shortage in the wake of the global financial crisis. Interest premia due to potential default by financial institutions soared late in the year, as is reflected in the spread between EURIBOR and OIS rates.[1] The interbank market was affected as well (see Chart I-4).

European banks are still heavily leveraged and are extremely dependent on wholesale funding. The International Monetary Fund (IMF) estimates that the refinancing needs of euro area sovereigns

Chart I-3

Real policy rates of foreign central banks

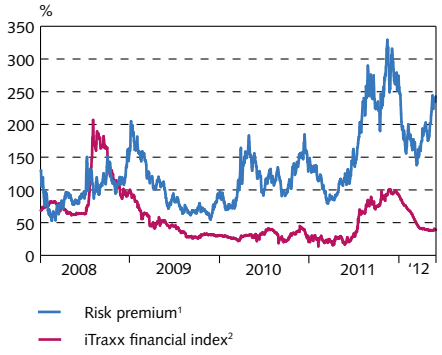
January 2004 - March 2012



Source: Macrobond.

1. For the purposes of this discussion, EURIBOR is the interbank rate on three-month unsecured loans, and OIS is the overnight swap rate. The difference between the two measures banks' reluctance to loan to one another. It also indicates the market's assessment of financial firms' probability of default.

Chart I-4
Risk premium and iTraxx financial index
Daily data, 20 March 2008 - 31 May 2012



1. The risk premium is measured as the spread between three-month EURIBOR rates and expected overnight rates (OIS). 2. The iTraxx financial index comprises 25 CDS spreads in Europe.
Source: Bloomberg.

and banks in 2012 totals 23% of the region's GDP.[2] Because of this refinancing need, together with increased capital requirements and weak output growth in the euro area, many European banks have announced plans to downsize their balance sheets. The IMF projects that the banks will reduce their balance sheet size by some 2,600 billion US dollars this year. Asset sales and further cuts in lending could delay the economic recovery in the euro area. Under these conditions, financial institutions have little room for increased lending to leveraged countries, and leveraged countries are not strong backers of financial institutions. The situation is therefore delicate.

The above-described interrelation between the banking crisis and the sovereign debt crisis in the euro area will affect euro area economies most strongly, but it could hinder growth in other regions because of elevated uncertainty, reduced external trade, and financial market instability. Possible shocks sustained by European sovereigns and banks could spread to American banks, although stress tests carried out by the US Federal Reserve Bank show that US banks' risk-weighted capital base is strong enough to withstand considerable losses in the wake of the global economic crisis.

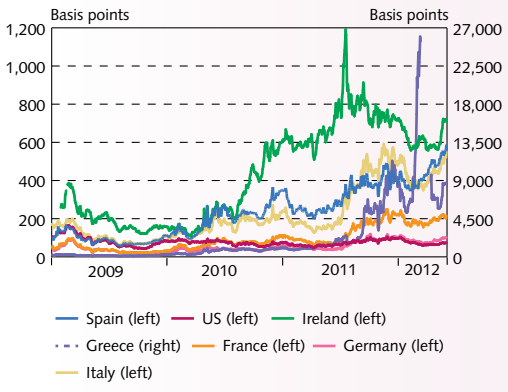
2. IMF (2012). *Global Financial Stability Assessment. (Global Financial Stability Report, Chapter 1)*. Washington, DC: International Monetary Fund.

Box I-1

The euro area debt crisis

The European financial markets were rocked by the 6 May elections in Greece, which triggered a political crisis and fostered more widespread belief than before that Greece would abandon the euro and re-adopt its own currency. Europe's main stock market indices[1] fell by 4.5-6.5% in the first two weeks following the Greek parliamentary elections, and Spain saw its CDS spread rise by 80 points. Deposits began to flow out of Greek banks as never before, adding to the 20% drop since the beginning of 2011. The spotlight then focused on Spain, the EU's fourth-largest economy, after Moody's Investor Service downgraded 16 Spanish banks on 17 May. Two of the country's largest banks, Banco Santander SA and Banco Bibao Vizcaya Argentaria SA, were downgraded by three notches. The authorities tried to mollify the market with declarations that Spanish banks were securely funded two years ahead, in part with loans from the European Central Bank. A review of Spanish banks' mortgage portfolios was launched simultaneously, under the supervision of international advisors and auditors.

Chart 1
CDS spreads
Daily data, 1 January 2009 - 30 May 2012



Source: Bloomberg.

The debt crisis

The volatility that has plagued the European markets in recent weeks can be traced to the sovereign debt crisis threatening several EU countries. In the wake of the banking crisis that began in mid-2007, public expenditures rose and revenues declined, due to the ensuing economic contraction and the cost of recapitalising banking institutions. Weighted average public sector debt in the euro area shot up by a third in four years, from 66% of GDP in 2007 to about 88% in 2011. In general, the sustainability of public sector debt is determined primarily by growth prospects and interest rates, given an initial level of debt. Reinhart and Rogoff point out that public

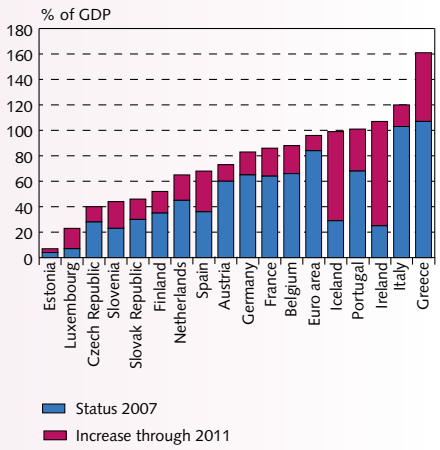
1. Stoxx 50, DAX 30, CAC 40, and FTSE 100.

debt exceeding 90% of GDP slows down economic growth.[2] A negative spiral can result, making countries unable to pay their debt and perhaps even leading to sovereign default. Concerns about sovereign debt in the euro area have therefore focused on heavily indebted countries with a poor output growth outlook (see Chart 1).

In Greece, Ireland, Portugal, Italy and Spain, debt problems are so severe that market pricing clearly reflects doubts about the countries' ability to service their debt. Rising risk premia have pushed their financing costs upwards, exacerbating the debt crisis and intensifying the need for public expenditure cuts, with the inevitable impact on output growth.

Greece's public sector debt is in a class by itself. After measuring 107% of GDP in 2007, it shot up by nearly half, to 160% of GDP in 2011 (see Chart 3). Ireland's surge in debt is due for the most part to policy actions in support of domestic financial institutions, raising public sector debt from 25% of GDP in 2007 to 107% of GDP by the end of 2011. Spain's debt ratio is much lower, however – even lower than that in Germany and France. Concerns about the sustainability of Spain's public sector debt centre on its continuing banking system weakness, high unemployment, and bleak economic outlook.

Chart 2
Public sector debt (Maastricht definition)



Source: OECD (Economic Outlook 90 Database).

Responses to the problem

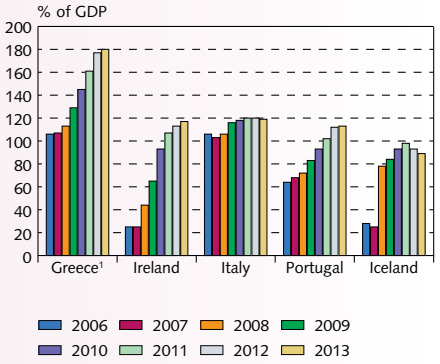
The origins of and solutions to the euro area debt problem are closely linked to the difficulties plaguing European banks ever since the financial crisis struck. After the crisis broke out, a number of distressed financial institutions received government support, and the problem was thereby shunted over to the public sector, with the associated rise in sovereign indebtedness. As the debt crisis escalated in some euro area countries, new fears about the position of European banks took root.

The European Central Bank (ECB) has responded with wide-ranging support measures for financial institutions and markets. On two occasions before and after year-end 2011, the ECB stepped up its long-term repo loans (LTRO) to European banks while relaxing collateral requirements for the facilities granted. These measures raised ECB loan facilities to an all-time high of 1,100 billion euros and provided for some longer maturities as well (see Chart 4). In addition, since mid-2010 the ECB has purchased over 200 billion euros worth of securities in the market, with particular emphasis on bonds issued by countries faced with rising financing costs. This was done to reduce financing costs, as risk premia were considered to have risen disproportionately.

The European Financial Stability Facility (EFSF) was launched in June 2010. The EFSF can issue bonds with a guarantee from the EU Member States of 780 billion euros but is only authorised to grant financial institutions loans up to 440 billion euros. The EFSF has funded itself with interest rates of 2.6% for four years and 3.9% for 20 years, about 150 basis points above German Treasury bond rates. It lends funds to Member States with debt problems by buying their government bonds in the market. To date, the EFSF has loaned 107 billion euros to the Greek government, 12 billion euros to the Irish government, and about 10 billion euros to the Portuguese government. It is worth noting that Greece's GDP totalled about 215 billion euros in 2011.

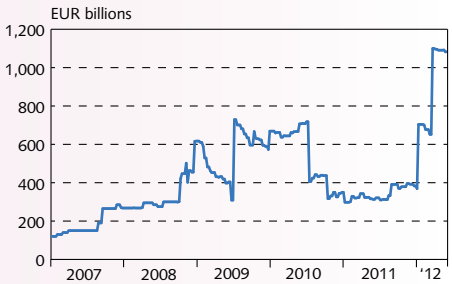
The European Financial Stability Mechanism (EFSM) is authorised to borrow up to 60 billion euros in the name of the European

Chart 3
Public sector debt (Maastricht definition)



1. Agreement with creditors to reduce debt to 120% of GDP by 2020.
Source: OECD.

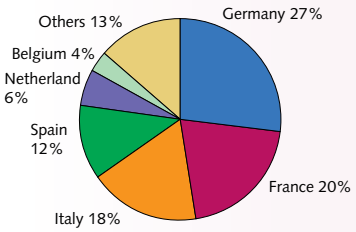
Chart 4
ECB long-term refinancing operations
Weekly data, 1 January 2007 - 7 May 2012



Source: European Central bank.

2. Reinhart and Rogoff (2009) "This Time Is Different: Eight Centuries of Financial Folly." Princeton, NJ: Princeton University Press.

Chart 5
EU Member States' contributions to the ESM (%)



Source: European Financial Stability Facility.

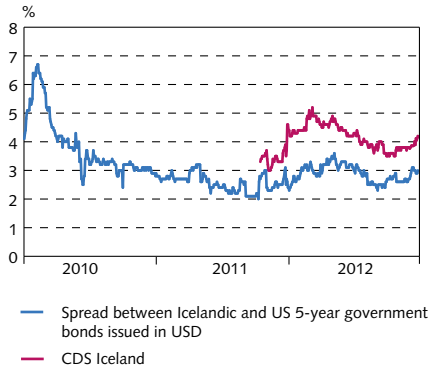
Union. This fund has been authorised to grant Ireland and Portugal loans of up to 50 billion euros over the next three years.

The EFSF and EFSM will be merged to form the European Stability Mechanism (ESM) by July 2013. The ESM will be authorised to lend up to 500 billion euros, backed by state guarantees from Member States in the amount of 700 billion euros (see Chart 5).[3]

In addition to these general measures to ensure financial stability in Europe, Greece was promised loans from the EU and the IMF in mid-March, following substantial write-offs of private sector debt. Parallel to these pledges, Greece committed itself to a stringent fiscal consolidation programme. Since the elections in Greece, however, the political landscape has changed radically, and support for the austerity programme is now quite uncertain.

3. Paid-in capital from Member States will total 80 billion euros, and 620 billion euros will be due upon demand.

Chart I-5
Credit spreads on the Icelandic Treasury
Daily data, 1 January 2010 - 31 May 2012



Sources: Bloomberg, Central Bank of Iceland.

Domestic financial markets sheltered

Domestic financial institutions have few claims against their euro area counterparts; therefore, potential shocks in Europe pose little direct risk to their asset portfolios. Furthermore, the capital controls shelter the domestic financial market from turbulence abroad, and the Treasury and domestic banks rely very little on foreign financing because of their ready access to domestic sources of capital.

However, a severe and protracted crisis in the euro area would inevitably cause difficulties in Iceland. Planned domestic investment that depends on external financing could be delayed, for instance, if the global economic outlook deteriorates. This could delay the domestic recovery, which would unavoidably affect the operations of Icelandic financial institutions.

Increased global financial market unrest could also obstruct Icelandic financial institutions' access to credit markets abroad; however, one of the preconditions for removal of the capital controls is that the Treasury and domestic financial institutions must have demonstrated that they can access foreign credit markets on acceptable terms.[3]

Treasury confirms access to global financial markets

In summer 2011, the Republic of Iceland regained access to foreign credit markets, issuing a five-year bond in the amount of 1 billion US dollars. At the beginning of May 2012, the Treasury confirmed this access by issuing another bond for 1 billion US dollars, this time with a 10-year maturity. The yield on the latter bond was just under 6%, as opposed to 1.9% for a comparable 10-year US Treasury bond. As of end-May, the yield on the Icelandic 10-year bond was 6.2%, an increase of 28 basis points from the beginning of the month.

The long-term spread between Icelandic and German Treasury bonds has widened by 0.9 percentage points year-to-date, measuring 5.6% at the end of May. The short-term spread against Iceland's main

3. The Republic of Iceland's sovereign credit rating is in the lowest investment-grade category according to Standard & Poor's, Moody's, and Fitch, and in the highest speculative category according to R&I.

trading partners in terms of the three-month risk-adjusted interbank rate on ISK assets has narrowed by about 1 percentage point, to the current 1.1%. Risk premia on Treasury obligations grew more volatile last summer but settled down again as global market unrest subsided (see Chart 5).

The domestic economy

Private consumption and business investment were the principal drivers of the output growth in 2011, contributing to it in equal measure. Economic growth measured 3.1% last year. It is projected at 2½% in 2012 and at 2½-3% during the following two years, according to the Central Bank's May forecast. The economic recovery therefore continues, and real wages and employment have risen. Private sector financial conditions have therefore improved, and the low real interest rate and debt restructuring efforts have made a positive impact on debtors' circumstances. The short-term inflation outlook has deteriorated, however. Although inflation has probably peaked by now, the Bank's most recent forecast (published in *Monetary Bulletin* 2012/2) indicates that it will subside slowly for the remainder of the year. Terms of trade are expected to deteriorate slightly this year, due to high oil prices and falling marine product and aluminium prices.

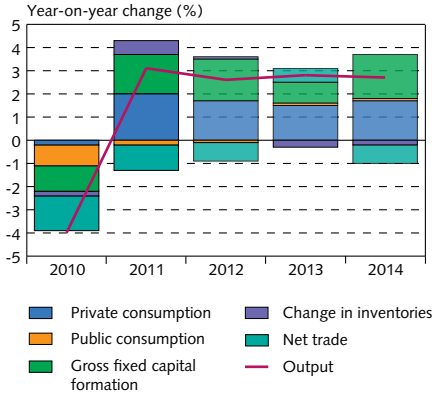
Residential investment was up 8.6% in 2011, after a deep post-crisis contraction. At the same time, business investment rose by 25.8%. Even though business investment was boosted by investment in energy-intensive industry in last year, it grew by just over 7% excluding ships, aircraft, and the energy-intensive sector. The results of the Central Bank's survey of domestic companies' investment plans indicates that firms intend to increase investment by 2% in real terms in 2012 (see *Monetary Bulletin* 2012/2, p. 30). The Bank assumes that business investment will grow by over 14% this year but will remain virtually unchanged if ships, aircraft, and the energy-intensive sector are excluded. The construction sector is expected to rally in the next 2-3 years, with 17-19% growth in residential investment, according to Central Bank projections.

As always, the outlook for output growth is uncertain. Uncertainties stemming from global economic conditions are discussed above; however, high private sector debt levels could also weaken the recovery. Private consumption growth could be slowed down if Icelandic households are slower to adjust their balance sheets and pay down debt. For the same reason, heavy corporate indebtedness could impede new investment and stunt DMBs' lending growth. Moreover, uncertainty surrounding the legislative bill amending the Fisheries Management Act could deter investment in the fishing industry. Companies' position is discussed in greater detail in Section III of this report.

Balance of payments will be tested in spite of underlying current account surplus

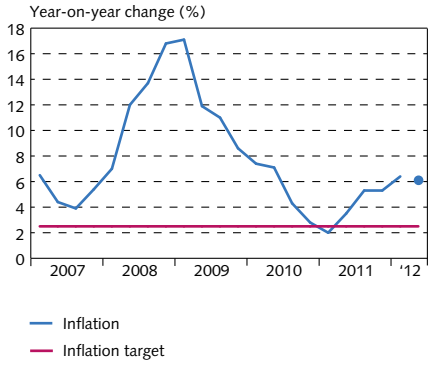
The current account balance was negative by just over 7% of GDP in 2011, according to official figures. Offsetting last year's considerable trade surplus was a sizeable deficit in the balance on income, which

Chart I-6
GDP growth and contribution of underlying components 2010-2014[1]



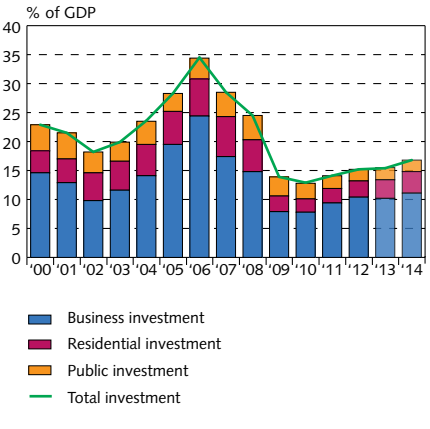
1. Central Bank baseline forecast 2012-2014.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-7
Inflation[1]
Q1/2007 - Q2/2012



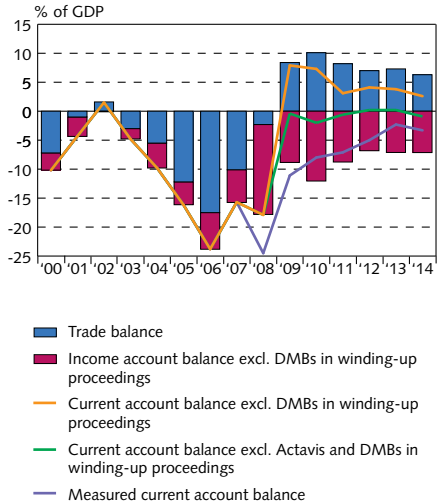
1. Central Bank baseline forecast, Q2/2012.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-8
Investment as a share of GDP 2000-2014[1]



1. Central Bank baseline forecast 2012-2014.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-9
Current account balance 2000-2014[1]



1. Net current transfers are included in the balance on income. Central Bank baseline forecast 2012-2014.
Sources: Statistics Iceland, Central Bank of Iceland.

primarily reflects debt accumulation in the years before the crisis, when Iceland had a large trade deficit. After adjusting for accrued interest due to DMBs in winding-up proceedings and the pharmaceuticals company Actavis, the current account balance shows a surplus in the amount of 3.1% of GDP for 2011.[4] According to the most recent Central Bank forecast, a 4% underlying surplus is expected this year and a 2½-4% surplus in the two subsequent years. The financial balance (excluding the foreign exchange reserves) was also positive in 2011, by 27% of GDP; however, as is discussed in Box VII-1 of *Monetary Bulletin* 2012/2, it is expected to be negative in 2012 and 2013 and will probably fluctuate somewhat in connection with foreign loan repayments and outflows due to the DMBs in winding-up proceedings. These fluctuations in the financial balance could affect the domestic foreign exchange market in coming quarters.

Developments in the balance of payments will depend on the results of debt restructuring and refinancing, on the one hand, and progress in lifting the capital controls, on the other. Iceland has long been among the most indebted of the world's developed countries. The country's balance sheet has contracted sharply since the collapse of its financial system, however, and estimates suggest that its underlying net debt is sustainable (see Box VII-1 in *Monetary Bulletin* 2012/2). In spite of this, the balance of payments will be put to the test in coming quarters, particularly in connection with the removal of the capital controls and as a result of domestic firms' limited access to foreign credit markets.

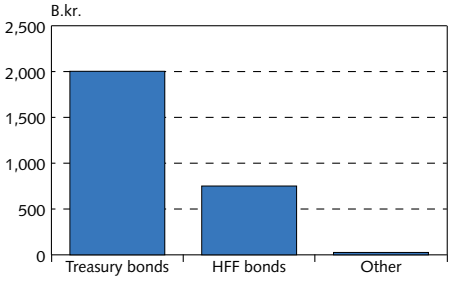
The capital controls obstruct the progress and growth of the economy and are therefore a hindrance to output growth in the long run. As a result, attempts are being made to lift them as quickly as possible, but without causing undue instability and placing excessive pressure on the balance of payments. The ultimate effect of capital account liberalisation on financial stability is highly uncertain. Further discussion of this topic can be found in Section VI.

Domestic financial markets

The bond market

Bond trading on the NASDAQ OMX Iceland Exchange totalled 2,602 b.kr. in 2011, as opposed to 2,839 b.kr. in 2010. Average monthly volume was 216 b.kr., which is broadly in line with pre-crisis levels. The 2007 average, for instance, was about 200 b.kr. per month. More than 99% of trading volume is due to bonds issued by the Treasury and the Housing Financing Fund (HFF), with most of the remainder due to bonds issued by the municipalities and Municipality Credit Iceland plc. In 2011, trading in bonds issued by financial institutions and other corporations amounted to only 6.4 b.kr. Bond market turnover rose 50% year-on-year in the first quarter of 2012, and trading averaged 301 b.kr. per month, as opposed to 199 b.kr. in Q1/2011.

Chart I-10
Bond trading volume on the NASDAQ OMX Iceland Exchange
1 May 2011 - 30 April 2012



Source: NASDAQ OMX Iceland Exchange.

4. Official current account figures give a skewed view of Iceland's external position because they include accrued interest expense from the estates of the failed banks, the vast majority of which will never be paid and will disappear from official accounts when the estates are wound up. The heavily indebted pharmaceuticals company Actavis skews Iceland's external position in a similar manner. For further discussion, see Section VII of *Monetary Bulletin* 2012/2.

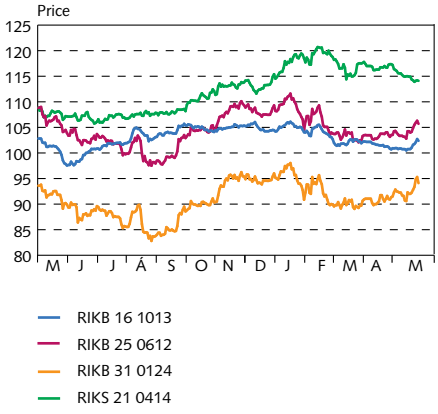
The dearth of listed bonds and equities and the capital controls make it increasingly difficult for investors to find new investment opportunities. The value of the stocks and bonds listed on the NASDAQ OMX Iceland Exchange has increased sharply, giving rise to the possibility that an asset price bubble will develop. In order to reduce that risk, it is important to encourage further corporate listings on the exchange. It is important as well to promote corporate bond listings by financial firms and others.

The capital controls inhibit bond market functioning and keep interest rates low, as neither non-resident owners of Icelandic krónur nor domestic investors have the option of expatriating their capital unrestricted.[5] The information provided by the market on the situation and outlook for the domestic economy is therefore less valuable than it might otherwise be. Furthermore, Central Bank interest rate decisions are transmitted less effectively to the yield curve because of the capital controls. The controls distort bond market price formation and are therefore detrimental in the long run. On the other hand, they have helped Iceland through a time of acute need for credit following the collapse of the banks. Because of the capital controls, the Treasury has been offered much more advantageous loan terms than would have been available without them.

During the first quarter of 2012, the Treasury sold indexed Treasury bonds for 17.5 b.kr. in connection with its foreign currency auctions. The largest purchasers of the bonds were domestic pension funds, which pay for them in euros and are obliged to hold them for five years. Sales in these auctions reduce sales in the Treasury's regular bond auctions.

In the past 12 months, indexed bonds have risen steadily in price. At the beginning of May 2012, the yield on 10-year indexed Treasury bonds was 1.7%, as opposed to 2.7% a year earlier. Yields on long HFF bonds have behaved in a like manner. The rise in indexed bond prices is due to two factors, in addition to the capital controls: market expectations of higher inflation and the limited supply of indexed bonds, coupled with strong demand from long-term investors such as pension funds.

Chart I-11
Indexed (RIKS) and non-indexed (RIKB) Government bonds, price
2 May 2011 - 31 May 2012



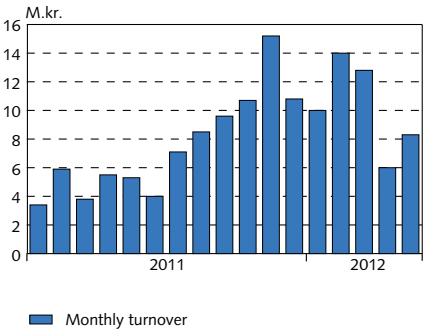
Source: NASDAQ OMX Iceland Exchange.

Foreign exchange market

Although trading in the domestic foreign exchange market has grown since last year, the market shows clear signs of being hampered by the capital controls. In the first four months of 2012, turnover totalled 43 b.kr., as opposed to under 19 b.kr. for the same period in 2011. For 2011 as a whole, it amounted to nearly 90 b.kr., double the total turnover for 2010. In comparison, foreign exchange market turnover totalled 7,500 b.kr. in 2008.

At present, there are three market makers in the foreign exchange market: Arion Bank, Íslandsbanki, and Landsbankinn. The market has undergone a number of changes for the better in the recent term. For instance, the spread between market makers' bids

Chart I-12
The interbank foreign exchange market
January 2010 - May 2012



Source: Central Bank of Iceland.

5. Further discussion of the capital controls and their impact on asset prices can be found in Box 2 of Section I in this report.

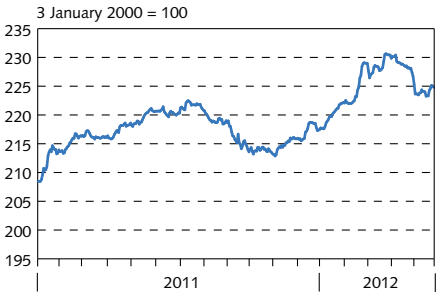
was narrowed, and the minimum bid amount was raised. Because of these changes, more trading and larger amounts are needed in order to affect the exchange rate.

Since 2010, the Central Bank of Iceland has bought 1.5 million euros per week from the three market makers. The declared objective of the purchases is to fortify the foreign exchange reserves without directly affecting the exchange rate of the króna. In 2011, these trades totalled 78 million euros (12.6 b.kr.). In all, the Bank has bought 132 million euros (21.3 b.kr.) since launching its programme of regular purchases. The króna depreciated in 2011 and through the first months of 2012. Possible seasonal volatility can be detected, perhaps due to cyclical revenue flows from the tourism sector. The króna has appreciated somewhat over the summer months in the past two years and then fallen again when tourist numbers decline in the autumn.

At the beginning of March 2012, the Central Bank of Iceland intervened in the foreign exchange market for the first time since 2009, selling a total of 12 million euros, the equivalent of just under 2 b.kr. The Bank intervened at that time because of unusually heavy outflows in preceding weeks. Inflows of foreign exchange from external trade were at a low level and instalments on foreign loans were sizeable, and exemptions from the capital controls also contributed to increased outflows. The Bank considered the situation a temporary one and thought it undesirable to allow it to have a marked effect on the exchange rate. Amendments to the Foreign Exchange Act passed later that month reduced the number of exemptions to the capital controls, perhaps easing some of the pressure on the króna.

Trading in the offshore market for Icelandic krónur has been sparse in recent months, due in part to the aforementioned statutory amendments, which eliminated one means of profiting on such trading by reinvesting instalments on HFF bonds in the offshore market. This has directed non-residents wishing to unwind króna positions towards the Central Bank's foreign currency auctions, which were launched in the first half of 2011. The auctions have been an avenue for investing larger amounts than are generally traded in the offshore market. In the most recent offshore trades, the EURISK exchange rate has been broadly in line with the exchange rate offered in the auctions, and no offshore trading has taken place for quite some time.

Chart I-13
Exchange rate index[1]
5 January 2011 - 31 May 2012

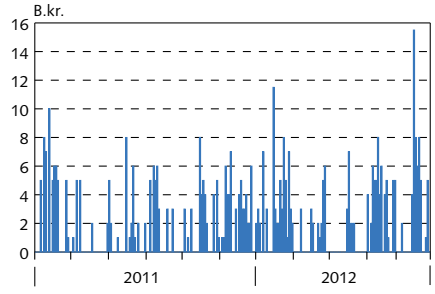


1. Narrow trade-weighted index.
Source: Central Bank of Iceland.

The interbank króna market

The interbank market for krónur (the REIBOR market) has changed little in the past year. In the first four months of 2012, turnover in the REIBOR market totalled 169.5 b.kr., which was virtually unchanged year-on-year. As before, trading is concentrated in short durations – overnight and seven days. On the whole, financial institutions have had ample liquidity since the banks collapsed, and some days there is no interbank market trading at all. Even though transactions do take place, bids move less decisively than might be expected, and the position of each firm has not been fully reflected in the bids. Since autumn 2009, the Central Bank has responded to the market situation by issuing certificates of deposit. In spite of the Bank's actions, interbank market rates usually lie below the centre of the interest rate corridor.

Chart I-14
The interbank market for krónur
1 July 2011 - 31 May 2012



Source: Central Bank of Iceland.

Equity market

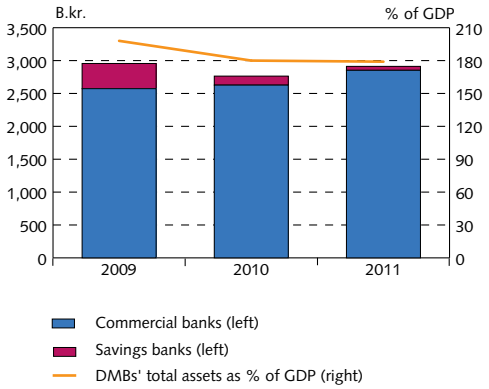
The NASDAQ OMX Iceland Main List (OMXI6) appreciated by 19.2% in the first four months of 2012, to 1,084 points at the end of April, from 910 at year-end 2011. The OMXI6 index includes four Icelandic firms and two Faeroese firms. Icelandair shares have risen by 25% and Marel by 28%, and Össur and Hagar have risen by 14% each. The rise in the index has been driven primarily by the Icelandic companies. Turnover on the domestic securities exchange totalled 28 b.kr. in the first four months of 2012, which is broadly unchanged from the same period in 2011.

II The scope of financial institutions' operations

Total DMB assets broadly unchanged between years ...

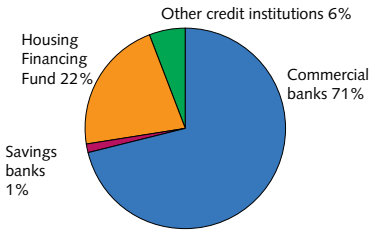
At present there are four commercial banks and 10 savings banks in operation in Iceland. The combined assets of these deposit money banks (DMBs)[1] totalled just over 2,900 b.kr. at the end of December 2011, or almost twice GDP, down from 10 times GDP in September 2008. Since 2010, DMBs' assets have increased by about 5.5%, largely due to the transfer of Kaupthing hf.'s mortgage loan portfolio to Arion Bank, in the amount of some 112 b.kr., or about 3.8% of total DMB assets. Assets owned by credit undertakings other than DMBs totalled 1,100 b.kr.[2] The vast majority of these are Housing Financing Fund (HFF) assets, which totalled 864 b.kr. at year-end 2011, including 782 b.kr. in real estate-backed loans. DMBs and the HFF combined account for 94% of all credit institution assets, a figure that has remained relatively stable in recent years. Total assets in the financial system amounted to just under 8,500 b.kr. at year-end 2011, an increase of 12% from the previous year (see Table II-1).[3] The rise is due primarily to the expansion of the Central Bank of Iceland's balance sheet because of larger foreign exchange reserves (foreign deposits), increased pension fund assets, and submittal of information on year-2011 assets by institutional investment funds, which explains the steep increase in assets held by mutual funds, investment funds, and institutional investment funds. In comparison, the increase in assets since year-end 2008 was under 5% and is due mainly to increased assets held by pension funds, mutual funds, investment funds, institutional investment funds, and the HFF.

Chart II-1
DMBs' total assets, % of GDP[1]



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

Chart II-2
Credit institutions' total assets 2011[1]



1. Parent companies, December 2011.
Source: Central Bank of Iceland.

Table II-1 Credit system assets

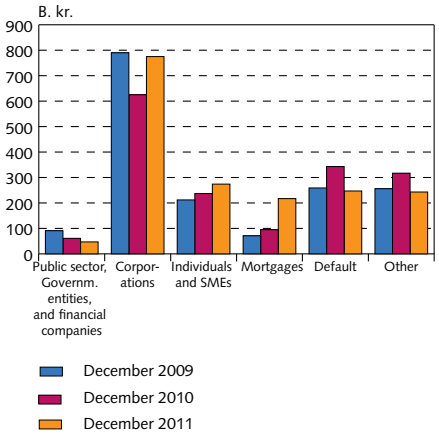
Assets, b.kr	*30.9.2008*	*31.12.2008*	*31.12.2009*	*31.12.2010*	*31.12.2011*
Banking system[1]	15,087	4,632	3,967	3,878	4,381
portion due to commercial banks	14,153	3,417	2,573	2,627	2,852
portion due to savings banks	742	768	383	137	60
Other credit institutions	1,321	1,284	1,194	1,129	1,097
portion due to Housing Financing Fund	699	733	795	836	864
Pension funds	1,871	1,665	1,849	1,989	2,168
Insurance companies	161	122	131	138	145
Mutual, investment and institutional funds	667	212	195	284	516
Government credit funds	103	125	146	161	166
Total assets	19,209	8,040	7,483	7,579	8,474

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.

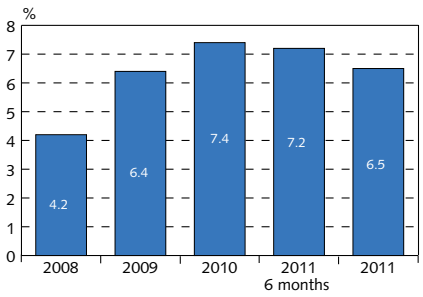
1. Deposit money banks (DMBs) are commercial banks and savings banks.
2. Miscellaneous credit undertakings apart from the Housing Financing Fund are: Kreditkort hf., Valitor hf., Borgun hf., Lýsing hf., the Icelandic Regional Development Institute, and Municipality Credit Iceland Plc.
3. The financial system consists of the banking system, miscellaneous credit undertakings (including the Housing Financing Fund), pension funds, insurance companies, mutual funds, investment funds, institutional investment funds, and Government credit funds.

Chart II-3
Risk base, credit risk of the three largest commercial banks[1]



1. Consolidated figures
Source: Financial Supervisory Authority.

Chart II-4
Credit provisioning accounts of the three largest commercial banks[1]



1. Consolidated figures. Credit provisioning accounts and claims against customers as % of total lending.
Sources: Financial institutions' annual and interim accounts.

... but concentration in the market has increased

Savings banks' assets amounted to only 60 b.kr. at year-end 2011, after having declined rapidly in recent years as the number of savings banks has fallen. The assets of the 10 savings banks still in operation at the end of 2011 were unchanged from year-end 2010. The last major change in the savings bank system took place in March 2011, when SpKef savings bank merged with Landsbankinn. Clearly, the savings banks' position has been adversely affected by recent court decisions on exchange rate-linked loans, and further mergers are likely in the near future. Further discussion of the savings banks' operations and capital can be found in Section V.

In other changes among financial institutions in 2011, Byr merged with Íslandsbanki towards the end of the year, Avant and SP fjármögnun merged with Landsbankinn, also towards the end of the year, Straumur IB commenced operation as a credit undertaking in late August, and MP Bank commenced operation in its current form on the foundations of the savings bank nb.is in April. In addition, the Financial Supervisory Authority revoked the operating licences of a large number of financial companies following rulings dissolving their activities.

Largest commercial banks' risk base rises

The risk base for the three largest commercial banks' credit risk was about 1,800 b.kr. at year-end 2011, after increasing by over 7% since 2010. The increase can be traced mainly to mortgage loans, as Arion Bank took over Kaupthing hf.'s mortgage loan portfolio, assessed at 112 b.kr., at year-end 2011. In addition, the risk base rose as a result of the transfer of loan portfolios following two mergers of DMBs with large commercial banks. The former of these was the Byr-Íslandsbanki merger and the transfer of Byr's 84 b.kr. loan portfolio, and the latter was the transfer of SpKef's 30 b.kr. loan portfolio to Landsbankinn upon the merger of the two institutions. In the case of SpKef, the value of the portfolio is disputed and is therefore uncertain. The risk base is reduced, however, by declining default and the banks' sale of companies with unrelated operations. Just under half of the risk base is due to loans to large and medium-sized companies.

Table II-2 Risk-weighted asset base: the three largest commercial banks[1]

M.kr.	*31.12.2009*	*31.12.2010*	*31.12.2011*
Public sector, Gov. entities and financial companies	91,259	60,959	47,326
Companies	790,182	625,461	774,880
Individuals and SMEs	212,394	237,429	274,229
Mortgage loans	71,447	94,977	217,025
Default	259,025	343,770	247,145
Other	255,977	317,350	243,165
Total	1.680,284	1,679,945	1.803,770

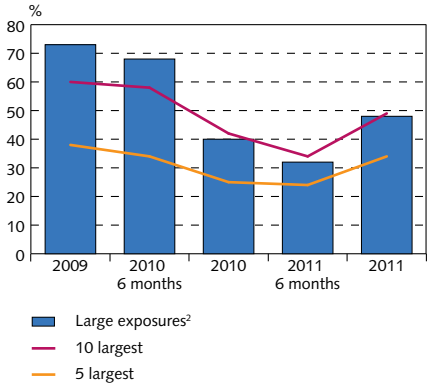
1. Consolidated figures.
Source: Financial Supervisory Authority.

Credit provisioning accounts continue to shrink

The balance of the three largest commercial banks' credit provisioning accounts totalled 6.5% of their total loans at the end of 2011, down from 7.4% at year-end 2010. The decline is attributable both to

greater success in private sector debt restructuring and to a reduction in default on loans from the commercial banks. In comparison, the credit provisioning accounts totalled some 3% of total loans during the period 1995-2004, before the banks' foreign expansion phase. A number of factors indicate that, for these same reasons, the banks' credit provisioning accounts should continue to contract in the near future, other things being equal. Any examination of the banks' provisioning accounts should take account of the fact that their methodologies for contributions to credit provisioning accounts differ in many respects, as do their methodologies for impairment of transferred loan portfolios. The sooner the banks complete debt restructuring, the sooner their accounts (including their credit provisioning accounts) will be comparable.

Chart II-5
Large exposures, % of own funds[1]



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

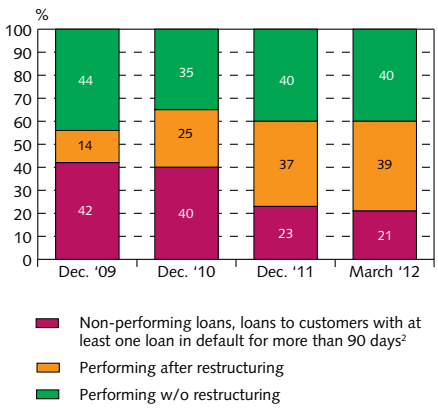
Large exposures rise relative to capital base

Total large exposures rose year-on-year, to 48% of the capital base as of year-end 2011. Chart II-5 illustrates the developments in recent years. The ratio of large exposures to the capital base declined sharply from end-2009 to mid-2011. Since then, it has risen again, as has the total of the commercial banks' five and 10 largest exposures. Loan concentration has therefore increased in the recent term, and even though it still appears limited, there is good reason to keep abreast of this trend in the quarters to come. It is clear that facilities granted to individual customers and parties connected to them can create large exposures in the accounts of more than one bank. This situation must therefore be monitored closely, together with cross-ownership in the financial system, both of which could jeopardise financial stability. Steps have already been taken in this direction, as financial institutions are now required to submit information on large borrowers to the FME, for entry to a special register of exposures, so that parties can be linked together and the systemic impact can be assessed if a borrower experiences operational difficulties.

Developments in DMB lending

At the end of March 2012, the book value of DMBs' loans totalled 1,870 b.kr., an increase of 4.5% since year-end 2010. The main reason for the increase is that Arion Bank took over Kaupthing hf.'s mortgage portfolio at year-end 2011. Otherwise, the DMBs' loan portfolios would have shrunk by 2%, whereas the CPI rose by just 8% from year-end 2010 to March 2012.[4] At the same time, overdraft loans rose by almost 4%, non-indexed loans by 50%, and indexed loans by 30%. Foreign-denominated loans contracted by almost 50%, however, in response to the Supreme Court judgments declaring them illegal.

Chart II-6
Status of loans from three largest commercial banks, book value[1]



1. Parent companies. 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.

New DMB mortgage lending beginning to rise …

Lending growth in the form of new DMB mortgage loans was limited in 2011, although a turnaround took place towards the end of the year. New mortgage loans from DMBs in 2011 totalled just over 14

4. Statistics Iceland. CPI in December 2010: 366.7; March 2012: 395.1.

b.kr., whereas general HFF lending totalled just under 21 b.kr. and pension fund lending just under 10 b.kr. In real terms, the banks' loan portfolios have also contracted in excess of normal payments; therefore, it appears as though a significant amount of debt is being retired early.

In Q1/2012, new DMB mortgage lending quintupled year-on-year, while new loans from the HFF and the pension funds contracted by 40% and 70%, respectively. Thus the total increase in new mortgage lending was 40%, in terms of both amount and number of loans. The turnaround is therefore a decisive one, particularly for the commercial banks, which loaned 9 b.kr. in the first three months of 2012, while the HFF loaned 3 b.kr. and the pension funds only 650 m.kr. The vast majority of the new mortage loans, or about 85-90%, are non-indexed.

... but HFF lending is below expectations

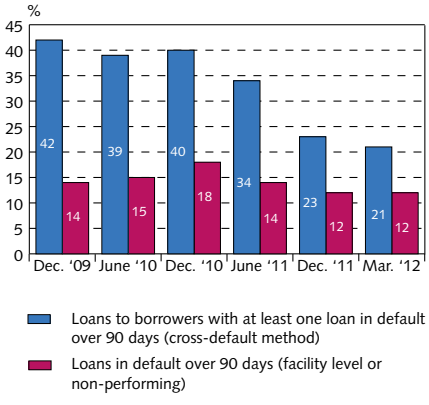
The HFF's loans rose by about 31 b.kr. in 2011, to a year-end total of 782 b.kr., including new loans in the amount of 24 b.kr., whereas the projections made at the beginning of 2011 assumed 27-35 b.kr. This was a marked deviation from the forecasted amount. Revised estimates for 2012 assume that the Fund's new loans will total 15-21 b.kr. Lending figures for the first months of 2012 indicate that the target will not be met and that the contraction in new credit is therefore continuing. In recent months, lending has shifted more and more to DMBs at the expense of the HFF and the pension funds, which do not offer non-indexed loans.[5] Further analysis of the composition of loans to households and businesses and a sectoral classification of corporate loans can be found in Section III.

Default ratios

Private sector debt restructuring has been proceeding apace, but it is essential to keep the process moving forward. The sooner the banks' balance sheets are normalised (and no less important, those of households and businesses), the sooner the foundations for sustainable output growth will be laid. The objective is that the largest possible number of borrowers be able to service their debt without sacrificing lenders' interests. Default should then decline in line with normal progress in debt restructuring. Further restructuring of the banks' loan portfolios will probably be delayed as a result of the February Supreme Court judgment on exchange rate-linked loans and the pending cases centring on calculation methods. It would be realistic to assume that recalculation in accordance with the judgments could begin in the latter half of this year. Further discussion can be found in the Box in Section V.

The percentage of loans in default has continued to decline, but at a less rapid pace than before. At the end of March 2012, about 21% of the three large commercial banks' loans were non-performing, as opposed to 23% at year-end 2011 and 40% at year-end 2010 (see Chart II-7). The share of loans that are performing

Chart II-7
Default ratios of the three largest commercial banks[1]

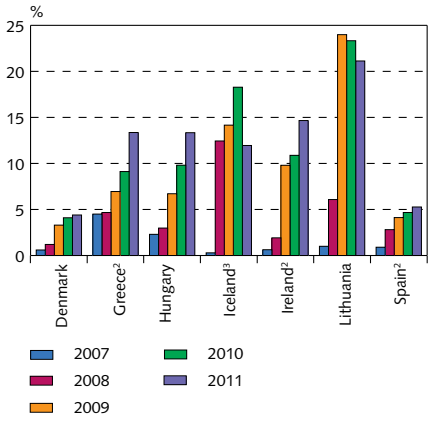


1. Parent companies, book value.
Source: Financial Supervisory Authority.

5. Central Bank of Iceland (2012, April). VI Asset markets, Chart VI-6, *Economic Indicators*.

without restructuring has remained broadly unchanged at about 40% in the recent term, while loans performing after restructuring are naturally on the rise. At the end of March, performing restructured loans were estimated at about 39% of total loans. These figures are based on book value, and they assume that all of a customer's loans are in default if one is in default or if payment is considered unlikely (cross-default). According to another measure of default, however, even though a customer has one loan in arrears by 90 days or more, that customer's other loans are not considered to be non-performing. By this criterion, the default ratio of the commercial banks' loans declined rapidly in 2010, to just under 12% at year-end 2011. In comparison, foreign banks with sound loan portfolios commonly have default ratios around 1-2%. Default levels have generally been on the rise in Europe in the recent past, however, particularly in countries with economic problems. Chart II-8 shows a comparison of several European countries. It is noteworthy that Iceland has made significant progress since 2010, reducing its default ratio from over 18% to the current 12%. Greece has not been spared negative developments in its default ratio, which has been soaring in the recent term. It now stands at about 13% and is rising swiftly. Hungary, Ireland, and other distressed euro area countries have seen similar developments, and Spain can be expected to follow suit, given the hardships facing the country at present. On the other hand, Lithuania has seen positive developments in its default ratio, after grappling with a financial crisis at about the same time as Iceland.

Chart II-8
Default ratios in European comparison[1]



1. Year-end figures. 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. Greece/Ireland: Q3/2011 figures. Spain: Q2/2011 figures.
3. Iceland. 2007: Figures estimated from the annual accounts of the failed banks. 2008: Central Bank estimates.

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

III Borrowers: Households and Firms

Households

Change in composition of household debt

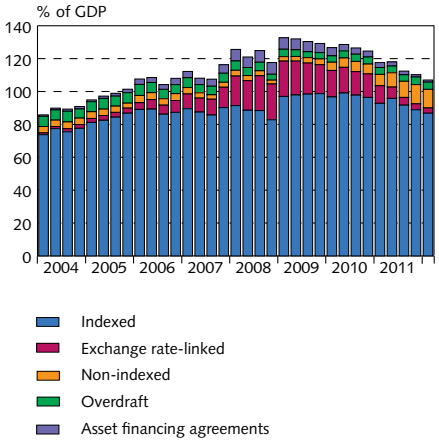
According to the Central Bank of Iceland's most recent estimate, household debt peaked at 132% of GDP in Q1 and Q2/2009.[1] As has been described in previous issues of *Financial Stability*, it has been declining steadily since 2009. It was estimated at 112% of GDP[2] at the end of Q3/2011 and 110% of projected GDP at the end of Q1/2012 (see Chart III-1).

The vast majority of household debt is indexed to the CPI, with the actual percentage ranging between 74% and 99% of GDP since 2004. Access to exchange rate-linked loans grew in 2007 and 2008, and as the króna depreciated over the course of 2008, exchange rate-linked loans rose to 22% of GDP. Since the banks failed, they have declined sharply, as most loan agreements with exchange rate linkage clauses have been declared illegal. At the end of Q1/2012, exchange rate-linked household debt was estimated at just over 3% of GDP.

Exchange rate-linked loans that have been deemed illegal and recalculated have been converted to indexed or non-indexed loans denominated in Icelandic krónur. Because Icelandic credit institutions' indexed assets exceed their indexed liabilities and their non-indexed liabilities exceed their non-indexed assets, the banks have tried to channel redenomination of exchange rate-linked loans towards non-indexed loans while offering individuals and households such loans on advantageous terms, both for refinancing and for new mortgage or motor vehicle loans. Household demand for non-indexed loans has been strong, and the banks' attempts to increase the share of such loans have clearly been successful. From the beginning of 2010 through the first quarter of 2012, non-indexed household debt excluding overdraft loans rose from 3.5% of GDP to 12.4%. At the same time, indexed debt fell from 99% of GDP to 88%. Non-indexed debt including overdraft loans tripled from the beginning of 2009 until the end of Q1/2012, rising from 5.7% to 15.4% over the three-year period. The increased weight of non-indexed debt must be viewed as a positive development, as mismatches in the banks' balance sheets diminish and the effectiveness of monetary policy should be enhanced. On the other hand, in most cases the debt service burden on non-indexed debt is greater than on indexed debt at the beginning, and interest rate hikes could raise it beyond households' tolerance levels, thereby jeopardising financial stability.

The rise in non-indexed debt is due primarily to mortgage financing and conversion of exchange rate-linked loans to non-

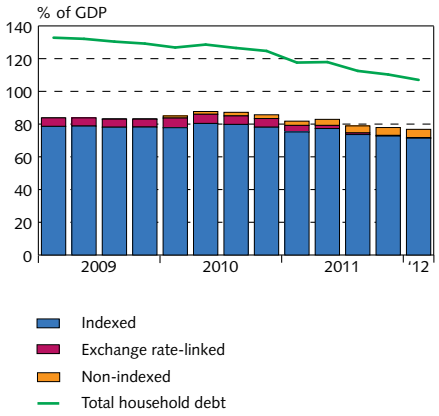
Chart III-1
Household debt as % of GDP
Q1/2004 - Q1/2012



Source: Central Bank of Iceland.

1. 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 loans in 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.
2. In the last issue of *Financial Stability*, household debt was estimated at 107% of GDP at the end of Q3/2011. It is therefore 5% higher according to the most recent estimate.

Chart III-2
Household mortgage debt as % of GDP
Q1/2009 - Q1/2012



Source: Central Bank of Iceland.

indexed króna-denominated loans. The share of non-indexed mortgages rose from 0.1% of GDP at the beginning of 2010 to 5.3% at the end of Q1/2012 (see Chart III-2). Over the same period, indexed mortgages declined from 78% of GDP to 72%. Liabilities other than mortgage debt have declined sharply since the collapse of the banking system. They peaked at 54% of GDP at the end of Q/2009 and now, three years later, measure roughly 38% of GDP.

Household debt likely to fall still further

It can be assumed that household debt will continue to fall. First, the financial institutions still have yet to process some applications for debt relief measures. The Icelandic Financial Services Association estimated that almost 1,100 cases were still in processing at the end of January 2012. Second, the Supreme Court ruled in February 2012 that it was prohibited to demand that borrowers with illegal exchange rate-linked loans make additional payment for previous interest rate dates if a receipt for full payment exists. The impact on households will be substantial. According to the analysis conducted by the Financial Supervisory Authority after the judgment was handed down, the book value of the loss sustained by commercial banks, savings banks, and other credit institutions due to loan agreements with households will probably be at least 22 b.kr., and perhaps as much as 9 b.kr. higher. An estimated ¾ of the loss that financial institutions must recognise as a result of loan agreements with households will show up as a reduction in the book value of open agreements, and the other ¼ will be disbursed. Households that previously had exchange rate-linked loans can therefore expect a drop in debt of at least 16 b.kr. and a cash reimbursement of up to 6 b.kr. This estimate is based on book value, but because the claim as it pertains to borrowers could be higher, it is not unlikely that the amounts involved will exceed these. In addition, it is possible that the book value of the credit institutions' losses will be some 9 b.kr. higher, although the ultimate amount will depend on the outcome of other pending lawsuits. Of the additional 9 b.kr., almost 8 b.kr. would be paid out and the remaining 1 b.kr. would show as a reduction in the book value of the loan agreements. Further discussion of the court cases involving exchange rate-linked loans can be found in the Box in Section V.

Disposable income rises, and household purchasing power grows

Following debt restructuring and a rise in disposable income, household debt declined as a share of disposable income in 2011, after having risen or remained stable for several years.[3] Real disposable income rose by 2.9% in 2011, after having fallen by 17% and 11% in 2009 and 2010, respectively. This steep drop is reflected in the fact that, although household debt declined as a share of GDP in 2010, it rose markedly as a share of disposable income. The forecast in *Monetary Bulletin* 2012/2 assumes that real disposable income will rise by 0.5% in 2012 and that, as debt restructuring progresses, debt relative to disposable income will continue to decline during the year, albeit less

3. Based on the Central Bank of Iceland's quarterly macroeconomic model (QMM).

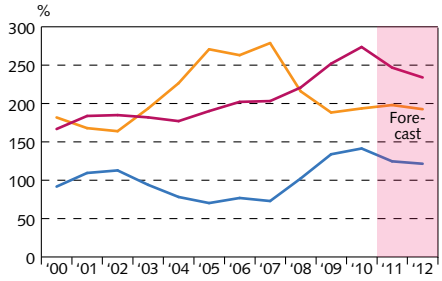
than in 2011. Private consumption grew strongly in 2011, or by 4.0%, and has been one of the main drivers of the economic recovery in recent quarters. Household demand is projected to continue growing in 2012 and drive output growth, although less strongly than in 2011. Private consumption is expected to grow by 3.2% in 2012, supported by increased purchasing power, a higher employment rate, higher asset prices (including housing), a low real interest rate, and expanded authorisations for third-pillar pension savings payouts, together with changes in the taxation of such payouts. Private consumption remains low relative to GDP, however, in spite of the recent surge.

Household debt relative to net assets, including real estate, motor vehicles, bank deposits, and various securities holdings (but excluding pension assets) declined by a full 17% between 2010 and 2011, the first year-on-year drop since the collapse. This positive trend is projected to continue in 2012, although less decisively than in 2011. In 2011, net household assets rose once again as a share of disposable income, after falling steeply in the wake of the banks' collapse. Even though it is assumed that household assets will increase in 2012, net household assets as a share of disposable income will decline during the year because disposable income will rise in excess of assets. The factors mentioned here indicate that the improvement in households' financial position that began in 2011 will continue in 2012.

Just after the turn of the century, household debt in Iceland measured about 170% of disposable income, similar to the level in Denmark and the Netherlands. In other comparison countries, debt as a share of disposable income was much lower, at 100-120% (see Chart III-4). In most Western countries, easy access to cheap credit led to a rise in household debt over and above the rise in disposable income after the turn of the century. In 2010, Iceland had the highest ratio of household debt to disposable income in Europe. As a result of debt restructuring (including write-downs in the wake of Supreme Court judgments on the illegality of exchange rate linkage) and the rise in disposable income in 2011 and 2012, Iceland's ratio of household debt to disposable income is expected to be below that in Denmark and the Netherlands in 2012. On the other hand, household debt in Iceland is still high in international comparison, in spite of the dramatic decline of the past three years and the reduction in the debt-to-disposable income ratio.

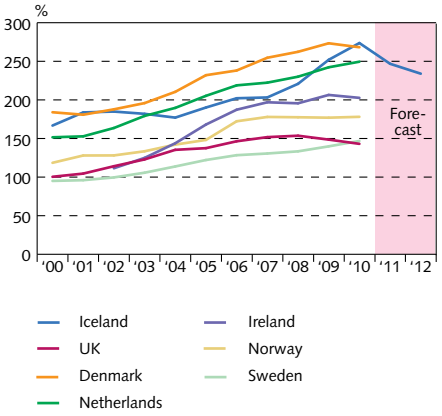
A large share of household debt is due to mortgage financing and is therefore categorised as housing expense. Chart III-5 shows housing expense as a share of disposable income. A comparison of Charts III-4 and III-5 shows a fair amount of consistency: the Netherlands and Denmark are at the top in both charts, and Norway and Sweden are similar to one another. Iceland stands out, however, as housing expense is similar to that in Norway and Sweden, while indebtedness is much greater. This is because the cost of heat and electricity is much lower in Iceland than in Europe. It is therefore worth pondering whether the low utilities costs in Iceland prompt Icelandic households to take on more debt than they would otherwise; for instance, consumer loans, motor vehicle loans, and student loans are generally higher in Iceland than in neighbouring countries.

Chart III-3
Financial position of households



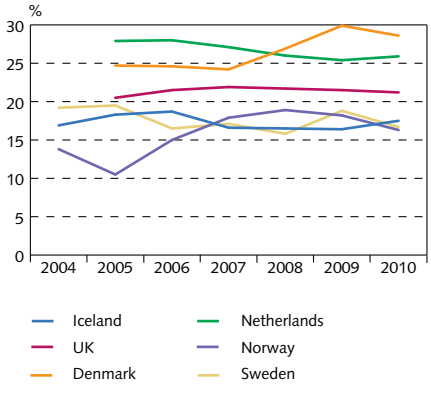
1. Including real estate, motor vehicles, bank balances, and various securities, but excluding pension assets.
Source: Central Bank of Iceland.

Chart III-4
Household debt as a percentage of disposable income



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

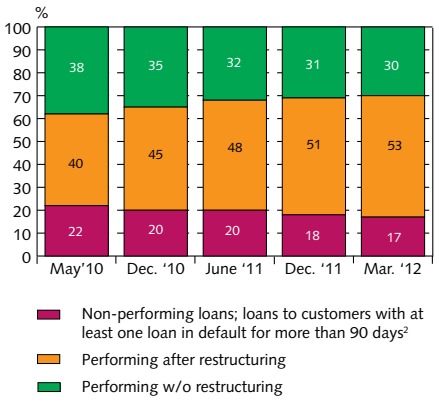
Chart III-5
Residential housing costs as a percentage of disposable income



Source: Statistics Iceland.

Chart III-6

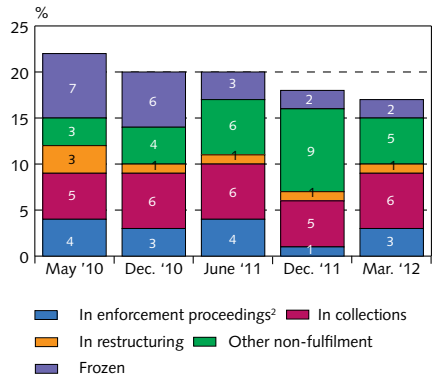
Status of loans from three largest banks and the Housing Financing Fund to households[1]



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; 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.

Chart III-7

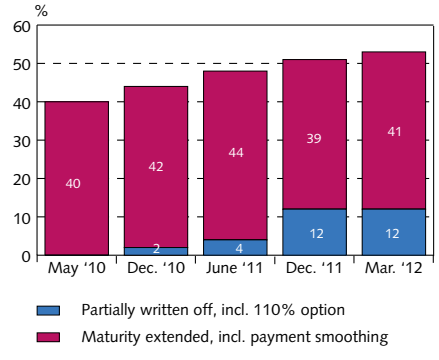
Status of household loans in default from the large commercial banks and the Housing Financing Fund[1]



1. Parent companies, book value. 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; 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 III-8

Household debt restructuring by the large commercial banks and the Housing Financing Fund[1]



1. Parent companies, book value.
Source: Financial Supervisory Authority.

Default ratios continue to decline

At the end of March 2012, some 17% of total loans granted to households by the three largest commercial banks and the Housing Financing Fund (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. This ratio was 18% at year-end 2011, 20% in December 2010, and 22% in May 2010. Most likely, the past two years' decline in default is due to debt restructuring efforts, as the percentage of loans that were performing following restructuring rose from 40% to 53% over the same period (see Chart III-6).

The lower default level in March 2012 as compared with year-end 2010 is due to the reduction in the share of frozen loans from 6% to 2%, whereas other forms of non-fulfilment rose from 4% to 5% (see Chart III-7). The share of loans undergoing restructuring is 1%, the same as at year-end 2010. As of end-March, 9% of loans were in enforcement proceedings or collections. This percentage, too, has remained unchanged for about two years. Actually, the share of loans in collections fell from 3% to 1% in December 2011, but by March 2012, it was back up to 3%. The dip and subsequent rise are attributable to the fact that the Housing Financing Fund did not send out dunning letters or forced sale requests in the latter half of December.

Extension of loan maturities (including payment smoothing) is the most common form of household debt restructuring. To date, some 40% of household loans have been lengthened in this manner. About 12% of household debt has been written off in part through the 110% option or the problem debt restructuring option (see Chart III-8), as opposed to 2% at year-end 2010 and 8% as of end-September 2011. According to information from the Icelandic Financial Services Association, nearly all applications for the 110% option have been processed, as have the majority of applications for problem debt restructuring. Significant progress was therefore made in restructuring household debt in 2011.

The loan-to-value (LTV) ratios of the large commercial banks' mortgage loans indicate that the collateral coverage for mortgage loans is improving. About 45% of residential mortgages had an LTV ratio of 70% or over at the end of 2011, as compared with 51% at the end of June 2011 and 46% at year-end 2010. Roughly 22% of mortgages had an LTV ratio over 90% as of end-2011, as opposed to 32% in June 2011 and at year-end 2010. Official property values for residential housing rose by an average of 9% at the beginning of 2012, which is in excess of price level increases and, other things being equal, should lower LTV ratios even further.

The number of individuals on the default register has continued to rise. It appeared to have peaked in summer 2011, but towards the end of the year it began to rise again, topping 26,000 for the first time in December. Since that time, there have been just under 26,500 persons on the default register, and it is too soon to say whether a peak has been reached.

Developments in the default register diverge from developments in default on loans from the commercial banks and the Housing

Financing Fund. The main reasons for this are two: first of all, because of differences in loan contract types, anywhere from 60 to 400 days may pass before a default is entered to the default register;[4] and second, individuals may remain on the default register for two years after the conclusion of liquidation proceedings and four years after unsuccessful distraint measures. As a result, there is a significant time lag between declining default figures from credit institutions and declining default register numbers.

Unsuccessful distraint is declining while bankruptcy is rising

The most recent information on the frequency of unsuccessful distraint measures confirms earlier indications of a turnaround in autumn 2011. A total of 2,348 unsuccessful distraint measures were recorded between September 2011 and April 2012, as opposed to 5,266 during the same period a year earlier, a decline of 55%. Comparison with the first four months of 2012 shows a drop of 60%. On the other hand, individual bankruptcies have increased in number in the recent term. Over the eight-month period from September 2011 to April 2012, a total of 152 individuals were declared bankrupt, up from 88 during the same period a year earlier, an increase of 73%. These figures indicate that the position of the individuals whose debt is sent to collections is stronger than just after the crisis struck, as it is likely that the financial institutions consider the value of the debtors' assets to exceed the cost of collections measures.

Bankruptcy rulings represent only a small fraction of the collections cases that end in unsuccessful distraint. The drop in the frequency of collections cases ending in bankruptcy or unsuccessful distraint is in line with the decline in default.

Probable delay in further household debt restructuring

Uncertainty about household debt restructuring has mounted because of the uncertainty about interest recalculation and settlement of previously paid interest on exchange rate-linked loans. It is thought likely that over a dozen court cases will be needed to eliminate the legal uncertainty surrounding loan agreements with exchange rate linkage clauses. It is important to try to expedite the handling of the relevant cases that have already been filed, as the uncertainty is detrimental to households and credit institutions alike.

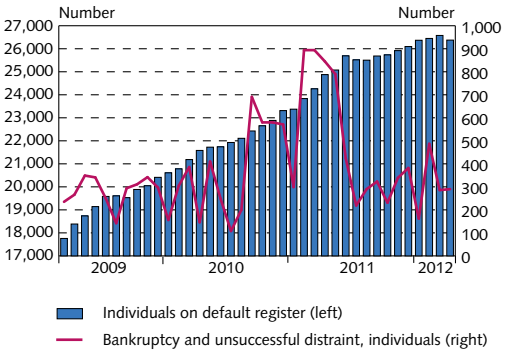
According to the Icelandic Financial Services Association, loan principal reductions granted to individuals by financial institutions, the Housing Financing Fund, and the pension funds as a result of recalculation and write-downs totalled 202.2 b.kr. as of end-January (see Chart III-10). The total reduction due to recalculation of exchange rate-linked loans amounted to 149.2 b.kr., 109.6 b.kr. for mortgages and 39.6 b.kr. for motor vehicle loans. In comparison with end-September 2011 figures, mortgage principal has fallen by 13.2 b.kr. over these four months, and motor vehicle loan principal by 1.1 b.kr. Only 61 cases involving vehicle loans still await processing. It therefore appears as though motor vehicle loan principal has been recalculated

4. According to information on the procedure for entry of data to the CreditInfo default register.

Chart III-9

Individuals on default register, bankruptcy, and unsuccessful distraint

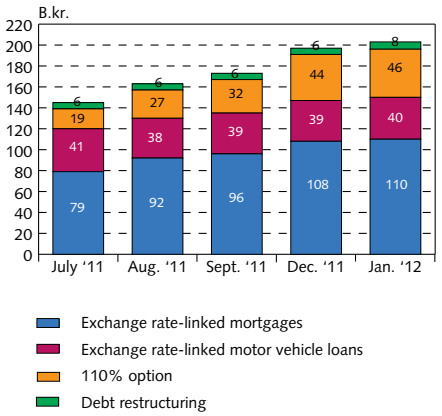
March 2009 - April 2012



Source: CreditInfo.

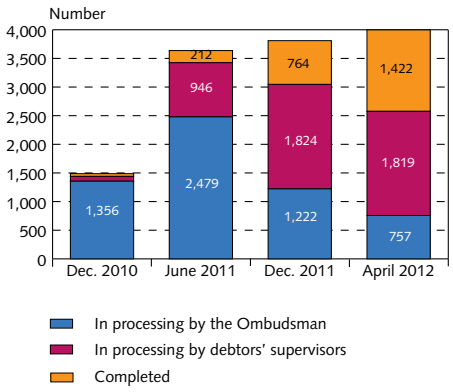
Chart III-10

Loan principal reduction due to recalculation and write-downs



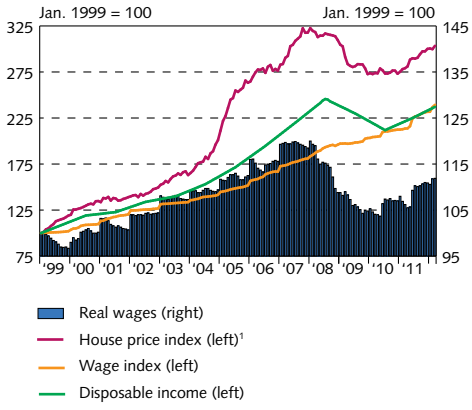
Source: Icelandic Financial Services Association.

Chart III-11
Status of applications filed with the Debtors' Ombudsman



Source: Debtors' Ombudsman.

Chart III-12
Greater Reykjavík house prices, wage index, and disposable income per capita
January 1999 - March 2012



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

in accordance with judgments handed down before the 15 February decision. The reduction due to write-downs totals 53 b.kr.: principal declines by 45.8 b.kr. because of the "110% option" and 7.2 b.kr. due to problem debt restructuring measures. In comparison with end-September 2011, write-downs associated with the 110% option increase by 14.1 b.kr. and those resulting from problem debt restructuring increase by 1.1 b.kr. At the end of January, only 1% of applications for the 110% option were still awaiting processing; therefore, it can be said that this form of debt restructuring method is all but complete. About 28% of problem debt restructuring applications are still being processed; therefore, further write-downs can be expected. Debtors may file applications for problem debt restructuring until year-end 2012.

As of end-April, the Debtors' Ombudsman had received 3,998 applications for debt mitigation, the most aggressive option available to individuals in financial distress. Of those 3,998 applications, 757 were still being processed by the Ombudsman's office, 1,819 had been referred to supervisors, and 1,422 cases (36% of the total) had been concluded and closed (see Chart III-11). Thus the bulk of the processing of debt mitigation cases has been shifting from decision-making to monitoring and support of supervisors.

Households' financial position improves, but uncertainty remains

Households' financial position took a decisive turn for the better in 2011. Total household debt declined by almost 8% in real terms, real wages rose by 3.7%, and private consumption grew by 4%. Unemployment was down 0.7% during the year, and there was a discernible increase in hours worked and a rise in labour demand. Households' equity position has also improved considerably. The real estate market is recovering, with increased turnover and prices up 10% in 2011.

Although progress has been made in household debt restructuring, the process is not complete, as there is still uncertainty about the recalculation of exchange rate-linked loans. It is clear that household debt will decline as a result of the February Supreme Court decision and that some reimbursements will be made to households, as a portion of the amount credit institutions must write off because of the Court decision cannot be set off against other debt. Furthermore, it is expected that investment will grow this year, which will boost labour demand and reinforce households' financial position.

There are signs that households' position is slowly improving. Financial conditions remain challenging for many, however, and studies show that single parents and young couples with children have the greatest difficulty making ends meet. Inflation has outpaced forecasts in the recent term, and the inflation outlook has deteriorated. The market expects Central Bank interest rates to be higher as a result; for example, the large commercial banks raised the nominal interest rate on non-indexed mortgage loans by 0.25-0.50 percentage on 1 April, following the Bank's 0.25 percentage rate hike on 21 March (see Table III-1). The large commenrcial banks raised interest by an additional 0.35-0.50 percentage in the wake of the Central Bank's 0.50

percentage rate hike on 16 May. Another source of uncertainty is the exchange rate of the króna, which could be affected by the removal of the capital controls. Even though households' position has broadly improved in the recent term and the outlook is positive, considerable uncertainty remains.

Table III-1 Fixed interest rates of the large commercial banks non-indexed mortage loans

Commercial bank	*Fixed rates for:*	*Increase since 1 April, %*	*Fixed rates in June, %*
Landsbankinn	60 months	0.70	7.30
Landsbankinn	36 months	0.60	7.00
Arion banki	60 months	1.00	7.45
Íslandsbanki	36 months	0.75	6.95

Sources: Arion banki, Íslandsbanki, Landsbankinn.

Box III-1

Review of interest rates on private sector loans

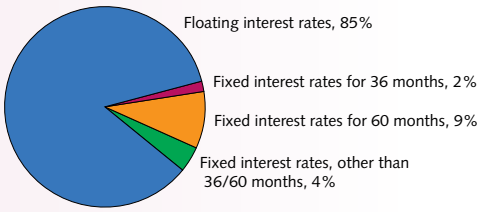
Change in composition of household debt

Since the banking system collapsed, household debt has changed (see Chart III-1), both in amount (a reduction relative to GDP) and composition. The changes are due primarily to Supreme Court judgments declaring exchange rate linkage illegal, following which the claim value of loans to households has declined and exchange rate-linked loans have been converted to either indexed or non-indexed loans in Icelandic krónur. The banks have attempted to channel redenominated loans towards non-indexed debt, and household demand for such loans has been strong as well. Since the beginning of 2012, for instance, nearly 90% of new mortgage loans from deposit money banks (DMBs) have been non-indexed, indicating that households prefer higher debt service initially and more rapid accumulation of equity to the more stable debt service provided by indexed loans. Negative discussion of indexation and the post-crisis surge in inflation have also played a part.

Households are offered a number of financing options when purchasing a home or motor vehicle, as most DMBs offer fixed or floating interest rates on both indexed and non-indexed loans. The fixed period for non-indexed interest rates can vary as well, with three or five years the most common fixed-rate period available to individuals. Based on the end-2011 book value of the large commercial banks' non-indexed mortgage loans, 85% of loans (64.7 b.kr.) had variable interest rates, 9% (7 b.kr.) had fixed rates for five years, 2% (1.2 b.kr.) had fixed rates for three years, and 4% (3 b.kr.) had a fixed period other than three or five years. In the recent term, the majority of new non-indexed mortgages have been fixed-rate loans; therefore, it is likely that nearly all exchange rate-linked loans that have been converted to non-indexed króna-denominated loans have floating interest rates. If the general trend in interest rates runs counter to the fixed interest rate on a loan, terms and debt service can change radically upon the next review. If interest rates do develop in this way and rates on a large majority of non-indexed loans are reviewed at roughly the same time, consumption, financial stability, and the position of a large number of households could be affected. Fixed rates on non-indexed mortgages from the large banks are likely to rise upon review in 2012 and 2013. Since 1 April 2012, fixed rates on 36- or 60-month non-indexed loans have risen by 0.6-1.0 percentage point. Chart 2 shows that almost half of non-indexed fixed-rate loans are due for review in 2016, and about a fourth are up for review in 2013. The amounts concerned are

Chart 1

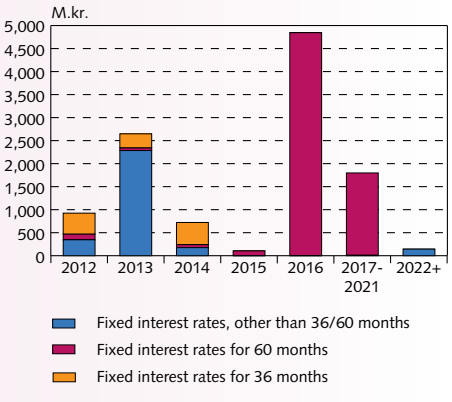
Interest rate terms of non-indexed mortgage debt at year-end 2011[1]



1. Book value of the three largest commercial banks' loans.
Source: Central Bank of Iceland.

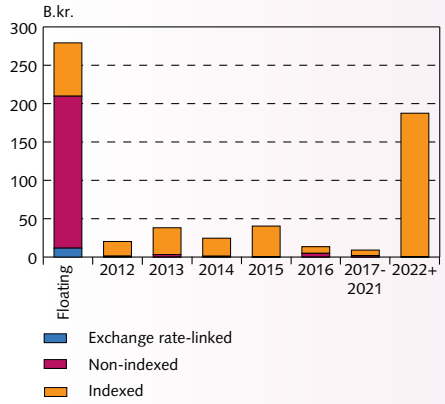
Chart 2

Interest rate review of fixed-rate mortgage debt[1]



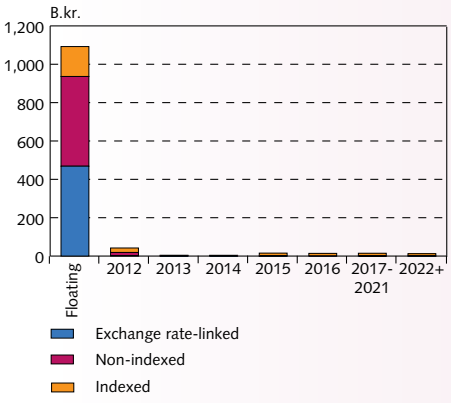
1. Book value of the three largest commercial banks' loans.
Source: Central Bank of Iceland.

Chart 3
Interest rate review of household debt[1]



1. Book value of the three largest commercial banks' loans.
Source: Central Bank of Iceland.

Chart 4
Interest rate review of corporate debt[1]



1. Book value of the three largest commercial banks' loans.
Source: Central Bank of Iceland.

low relative to total residential mortgages, however, and financial stability will not be affected even if rates rise after the next review.

An examination of the book value of the large commercial banks' total household loans reveals that 46% are floating-rate loans and 54% have fixed interest rates. Some 31% of fixed-rate loans have a fixed period of 10 years or longer. The vast majority are indexed mortgages with fixed real rates until maturity (the "2022+" category in Chart 3). If loans from the Housing Financing Fund (HFF), the pension funds, and the Icelandic Student Loan Fund are included, this percentage is much higher.

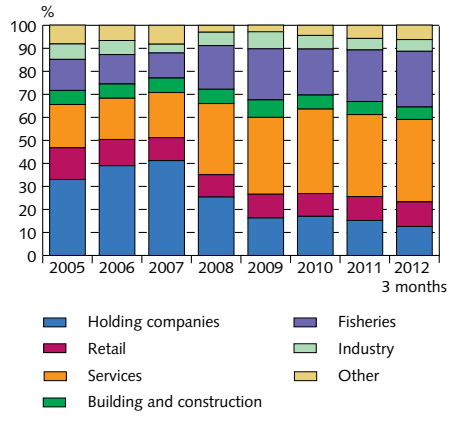
In the near future, interest rate reviews will be much more common for indexed loans than for non-indexed. Non-indexed loans that are up for review in the next five years only account for roughly 2% of total household debt, as opposed to 21% for indexed loans.

Clearly, the share of household loans with floating rates or fixed rates for a short period of time is fairly large, and it can be expected to rise because of the strong demand for non-indexed debt. Furthermore, the pension funds and the HFF are considering offering non-indexed loans. Moreover, most pension funds now offer indexed loans at variable real interest rates. This change in the composition of household debt should enhance the effectiveness of monetary policy, as changes in Central Bank rates should have a greater effect on debt service. On the other hand, in most cases the debt service burden on non-indexed debt is greater than on indexed debt at the beginning. Interest rate hikes could therefore raise debt service beyond households´ tolerance levels, possibly jeopardising financial stability.

Corporate debt primarily at variable interest rates

The vast majority of corporate debt (91%) bears variable interest, 39% of it exchange rate-linked, 13% indexed, and 39% non-indexed. Of the 9% of loan agreements bearing fixed interest, 1.5% are non-indexed loans and 7.5% indexed. Interest rate reviews on fixed-rate corporate loans therefore pose little threat to financial stability and are unlikely to jeopardise it in the future.

Chart III-13
DMBs' lending to companies, by sector[1]



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

Firms

Corporate balance sheets contract

Many corporate balance sheets grew during the pre-crisis years, as companies stepped up acquisitions and accumulated debt. By 2008, the balance sheets of Iceland's 100 largest non-financial firms were roughly six times GDP, after having more than doubled since 2004. That trend has now reversed. Many large firms have been dissolved, become insolvent, or undergone financial restructuring, and their balance sheets have shrunk accordingly. By year-end 2010, the balance sheets of the country's 100 largest firms were down to 4.4 times GDP, which is nonetheless more than in 2005.

The sectoral distribution of Iceland's 200 largest firms has changed in recent years, as can be seen in Table III-2. While 52 of the 200 largest companies were fisheries in 1998, by 2007, only nine years later, that figure had dropped to 14. By 2010, it was up to 22. Loans to companies in the fishing industry have also increased relative

to total corporate lending, to 24% as of end-March 2012. The most salient change over this period has been in holding companies, which accounted for 52 of Iceland's 200 largest firms in 2001 and again in 2010. In 2007, however, 120 of the 200 largest firms were holding companies. At the end of March 2012, loans to holding companies accounted for 13% of deposit money banks' (DMB) corporate loans, as opposed to 41% in 2007. The number of large service companies has risen sharply since 2007, in part because of the surge in tourism and information technology, but also because of an increase in real estate firms and corporate headquarters' operations, which are similar to holding company activities. In 2007, 29 of the 200 largest firms were service companies. Their numbers had remained relatively stable for several years but mushroomed to 60 by 2010. DMBs' loans to service companies have doubled in well under a decade, from 18% in 2006 to 36% at the end of March 2012.

Table III-2 Sectoral distribution of Iceland's 200 largest non-financial companies 1998-2010

	Holding companies	*Wholsale and retail*	*Services*	*Industry*	*Fisheries*	*Other operations*
1998	30	43	31	23	52	21
2001	52	33	34	16	38	27
2004	87	24	29	14	24	22
2007	120	13	29	9	14	15
2010	52	22	60	18	22	26

Source: Statistics Iceland.

Default and unsuccessful distraint on the wane

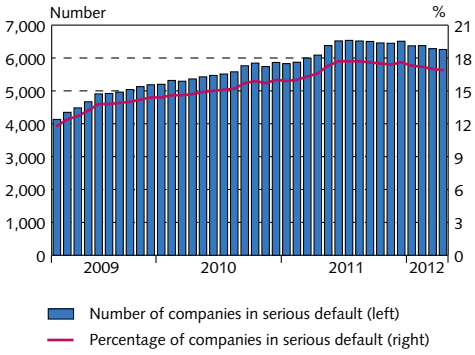
The number and percentage of firms on the default register peaked around mid-2011. At this writing, some 6,250 companies (17%) are on the default register, a slight decline in recent months. Once a firm is placed on the default register, it can take a long time for it to drop off it after its loans are performing again, its debt is restructured, or its operations discontinued (bankruptcy). As a result, there is often a time lag in the default register, and actual default levels may be lower than the register indicates.

Corporate bankruptcy and unsuccessful distraint actions against firms rose substantially year-on-year in 2011. There were a total of 6,210 unsuccessful distraint actions in 2011, as opposed to 4,843 in 2010. They dropped by 35% year-on-year in the latter half of 2011, however, and by 55% year-on-year in Q1/2012. A total of 1,578 firms were subjected to bankruptcy proceedings in 2011, up from 982 in 2010. The bankruptcy rate was the highest seen in several decades, with 4.6% of firms declared insolvent, as opposed to 2.8% in 2010. Operational distress and subsequent insolvency emerge with a significant time lag. The high frequency of bankruptcy seen now is an aftershock from the financial collapse of 2008 and the adjustment of the economy to new circumstances. Viable firms are being restructured, while those that cannot survive are being wound up.

Legal disputes delay restructuring

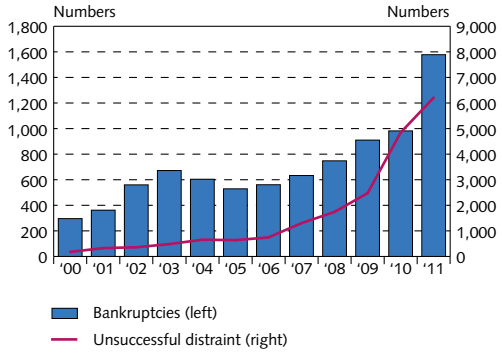
Corporate debt restructuring proceeded apace in 2011. Nonetheless, nearly one-fourth of the largest commercial banks' corporate loans are

Chart III-14
Companies in serious default
March 2009 - April 2012



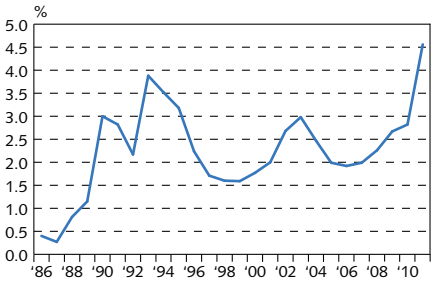
Source: CreditInfo.

Chart III-15
Corporate bankruptcies and unsuccessful distraint
Total for entire year



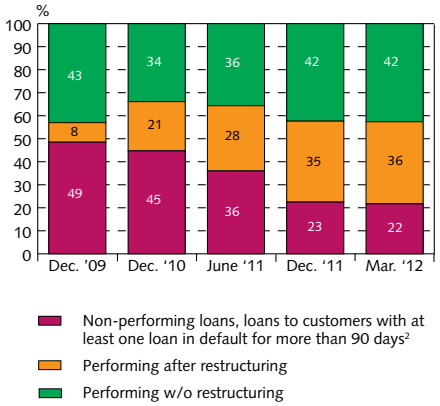
Sources: Registers Iceland, Statistics Iceland.

Chart III-16
Corporate bankruptcies, frequency



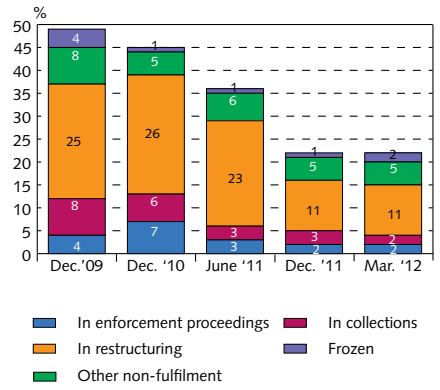
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-17
Status of the three largest commercial banks' corporate loans[1]



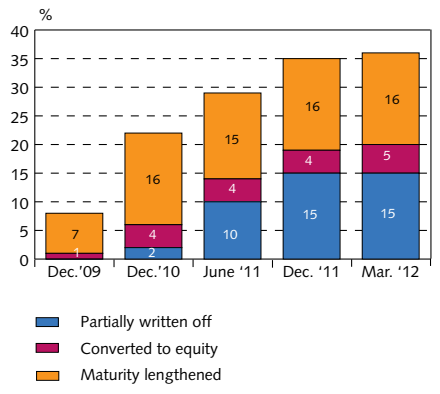
1. Parent companies, book value. 2. Non-performing loans are defined as loans in default for more than 90 days or deemed unlikely to be paid. The cross-default method is used; that is, if one loan taken by a customer is non-performing, all of that customer's loans are considered non-performing.
Source: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

Chart III-18
Status of non-performing corporate loans[1]



1. Parent companies, book value. 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 from the three largest commercial banks.
Source: Financial Supervisory Authority.

Chart III-19
Corporate debt restructuring measures[1]



1. Parent companies, book value. Corporate loans include loans from the three largest commercial banks.
Source: Financial Supervisory Authority.

still in default according to the cross-default method, which assumes that all of a customer's loans are in default if one loan is in arrears. This percentage declined by about half in 2011, from 45% at the end of 2010 to 23% a year later (see Chart III-17). An examination of loans in default shows that, as of end-2010, loans in default and undergoing restructuring were 26% of all loans. Well over half of this restructuring was completed in 2011. By the end of 2011, 11% of loans in default were undergoing restructuring, and of those, 4% were in the documentation process. Furthermore, the share of non-performing loans undergoing enforcement or collection proceedings fell from 13% to 5% (see Chart III-18). This is in line with the rise in bankruptcy and unsuccessful distraint, which was necessary in order to expedite corporate restructuring. Things changed for the better in 2011, when corporate debt restructuring progressed from consisting almost solely of extension of loan duration to including some partial write-offs. The share of restructured loans that were partially written off rose from 2% to 15%, while the share that had been lengthened remained constant at 16% (see Chart III-19). The increased percentage of partial write-offs may go hand-in-hand with a rise in the number of companies that changed hands during the restructuring process. As the Competition Authority[5] points out in its March 2012 report, a number of factors suggest that debt forgiveness is more widespread if a change of ownership takes place concurrent with debt restructuring.

All of the above-specified percentages remained virtually unchanged in the first three months of 2012. The cause is probably related to exchange rate-linked loans. A number of factors indicate that, in many instances, there is a legal dispute between financial institutions and firms still in default concerning the validity of the loan agreements. In coming months, the courts will hand down decisions on the legality of exchange rate-linked corporate loans and other disputes awaiting resolution. In addition, the Supreme Court's 15 February judgment on the validity of a receipt for full payment on exchange rate-linked loan agreements has considerable impact. The judgment exacerbates the uncertainty concerning settlement of exchange rate-linked loan agreements. Possible recalculation of loans to firms that have already been restructured or have paid on time will be time-consuming and will slow down the restructuring process. Further discussion of the Supreme Court judgment of 15 February 2012 and its impact can be found in the Box in Section V.

The drop in the number of firms on the default register and in the number of unsuccessful distraint actions and the reduced percentage of loans in default are clear signs that restructuring is bearing fruit and that a larger share of firms have returned to operability. It is likely that some restructured firms will seek restructuring again in the next few months. This is a normal occurrence in the wake of a debt crisis, as operational premises become clearer as external conditions are clarified.

5. http://www.samkeppni.is/media/skyrslur-2012/Skyrsla_3_2012_Endurreisn_fyrirtaekja_Aflaklaer_eda_uppvakningar.pdf

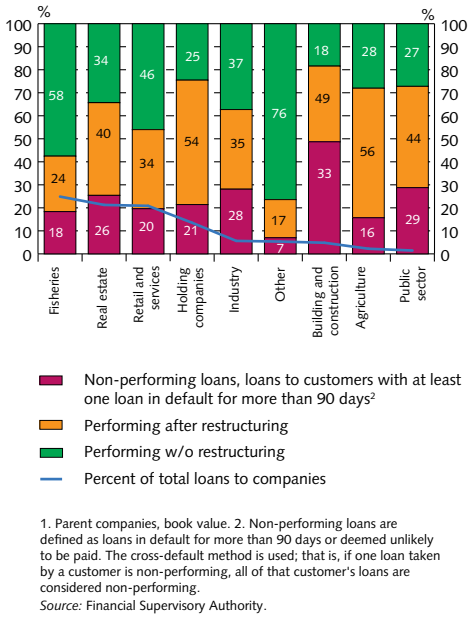
Fishing companies with the lowest default levels

Chart III-20 illustrates individual sectors' share of the three largest commercial banks' total corporate loans and presents an itemisation of default by sector. The figures vary greatly, both within given sectors and across them. About 60% of loans to fisheries and fish processing firms are performing without restructuring, reflecting the current strength in revenue generation in the fishing industry, while only 20% of loans in the construction industry and 25% of loans to holding companies are performing without restructuring. It is well known that holding companies fared poorly as a result of the stock market collapse, and the construction industry has contracted sharply in recent years. Most sectors have default levels around 20% or higher, with the exception of the construction industry, at almost 50%. This could be because of difficulties in appropriating assets, as many assets are relatively illiquid under current market conditions. In spite of the poor quality of loans to the construction industry, they only account for 5% of all corporate loans. Fisheries and fish processing companies account for 25% of the total, followed by real estate firms and retail and service companies, with 20% each. The status of loan performance is comparable among these large sectors, even though the original loan quality was best in the fishing industry, as fewest of these loans have needed restructuring.

Chart III-20

Status of the three largest commercial banks' corporate loans, by sector[1]

March 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.

Corporate debt has declined by almost half since the crisis struck

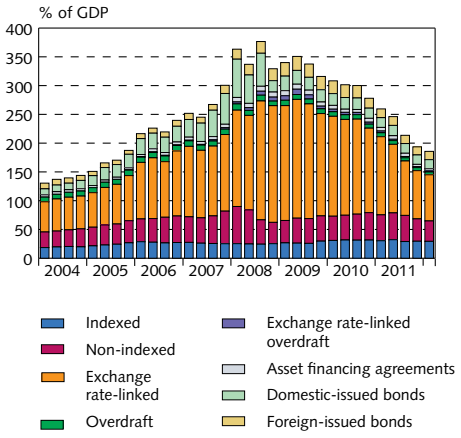
In spite of restructuring and write-offs, Iceland's ratio of corporate debt to GDP remains high in international comparison. It was estimated at about 185% at end March 2012, after having declined relatively rapidly from its autumn 2008 peak of 375% as a result of bankruptcy, restructuring, deleveraging and write-off.[6] Indexed, non-indexed, and overdraft loans in Icelandic krónur are broadly unchanged at about 70% of GDP, while foreign-denominated loans, overdraft loans, and asset financing agreements have declined from 220% of GDP to about 85%, and marketable bonds have fallen from 80% of GDP to about 30%. The main reason corporate loans in Icelandic krónur have not declined in line with other loan categories is that foreign-denominated loans of firms without foreign-denominated revenues have been systematically converted into domestic currency or restructured as ISK loans. Exchange rate-linked debt could fall still further if additional exchange rate linkage of corporate loan agreements is deemed illegal. Cases centring on this issue will be heard by the courts in coming months.

Many firms have a heavy debt service burden in spite of a sizeable reduction in debt levels, and it is uncertain whether they will be able to service their debt if economic developments work against them or output growth is weaker than expected in coming years. If companies are overleveraged, their ability to invest will be reduced, to their long-term detriment. This is a risk factor that should be monitored, as it could adversely affect the overall economy later on.

Chart III-21

Corporate debt as % of GDP[1]

Q1/2004 - Q1/2012

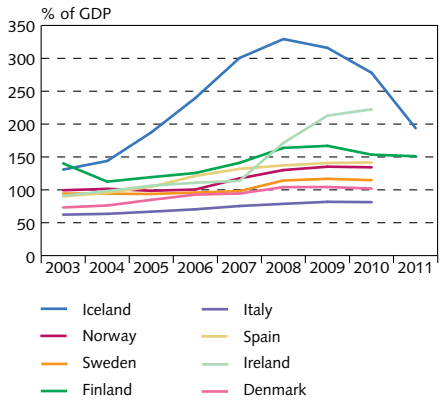


1. Debt to domestic and foreign financial institutions and issued marketable bonds.

Source: Central Bank of Iceland.

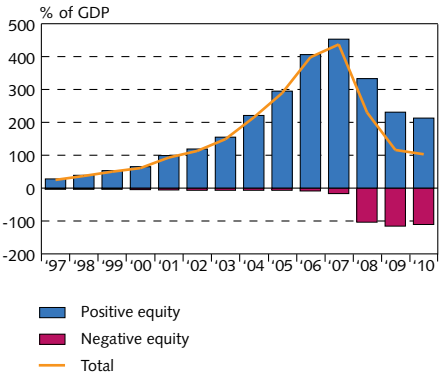
6. This refers to Icelandic companies' total debt, to domestic and foreign financial institutions and issued marketable bonds.

Chart III-22
Corporate debt as % of GDP



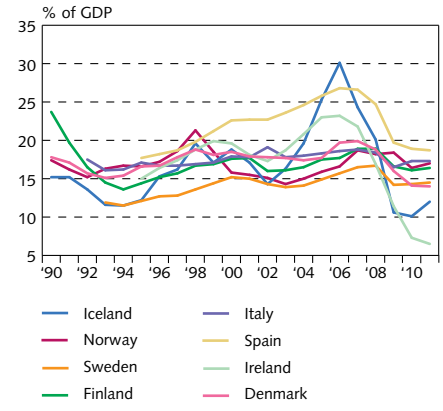
Sources: Eurostat, Central Bank of Iceland.

Chart III-23
Equity of non-financial companies



Source: Statistics Iceland.

Chart III-24
Business investment as % of GDP



Source: Eurostat.

Appropriated assets sold

According to the Act on Financial Undertakings,[7] financial institutions may not own firms engaged in unrelated operations for longer than 12 months, although the Financial Supervisory Authority can grant exemptions to this restriction. At the end of April 2012, 116 firms in unrelated operations were owned temporarily by financial institutions. Of these, 92 had been granted exemptions, 14 were within the legal time limit, and 10 were being processed by the Financial Supervisory Authority. Of the firms that had received exemptions, three were undergoing restructuring, 32 were being wound up, and 57 were being sold.

In recent months, financial institutions have been divesting themselves of firms with unrelated operations, although there is still work to be done in this area. They have taken over almost no companies in the past few months. Since mid-2011, upwards of 50 firms previously owned by financial institutions have been sold. In most instances, the buyers are investment funds owned by asset management firms. There has been reluctance to list companies on the stock market. Only one new listing has taken place since the banks collapsed, although a few other firms have publicly announced plans for listing.[8]

It is important that financial institutions be given the latitude to restructure companies within a sensible timeframe. Reluctance to take over companies for fear of being pressured when selling them later could cause delays in necessary restructuring until the outlook for sale in the market is brighter. Such a situation is contrary to the long-term interests of the economy, including the financial institutions themselves.

According to the Competition Authority's March report, financial institutions' control over Iceland's large companies has diminished. The report states that financial firms held controlling shares in 27% of large companies at year-end 2011, as opposed to 46% a year earlier. This is in line with the success in restructuring corporate debt during the year. There may be indirect ownership in some instances, as owners have limited room for manoeuvre due to high debt levels, and there is the possibility to affect operations through loan agreement terms and acceleration clauses.

Operational uncertainties abound

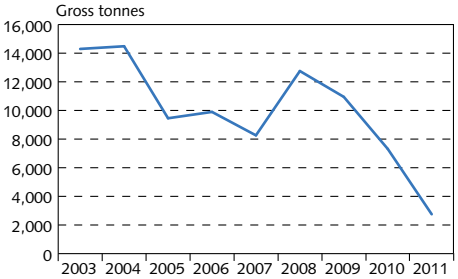
There are few new sizeable investments at present, and most new companies appear to be small-scale operations. Business investment is on the rise, however, and the Central Bank projects even more growth according to its most recent forecast, published in *Monetary Bulletin* 2012/2. Demand for new credit remains limited, however, for a number of interrelated reasons. In general, firms are heavily leveraged, and many of them have negative equity. Some appear focused entirely on solving existing problems. Moreover, risk appetite is limited, and a variety of uncertainties make planning complicated. There is still

7. Act no. 161/2002.
8. Hagar hf. was listed on the NASDAQ OMX Exchange Iceland in December 2011.

legal uncertainty related to loan agreements, particularly those with exchange rate linkage clauses. The legal environment has changed rapidly, and some of the changes have directly affected the profitability of investments. The amendments to the Fisheries Management Act recently presented before Parliament have a direct impact on fishing companies' earnings. The sector has been cautious with investments in the recent term because of the possibility of changes in the statutory framework, as can be seen in the limited renewal of the fishing fleet (see Chart III-25). If the bill of legislation is passed in its current form, there will probably be some negative effect on financial institutions, but not enough to jeopardise financial stability. The capital controls are still in place, and the effects of liberalisation on the exchange rate of the króna are uncertain. These uncertainties are likely to deter prospective investors from engaging in investment. Continued growth in investment is important to maintain output growth and enhance the likelihood that households and businesses will be able to service their debt.

Chart III-25

Total gross tonnage of newly registered and re-registered decked ships, three-year average[1]



1. Adjusted for Coast Guard ship Þór.
Sources: Icelandic Register of Ships 2004-2012.

Box III-2

Household debt according to income tax returns

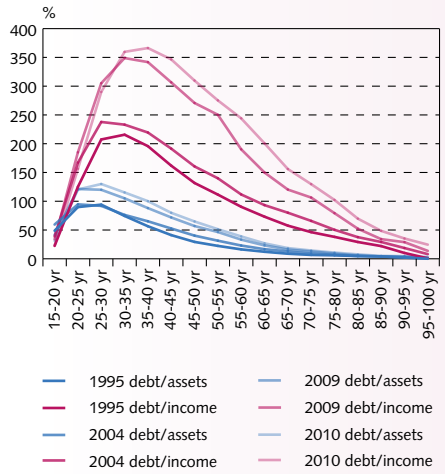
Household debt has garnered significant attention in the wake of the financial crisis that is still sweeping the globe. A large number of studies have shed light on the relationship between debt accumulation and asset prices, on the one hand, and financial and banking crises, on the other. A recent study by the International Monetary Fund (IMF) shows that the more heavily leveraged a country's private sector is during the prelude to a crisis, the deeper the ensuing recession will be. Other research has illustrated the importance of the distribution of household debt in an assessment of the impact of a crisis on the economy.[1]

Icelandic household debt has grown enormously in recent decades. Icelanders' debt is among the highest in the world, relative to either disposable income or GDP.[2] It is therefore important to analyse the impact and implications of this indebtedness. In recent years, households' position has been discussed in each issue of the Central Bank's *Financial Stability* report. For the past three years, the Bank has also published findings from broad-based research utilising data from a database containing information on most household loans.[3] Concurrent with these analyses, it is important to examine developments in lending and the distribution of debt over a longer period of time. Such an analysis can be useful, for instance, in preparing and selecting macroprudential rules or designing other measures aimed at reducing risk in the economy and promot-

1. See, for instance, International Monetary Fund (2012), World Economic Outlook on the relationship between household indebtedness and recession depth. See also King, Mervyn (1994) "Debt Deflation: Theory and Evidence", Hall, Robert (2010) "The Long Slump", and Guerrieri and Lorenzoni (2011) "Credit Crises, Precautionary Savings and the Liquidity Trap" on the importance of debt distribution and debt service within the economy as regards the depth and scope of contractionary episodes.
2. A number of explanations have been suggested for Icelandic households' heavy indebtedness, including the high proportion of home ownership, the young age of the nation, and the well-funded pension system. For further information, see also Box 1 in *Monetary Bulletin* (2004/3).
3. For further information, see the findings in forthcoming working paper on the Central Bank website. Thorvardur Tjörvi Ólafsson and Karen Á. Vignisdóttir (2012). "Households' position in the financial crisis in Iceland. Analysis based on a nationwide household-level database." The paper shows, among other things, how distribution of debt differs according to factors such as age and income.

Chart 1

Debt as a percentage of assets and income, by age of debtor 1995, 2004, 2009, and 2010

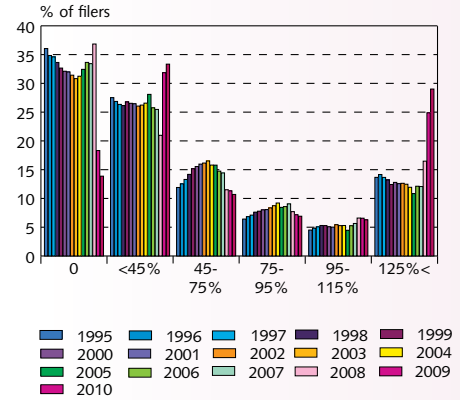


Source: Statistics Iceland; processed by the Central Bank.

Chart 2

Debt as a percentage of assets

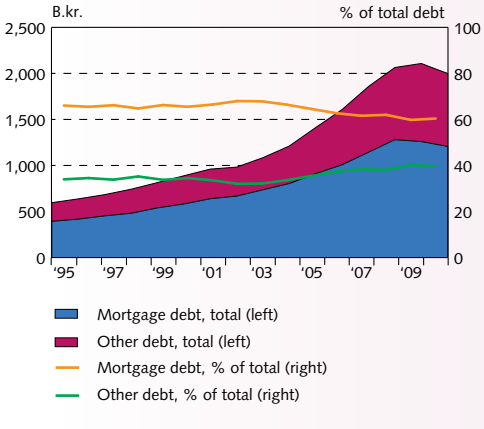
Number in each leverage range 1995-2010



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 3

Household debt according to tax returns, constant 2010 prices



Sources: Statistics Iceland, Central Bank of Iceland.

ing financial system stability. For this purpose, the Bank has used income tax return data prepared by Statistics Iceland.[4]

Distribution of debt by borrower age

It is possible to use tax returns to examine debt distribution according to the age of the borrower. If filers of income tax returns are divided into five-year age groups and the average debt of each group examined as a share of average assets, tax returns show that the youngest filers are the most indebted (see Chart 1). It has generally been considered normal that individuals should have fairly heavy debt relative to the value of their assets early in their lives, perhaps even owing more than they own. In general, it is assumed that individuals will smooth their expected lifetime income over their lives and take on some debt, particularly early on, when they are pursuing an education and establishing a home and family. At around this time, they often purchase a home, usually an individual's largest investment. Chart 1 shows that the ratio of debt to assets rises for all age groups during the period 1995-2010; furthermore, in all cases it is higher at the end of this period than at the beginning. The chart also illustrates the effects of asset depreciation and income erosion because, even though debt declined between 2009 and 2010, the drop in asset values and income was even greater. Debt ratios therefore rose. Debt relative to the income of individuals in the 20-35 age bracket stands out, however, as it declined between 2009 and 2010.

One-third of filers debt-free

The majority of filers had relatively little debt during the period under scrutiny. For instance, nearly 60% of filers owed less than 45% of their assets for nearly the entire period (see Chart 2). This group grew smaller in 2009 and 2010, although it still accounted for almost half of filers in 2010. It is noteworthy as well that the number who owed over 95% of the value of their assets remained relatively stable. For the majority of the period, this group included just under one-fifth of all filers. In the last three years of the period, however, the group of filers who owed over 95% of their assets mushroomed, to about 35% of filers by 2010. This includes roughly 65% of household debt, according to tax return data.

The over-95% group was roughly the same size in both 1995 and 2007, at about 18% of filers. Their share of total household debt declined, however, over the intervening period. For instance, these filers accounted for about 42% of total household debt in 1995 but only 34% in 2007. Rising asset values are doubtless the main reason increased household indebtedness did not trigger a rise in the number of filers with the heaviest debt. On the other hand, this development also reflects the increase both in the number of debtors owing 45-95% of the value of their assets and and in the size of their debt.

Increase in non-mortgage debt

Chart 3 shows developments in the total debt according to tax returns. According to the chart, even though mortgages account

4. The effects of tax treatment of asset and liability items probably affect tax return preparation. There is therefore the incentive to report income that meets the conditions for mortgage interest allowances and to underreport deposits and other assets. The data probably provide a more reliable view as the amount of information pre-entered to the tax return forms increases. In addition, assets are underestimated in that real estate is entered according to the official property valuation and equity securities are entered at nominal value. Presumably, the findings for 2009 and 2010 tax returns reflect differing treatment of loans that have been recalculated.

for the majority of household debt, they have fallen relative to total debt since the middle of the period. For example, mortgages accounted for 68% of total debt in 2002 but only 60% in 2010. Other debt, then, has assumed greater prominence.

Chart 4 analyses two groups further: those owing over 95% of the value of their real estate according to the appraisal value and those owing over 95% of the value of their non-real estate assets. The chart shows both the share of total debt (bars) and the number of filers in the group (lines).

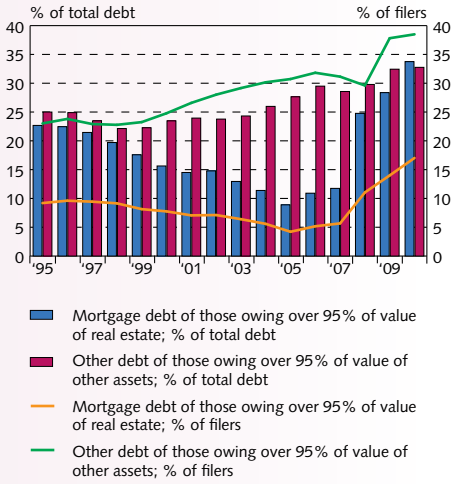
It also shows how the number who owed over 95% of the value of their real estate dropped early in the period (yellow line), from 8% in 2000 to 4% in 2005. Because of the housing bubble in 2004-2007, increased leverage does not show in a large increase of borrowers with negative housing equity. In 2008-2010, however, this group grew in size again, to 17% of filers with negative equity or less than 5% in positive equity in their property.

The group who owed over 95% of non-real estate assets also grew at this time. It grew steadily in size throughout the period, from 23% of filers in 1995 to 38% in 2010.

In general, this rise in non-mortgage debt increases the risk on financial institutions' balance sheets, as the risk of loss on non-mortgage debt is often greater than that due to mortgages. This category includes not only motor vehicle loans but also overdraft privileges and other loans with little or no underlying collateral.

Chart 4

Debt of borrowers owing over 95% of assets



Sources: Statistics Iceland, Central Bank of Iceland.

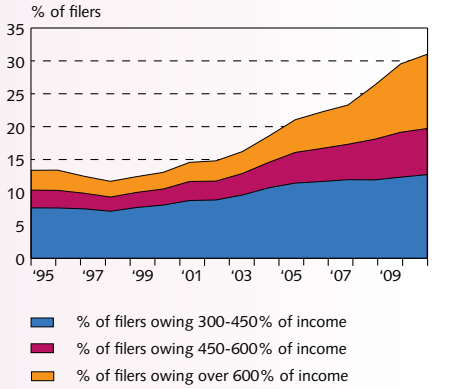
Debt and income

Negative equity does not necessarily entail financial distress. For instance, many students owe more than they own but have low debt service or even none at all, as they have not yet begun to pay their student loans off. If assets are limited or non-existent, the ratio of loans to asset values can be misleading. Debt service can therefore provide a more reliable measure of households' financial position. Debt as a percentage of income can provide an indication of a household's debt service burden.

During the reference period, 1995-2010, the group who owed more than 300% of their reported annual income first exceeded 15% of filers in 2002. Chart 6 shows how the size of this group developed. From 1999 onwards, it grew steadily as a percentage of all filers, exceeding 30% in 2010. The chart also shows the increase in the group who owed more than 600% of their reported income: from 3% in 2002 to 6% in 2007 and, finally, to just over 11% in 2010.

Chart 5

Filers owing over 300% of annual income



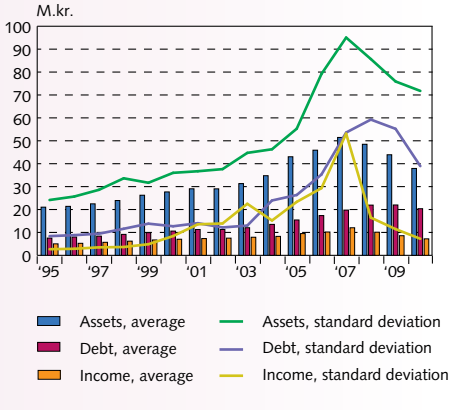
Sources: Statistics Iceland, Central Bank of Iceland.

Income gap narrows again

Tax returns show that, in tandem with the rise in average debt, income, and assets, the distribution of these variables also changed. The standard deviation for the data reveals that it grows as the time horizon progresses (see Chart 6) and reaches a high point for income and assets in 2007. The standard deviation also increases as a percentage of the average. This implies that the gap in income, assets, and debt widened during the period, peaking in 2007 for income and value of assets, and in 2008 for debt. Chart III-12 (see the discussion of households in Section III) shows that the gap between disposable income and the wage index grew over the same period. This implies that the hefty rise in income experienced by some filers was due at least in part to non-wage income. The standard deviation of income as a percentage of average income fell sharply once again, and by 2010 it was broadly in line with the level seen in 2000.

Chart 6

Joint filers' assets, income, and debt: average and standard deviation



Sources: Statistics Iceland, Central Bank of Iceland.

IV Funding

Commercial banks' funding predominantly from sight deposits

The majority of the commercial banks' funding comes from deposits. At the end of 2011, deposits comprised 59% of their total funding, a marginal decrease since end-2009. A large share of the deposits are denominated in Icelandic krónur and held by Icelandic residents; however, 120 b.kr. in Icelandic krónur are held by non-residents and 255 b.kr. are foreign-denominated deposits (see Table IV-1). According to the classification of commercial bank deposits by owner, non-residents' deposits declined by almost 54 b.kr. year-on-year because of liberalisation-related measures by the Central Bank or a shift from deposits to other investment options. Deposits held by other owners changed only marginally between years. The ratio of deposits to GDP is currently at a historical high, with the exception of the period from 2006 to 2008, when deposit accumulation abroad was at a very high level (see Chart IV-3).

The banks' liquidity risk lies largely in potential withdrawals, as over 75% of their deposits are payable on demand. As a result, they must be able to disburse a large share of their deposits at any given time. In order to reduce their liquidity risk, it is important that the banks place increased emphasis on term deposits.

Table IV-1 Commercial bank deposits[1]

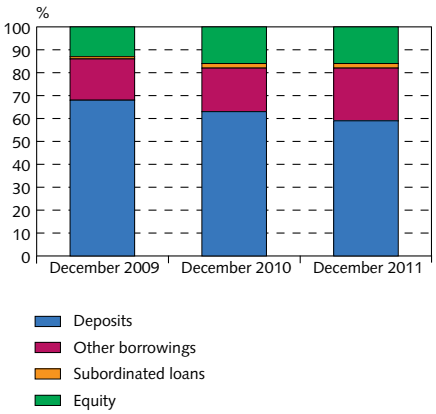
Deposits 31.1.2012, m.kr.	*In Icelandic krónur*	*In foreign currency*	*Total*
Foreign financial institutions	96,672	5,702	102,374
Domestic financial institutions	75,468	10,068	85,536
Icelandic financial institutions in winding-up proceedings	72,741	74,032	146,773
Icelandic pension and mutual funds	193,619	9,072	202,691
Other non-resident legal entities	8,389	4,064	12,453
Other Icelandic legal entities	458,291	124,448	582,739
Non-resident individuals	16,991	2,309	19,300
Icelandic individuals	500,594	25,579	526,173
Total deposits	1,422,765	255,274	1,678,039

1. Parent companies, the three largest commercial banks.
Source: Central Bank of Iceland.

Liquidity well above the regulatory minimum

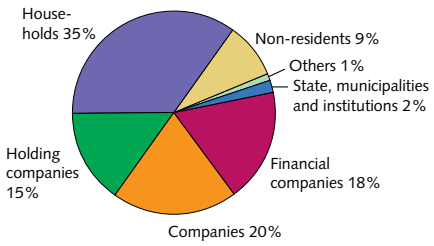
In accordance with the Act on the Central Bank of Iceland, the Bank sets rules on financial institutions' liquidity ratios. According to those rules, liquid assets and liabilities are grouped into four time periods and weighted in terms of risk. The rules stipulate that credit institutions must have liquid assets in excess of liabilities for the first two periods, which are defined as within one month, and between one and three months, respectively. They entail a certain stress test where a haircut is applied to various equity items, but where it is assumed, on the one hand, that all obligations must be paid upon maturity, and on the other, that a portion of other obligations, such as deposits, must

Chart IV-1
Commercial banks' funding[1]



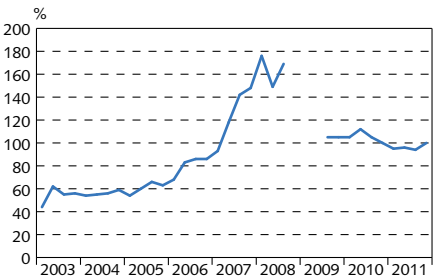
1. Parent companies.
Source: Central Bank of Iceland.

Chart IV-2
Deposit owners, year-end 2011[1]



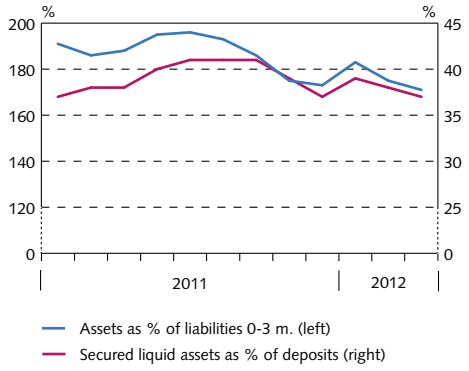
1. Parent companies, commercial banks.
Source: Central Bank of Iceland.

Chart IV-3
Deposits as % of GDP[1]
Q1/2003 - Q4/2011



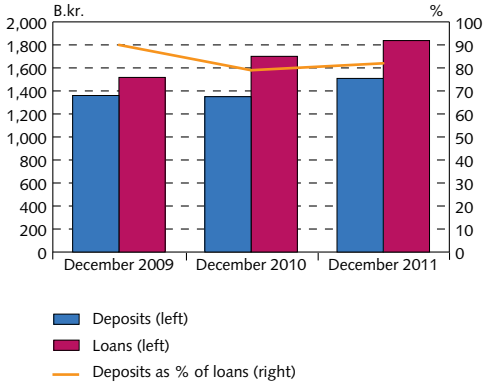
1. Parent companies. Customer deposits with deposit money banks.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart IV-4
The largest commercial banks' liquidity[1]



1. Parent companies. According to Central Bank of Iceland liquidity rules and FME requirements. Monthly data.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart IV-5
Deposits as % of loans[1]



1. Parent companies, commercial banks. Deposits from customers as % of loans to customers and asset financing contracts. Byr included as of 2010 and SpKef as of 2011.
Source: Central Bank of Iceland.

be paid at short notice or immediately. In addition to the Central Bank rules, the Financial Supervisory Authority (FME) requires that the three largest commercial banks hold liquid assets equal to at least 20% of all deposits and cash equalling at least 5% of sight deposits.[1] All of the commercial banks meet the liquidity requirements set by the Central Bank and the FME with comfortable margins.

Review of liquidity rules

New liquidity rules have been in preparation in the recent term. The new rules and related reporting are still being formulated but will be based on the work of the Basel Committee on Banking Supervision (BCBS) and the European Banking Authority (EBA). It is assumed that the new rules will provide for a liquidity coverage ratio (LCR), which measures secure liquid assets as a percentage of the next 30 days' liquidity outflows, and a net stable funding ratio (NSFR), which is to ensure stable funding in proportion to long-term assets. The rules will be adapted to Icelandic circumstances, both by distinguishing among currencies and by lengthening the time horizon for the net stable funding ratio so as to ensure that domestic financial institutions could withstand closure of foreign capital markets for a relatively long period of time. They will also provide for a maturity ladder, which shows the maturity mismatches of assets and liabilities plus reserves, in addition to a variety of other information items that could be useful to supervisory institutions. The new liquidity rules are expected to take effect at year-end 2012 or in mid-2013.

Stress tests of potential withdrawals

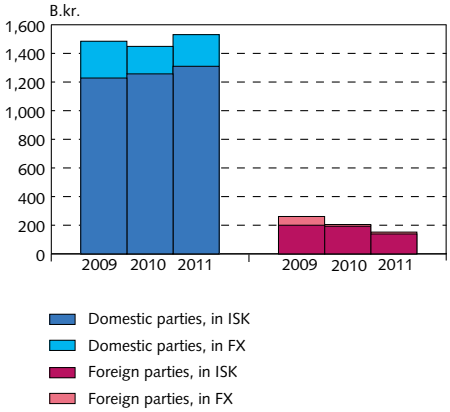
When the capital controls are lifted, the banks must be prepared for the possibility that a portion of their deposits – particularly those owned by non-residents – will be expatriated. As of end-January, non-residents owned about 8% of all deposits in Iceland's three largest commercial banks. At the beginning of March, the Central Bank conducted stress tests on the three banks' liquidity in order to assess the impact of possible withdrawals upon removal of the controls. Four scenarios were used: 1) non-residents would withdraw all of their deposits; 2) financial institutions in winding-up proceedings would withdraw all of their deposits as well; 3) pension funds and mutual funds would withdraw all of their deposits as well; and 4) Icelandic residents would withdraw all of their foreign-denominated deposits. The impact was assessed with respect to changes in liquidity ratios according to Central Bank rules and changes in secure liquid assets. According to the stress test, the banks can tolerate substantial withdrawals because they hold ample secure liquid assets, although the ultimate position would differ from bank to bank. The secure liquid assets of the three banks combined amounted to 625 b.kr., as opposed to total outflows of 643 b.kr. for all scenarios.

1. The FME liquidity requirements are independent of other capital outflows, whether expected or unexpected.

Market funding remains relatively limited

The commercial banks engage in little borrowing apart from deposit-taking at present, although debt financing has increased recently with Arion Bank's takeover of a loan portfolio backed by covered bonds and Arion and Íslandsbanki's issuance of covered bonds to fund mortgage loans. Arion Bank has issued two bond series, one indexed and the other non-indexed, and Íslandsbanki has issued three indexed bond series. As of mid-May, their combined covered bond issuance totalled just under 13 b.kr. Further discussion of covered bonds can be found in Box IV-1. In order for the banks to increase their share of domestic and foreign market funding, they must complete loan restructuring, reduce defaults, and obtain credit ratings. They have begun to prepare for credit ratings, thereby clearing the way for foreign funding. The Treasury has begun to blaze the trail for the banks' foreign funding by issuing US dollar bonds in foreign markets. In May 2012, the Republic of Iceland issued a 10-year bond in the amount of 1 billion US dollars. The bond bears fixed interest of 5.875% and was sold at a yield of 6%, which corresponds to a premium of just over 4 percentage points over and above a 10-year bond issued by the US Treasury. If the banks are successful in obtaining foreign funding in the near future, it can be assumed that these terms will be used as a basis for the terms offered to the banks. This provides an indication of the terms the Icelandic banks could expect if went go to the market.

Chart IV-6
Deposits with commercial banks[1]



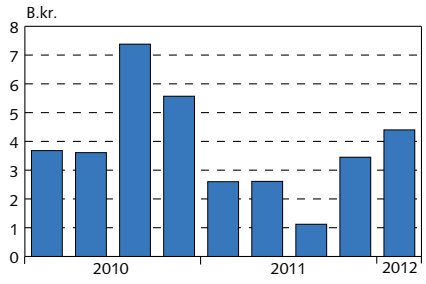
1. Parent companies, commercial banks. Deposits of customers and financial institutions. Deposits with Byr hf. included as of 2010. Deposits with SpKef included as of 2011.
Source: Central Bank of Iceland.

Landsbankinn's foreign bonds

In December 2009, the new Landsbankinn issued a 10-year foreign-denominated bond (EUR, USD, and GBP) to the old Landsbanki Íslands hf., to settle the difference between the assets and domestic deposits transferred to the new bank. The value of the bond was 277 b.kr. as of year-end 2011, and instalments are paid quarterly from 2014 to 2018. Landsbankinn has been buying foreign currency recently, in preparation for instalment payments and possible prepayment.

At the end of March 2013, Landsbankinn intends to issue a five-year foreign-denominated bond to Landsbanki Íslands hf. The nominal value of the bond is conditional upon changes in the valuation of the excess value of specified assets from the fall of the bank until year-end 2012. As of end-March 2012, the contingent bond was recognised in the Landsbankinn accounts at 67 b.kr., but its maximum value could range up to 92 b.kr. Payments on this bond will also be remitted quarterly between 2014 and 2018, as with the bank's other foreign funding.

Chart IV-7
Housing Financing Fund, paid-up debt[1]
Q1/2010 - Q1/2012



1. Debt paid off by HFF customers.
Source: Housing Financing Fund.

Housing Financing Fund financing

The Housing Financing Fund's (HFF) borrowings totalled 854 b.kr. at year-end 2011, including outstanding bond issues of just under 849 b.kr. The HFF finances mortgage lending by issuing indexed HFF bonds. The Fund issues bonds in four series (HFF14, HFF24, HFF34, and HFF44). All of the Fund's issued securities are backed by a simple Government guarantee. In recent months, HFF customers have been paying off their loans in increasing numbers. HFF debt retired in the first quarter of 2012 amounted to 4.4 b.kr., as opposed to 2.6 b.kr. in

Q1/2011 (see Chart IV-7). Clearly, large-scale debt retirement could disturb the balance in the average maturities of the Fund's assets and liabilities; therefore, it is important that the HFF keep such mismatches under control.[2]

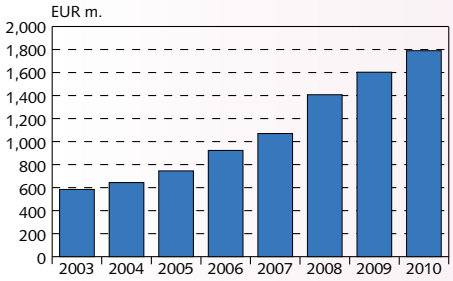
2. In accordance with the Housing Financing Fund's finance and risk management policy, which is reviewed annually, maturity mismatches in assets and liabilities are calculated on a quarterly basis.

Box IV-1

Covered bonds

Chart 1

Covered bonds issued[1]



1. Issued in Europe, USA, Canada and New Zealand. Market value (mortgages).
Sources: European Covered Bond Council.

Issuance of covered bonds has grown rapidly in recent years, and banks have relied increasingly on them to fund long-term assets such as mortgage loans. Covered bonds are an extremely safe investment option, as is reflected in the returns on them. Furthermore, some central banks, including the European Central Bank (ECB), have accepted covered bonds as collateral for collateralised lending facilities as liquidity difficulties have mounted in the wake of the banking crisis. In Iceland, the banks have funded their mortgage lending to a large extent in the short-term market; i.e., with deposits. It is important that they reduce their interest rate risk and refinancing risk by issuing long-term bonds, even though such bonds would not have as long a duration as mortgage bonds. Covered bonds are such an option, and they are a suitable investment for a variety of institutional investors, such as pension funds. Íslandsbanki and Arion Bank have recently been authorised by the Financial Supervisory Authority (FME) to issue covered bonds to fund their mortgage lending, in accordance with current Icelandic legislation on covered bonds.

The Act on Covered Bonds

According to the Act on Covered Bonds, covered bonds enjoy special rights of realisation in the issuer's collateral portfolio, or cover pool.[1] The cover pool is a portfolio of bonds and other assets (substitute collateral) that have been entered to a special register, and owners of covered bonds have rights of realisation with respect to it. The cover pool shall consist primarily of bonds backed by real estate or bonds issued by national or local governments. It may contain substitute collateral such as deposits, but such collateral may not exceed 20% of the value of the portfolio. Bonds in the cover pool must meet specific conditions concerning loan-to-value ratio. For instance, the ratio of the loan to the market value of the underlying property may not exceed 80% for residential property or 60% for commercial property. Furthermore, it is prohibited to include in a cover pool any bond that has been in default for 90 days or more. The market value of the hypothecated assets in the cover pool must be assessed on a regular basis.[2] The restated total principal of bonds and other assets in the cover pool used to back a specific class of covered bonds shall always exceed the restated total principal of that class of bonds. If the issuer's estate is subjected to insolvency proceedings, the covered bonds shall enjoy collateral rights in the bonds and other assets in the pool. Covered bonds therefore have higher priority than priority claims such as wages and deposits.

1. Act on Covered Bonds, no. 11/2008.
2. The FME has set rules supplementing the Act on Covered Bonds. According to the FME Rules on Covered Bonds, no. 528/2008, assets in the cover pool must be revalued at least weekly.

FME supervision

The FME oversees the Act on Covered Bonds and grants permission for covered bond issuance, in addition to setting rules to supplement the Act. In order for a permit to be granted, a covered bond issue must be in compliance with the Act, and a budget prepared by the issuer and confirmed by a certified public accountant must show a sound financial position, so that other creditors' interests are not jeopardised by the issue. The FME is authorised to set conditions for the permit, including those pertaining to loan categories in the collateral portfolio associated with the issue, time limits for issuance, duration, and terms of payment on the proposed bonds.

Commercial banks' covered bond issuance

The FME has authorised Arion Bank and Íslandsbanki to issue covered bonds to fund mortgage lending. The permits are subject to a number of conditions: there is a ceiling on total issuance, collateral must take the form of mortgage loans in Icelandic krónur, and there are provisions on maximum leverage. As of mid-May, the banks' combined covered bond issuance totalled just under 13 b.kr. Arion Bank had issued an indexed bond for 2.5 b.kr. at a yield of 3.6% and a non-indexed bond for 1.2 b.kr. at 6.7%. The indexed bonds pay equal instalments every six months and mature in 2034, and they are callable beginning in 2017. The non-indexed bonds mature in 2015. The average loan exposure in the cover pool for Arion Bank's issued covered bonds is 12 m.kr., the weighted average loan-to-value ratio is 66%, and over-collateralisation is 48%.[3] As of mid-May, Íslandsbanki had issued three indexed bonds amounting to 8.8 b.kr., at yields ranging from 2.8% to 3.5%. The bonds mature in 2016, 2019, and 2024, with extension options. The average loan exposure in the cover pool for Íslandsbanki's issued covered bonds is 11 m.kr., the weighted average loan-to-value ratio is 54%, and over-collateralisation is 28%.[4] The banks' issues are listed on the NASDAQ OMX Iceland Exchange, and secondary market trading amounted to about 3 b.kr. as of mid-May.[5] Both banks plan further issues but must obtain new authorisations from the FME if the issues exceed a specified maximum. It should be noted that covered bonds are not eligible as collateral for Central Bank of Iceland collateralised loan facilities.

Table 1. Bonds in the cover pool for issued covered bonds

	Arion Bank	*Íslandsbanki*
Number of mortages	465	887
Average loan exposure (m.kr.)	12	11
Weighted loan seasoning (yr.)	0,6	6,5
Weighted average (%)	66	54
Weighted average remaining term (yr.)	33	29
Over-collateralisation (%)	48	28

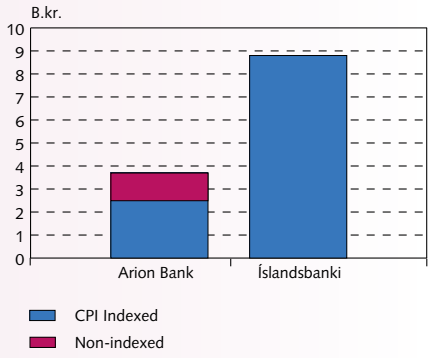
Sources: Arion Bank, Investor Report April 2012. Over-collateralisation as of May 2012. Íslandsbanki, Cover Pool Information 30.03.2012.

Possible restrictions on covered bond issuance

At present, the commercial banks are funded primarily with deposits. Until now, new funding has been limited to covered bonds, as

Chart 2

Commercial banks' issuance of covered bonds[1]



1. Arion Bank and Íslandsbanki. Bonds issued in May 2012.
Sources: NASDAQ OMX Iceland, banks' news releases.

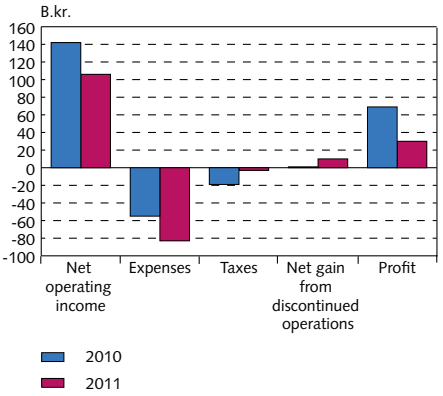
3. Arion Bank, Investor Report April 2012. Over-collateralisation as of May 2012.
4. Íslandsbanki, Cover Pool Information 30.03.2012
5. The banks' issues are listed on the NASDAQ OMX Iceland exchange. Arion Bank's indexed covered bonds are also listed on the Bourse de Luxembourg.

the banks have been completing asset restructuring and reducing default, as well as re-establishing confidence in the market. For the future, it is important that financial supervisors formulate policy on the optimal scope of covered bond issuance, with an eye to the issuer's balance sheet and to overall financial stability. It should be borne in mind that, in a bankruptcy estate, covered bonds always take priority over all other claims, including deposits. If the banks acquire substantial funding through covered bonds, other market funding will be undermined by the relatively poorer quality of the assets remaining to cover those claims. Widespread issuance also reduces the authorities' latitude to ensure financial stability in the event of a crisis. Setting a ceiling on covered bonds as a share of total funding is therefore an option.

V Operations and equity[1]

Iceland's commercial banks underwent significant operational changes in 2011. Landsbankinn took over the operations and balance sheet of SpKef savings bank, Íslandsbanki took over the commercial bank Byr, and Arion Bank took over Kaupthing's mortgage loan portfolio, funding it with covered bonds. As a result, the balance sheets of the large commercial banks grew by over 300 b.kr. In addition, MP Bank began operating in its current form on the foundations of the savings bank nb.is in April 2011.[2] These changes, together with the accounting entries made as a result of the February 2012 Supreme Court judgment and various irregular items, including write-offs of goodwill by Íslandsbanki, have made a strong impact on the large banks' financial statements. 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 about the value of loans, and therefore about operating results, key financial ratios, and equity.

Chart V-1
Largest banks' income and expenses[1]

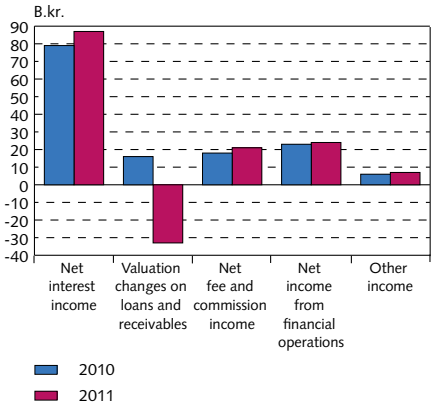


1.Consolidated accounts.
Sources: Commercial banks' annual reports.

Calculated returns down year-on-year ...

The large commercial banks' combined calculated return on total assets was 1% in 2011, and return on equity was 7%, down somewhat from the previous year. Net interest income totalled 87 b.kr. during the year, and the combined interest rate margin was 3.2%. The banks' interest rate spreads vary, in part because of differences in financial reporting methods. Their assets are funded largely through debt at non-indexed interest rates, particularly deposits. In the first half of the year, interest rate cuts and inflation widened the interest rate differential. For 2011 as a whole, commissions and fees totalled 21 b.kr. and income from financial activities just under 24 b.kr., due in particular to sizeable capital gains on equity securities. The weight of commissions (on asset management activities, for example) and income from financial activities will probably grow as economic activity grows and financial market trading rises. Profit from discontinued operations totalled just under 10 b.kr., due primarily to sales of appropriated companies.

Chart V-2
Largest banks' net operating income[1]

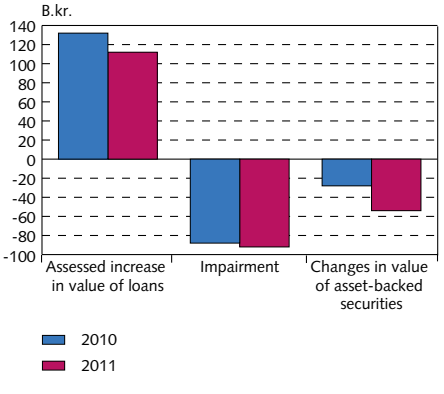


1. Consolidated accounts.
Sources: Commercial banks' annual accounts.

... due primarily to the Supreme Court decision on full-payment receipts

Valuation changes in loans changed radically from the previous year. Net loan impairment amounted to just over 33 b.kr. in 2011, as opposed to a valuation increase of just under 17 b.kr. in 2010. Early

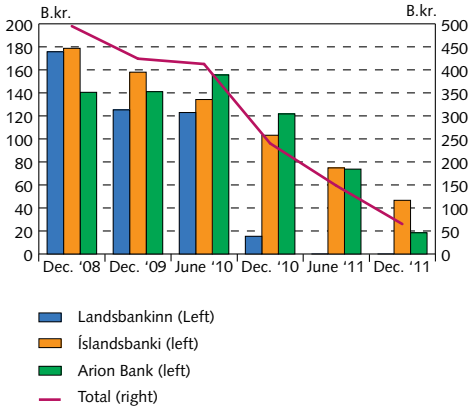
Chart V-3
Largest banks' income and expenses due to changes in valuation of loans[1]



1. Consolidated accounts.
Sources: Annual reports.

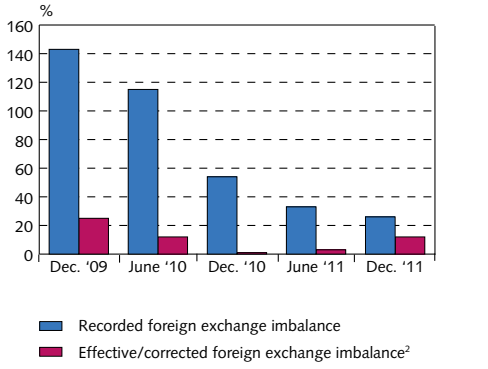
1. The discussion of commercial bank operations is based on the consolidated accounts of the three largest commercial banks for 2011 and comparison figures for 2010. Figures represent the aggregate position of the commercial banks unless otherwise stated. Discussion of the aggregate position may diverge from that of individual financial companies.
2. During the restructuring, MP Bank was divided into two entities. Domestic and Lithuanian operation were moved to the bank's subsidiary, nb.is. MP Bank's consolidated annual accounts for 2011 contained three quarters, and the comparison figures for 2010 were for the savings bank nb.is. According to the MP Bank annual report, the 15 February Supreme Court judgment would not have a significant effect on the bank. As of end-2011, MP Bank's capital base was 19.2% of its risk base.

Mynd V-4
Developments in ineffective exchange rate-linked assets[1]



1. Consolidated figures. Ineffective exchange rate-linked assets (FX/ISK assets) refers to foreign-denominated loans taken by borrowers with income in Icelandic krónur. In many instances, their capacity to pay was insufficient to enable them to pay the loans. The book value of the loans was therefore reduced in accordance with an assessment of payment capacity. Because the book value of a portion of this loan portfolio was much lower than the claim value, further fluctuations in the ISK exchange rate were not considered likely to affect the book value of the loans.
Sources: Financial institutions' annual and interim accounts.

Chart V-5
Imbalance between the largest commercial banks' foreign-denominated assets and liabilities[1]



1. Consolidated figures. Imbalance as a percentage of capital base.
2. Method used to calculate foreign exchange balance, which takes account of whether value and recovery are dependent on exchange rate movements. This method has been called the delta correction, the balance has been called the effective foreign exchange balance, and the exchange rate-linked assets not included in the effective balance have been called ineffective exchange rate-linked assets (so-called FX/ISK assets). This balance should therefore be closer to the balance the bank would have if uncertainty were eliminated and restructuring of foreign assets entirely complete. Only the three largest commercial banks are authorised to use this method.
Sources: Financial Supervisory Authority, Financial institutions' annual and interim accounts.

in 2011, the value of the loan portofolio rose but in Q4, the banks expensed 64 b.kr. as a result of the February 2012 Supreme Court judgment on exchange rate-linked loans. Furthermore, charges due to contingent bonds were sizeable. In 2011, the banks' operating expenses amounted to 60% of regular income and 2.4% of total assets, which is a slight increase from the previous year.[3] The Icelandic banks' operating expenses as a share of total assets are rather high in comparison with neighbouring countries.[4] Wage costs rose in 2011, in part due to contractual pay increases and payments related to termination agreements and wage differential. Furthermore, mergers with other financial firms led to cost increases. Moreover, taxes and fees levied on the banks have risen in the recent term. For example, the premium they pay to the Depositors' and Investors' Guarantee Fund has increased, and they now pay a special funding tax and a tax on their payroll costs. Their operating expenses have therefore risen, and they will need to streamline their operations to offset the increase.

Foreign exchange imbalances

According to the commercial banks' consolidated annual accounts, the book value of their foreign exchange imbalances has declined considerably in the recent term. Capital requirements due to foreign exchange risk have fallen as well. At the end of 2011, the book value of three largest commercial banks' foreign exchange imbalances was about 26% of their capital base and had declined from the previous year. The banks' annual accounts contain adjustments of their foreign exchange imbalances, with consideration given to ineffective exchange rate-linked assets. The term *ineffective exchange rate-linked assets* (FX/ISK assets) refers to foreign-denominated loans taken by borrowers with income in Icelandic krónur. The banks' adjusted foreign exchange imbalance[5] was 12% as of end-2011, after having increased for the first time since the end of 2009. Landsbankinn hf. stopped using an adjusted foreign exchange balance in June 2011 and considered its ineffective exchange rate-linked assets insignificant. The 15 February Supreme Court judgement does not make a significant impact of foreign exchange balance, as it pertains primarly to calculation of claim values in Icelandic krónur.

Because of the circumstances that developed after the banks collapsed, the Central Bank has a special authorisation, pursuant to the temporary provision in the Rules on Foreign Exchange Balance, to grant credit institutions a temporary exemption from the Rules. At the end of March 2012, just under half of all supervised credit institutions had received such an exemption. According to the temporary provision, these exemptions will not be granted beyond 1 January 2013.

Landsbankinn's indexation imbalance increases

In the wake of court judgments declaring exchange rate-linked loan agreements illegal, these loans have been converted to indexed or

3. Operating expenses less 17.9 b.kr. in goodwill written off by Íslandsbanki. Regular income, net interest income, and commission income.
4. See the charts in the Appendix.
5. I.e., book value of mismatch less ineffective exchange rate-linked assets.

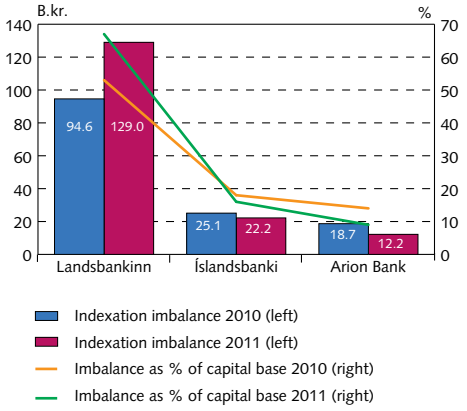
non-indexed loans in Icelandic krónur. The changes affect only the asset side of the banks' balance sheets. The banks' indexation balances have been positive; therefore, mismatches between indexed assets and liabilities have grown as illegal exchange rate-linked loans have been converted to indexed loans. The banks responded by offering non-indexed loans on advantageous terms and channelling illegal exchange rate-linked loans towards non-indexed debt. Furthermore, they have placed increased emphasis on indexed deposits (with a tied period of three years or more) and concluded derivatives contracts that create an indexed liability to offset a non-indexed asset.

At year-end 2011, the large commercial banks' indexation balance was positive by 163.4 b.kr., as opposed to a positive balance of 138.4 b.kr. at the end of 2010 (see Chart V-6). The 25 b.kr. year-on-year increase in the indexation balance is due to Landsbankinn's increase of 34.4 b.kr., which was partially offset by Íslandsbanki and Arion Bank, whose balances declined by 9.4 b.kr. through derivatives contracts and Íslandsbanki's issue of indexed covered bonds in 2011. Since the end of 2011, Arion Bank has issued such bonds as well. Landsbankinn's increased imbalance is due to the fact that a portion of the illegal exchange rate-linked loans have been converted to indexed loans; in addition, the bank's indexed assets grew in excess of indexed liabilities with the takeover of SpKef and Avant.

Landsbankinn's indexation balance as a percentage of its risk-weighted asset base was high, at 67%, at year-end 2011, whereas it was 53% at the end of 2010. Íslandsbanki and Arion's balances were much lower, or 16% and 9%, respectively, at the end of 2011. A high indexation balance relative to the risk-weighted asset base is undesirable, as unexpected changes in inflation could have a negative effect on operating results and equity. All of the commercial banks have a positive indexation balance.

Based on their indexation balances, the banks can recognise a profit in the amount of 1.6 b.kr. if the CPI rises by 1%. It is appropriate to note, however, that the banks also recognise a profit on the spread between interest rates on non-indexed assets and liabilities. If inflation develops in line with expectations and the spread between the pricing of non-indexed assets and liabilities is in line with expectations concerning inflation and real interest rates, the banks' profit on assets and liabilities should be more or less the same, whether they are indexed or non-indexed. If inflation exceeds expectations, it is advantageous to have a positive indexation balance, but if it is less than expected, a negative indexation balance is preferable.

Chart V-6
Indexation imbalances of the three largest commercial banks



Source: Central Bank of Iceland.

Interest rate risk

Fixed interest risk stems from mismatches in duration and amount of the assets and liabilities in the banks' loan books. Based on the large commercial banks' loan books at year-end 2011, the potential loss on a 1% rise in interest rates could have totalled 10.1 b.kr. Their interest rate risk as a share of their risk-weighted asset base was 2.1%. At the end of 2010, the banks' losses on a 1% rise in market rates were estimated at 17.3 b.kr., or 3.8% of their capital base. Their interest rate risk is therefore considerable but diminished markedly in 2011.

Interest rate risk derives primarily from differences in indexed items. It declined by nearly half in 2011. The interest rate risk on non-indexed items rose in 2011, but interest rate risk on foreign-denominated items declined and is now considered insignificant.

Table V-1 Interest rate risk[1]

B.kr.	*Nominal (non-indexed) items*	*Indexed items*	*Foreign-deniominated items*	*Total*
1% interest rate increase	-1.5	-8.2	-0.4	-10.1

1. Large commercial banking groups, year-end 2011.
Source: Financial Supervisory Authority.

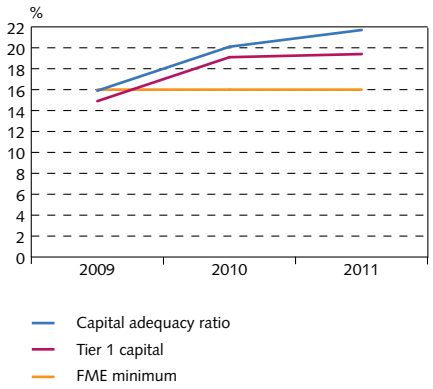
Capital ratios well above minimum requirements ...

The large commercial banks strengthened their capital position between 2010 and 2011. Their capital ratios rose slightly between years, to just under 22% as of year-end 2011, including 19.4% in Tier I capital.[6] The banks' capital ratios are therefore well above the Financial Supervisory Authority's (FME) 16% required minimum.[7] Their capital base totalled 476 b.kr. at the end of 2011, after increasing by 24 b.kr., or 5%, from the previous year. The capital base consists primarily of share capital and accumulated operating revenues, while subordinated loans amounted to just over 10%. The banks' risk base was 2,193 b.kr. at year-end 2011, an increase of 55 b.kr., or 3%, year-on-year. Credit risk is the banks' most salient risk factor, comprising over 80% of the risk base. The credit risk base rose by 7% between years, whereas market risk declined, particularly foreign exchange risk, which fell in accordance with declining foreign exchange imbalances.

... but leverage ratios are also taken into account

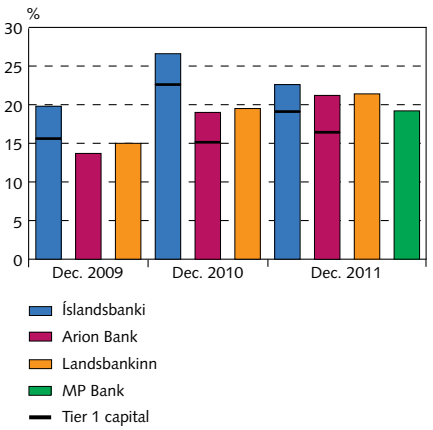
In international discussion, attention has been drawn to risk-weighting of assets in the risk base and whether the weights accurately reflect the risk involved. Financial institutions' capital adequacy ratios take risk weights into account. For instance, if the composition of risk-weighted assets changes, the capital ratio can rise, even if both the risk-weighted asset 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, irrespective of the risk composition of the assets. At

Chart V-7
Largest commercial banks' capital adequacy ratios[1]



1. Consolidated figures.
Sources: Commercial banks' annual accounts.

Chart V-8
Commercial banks' capital adequacy ratios[1]



1. Largest banking groups 2009-2010. Commercial banking groups 2011.
Sources: Commercial banks' annual accounts.

6. 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.

7. According to the Act on Financial Undertakings, no. 161/2002, a financial undertaking's capital base shall be at least 8% of its risk-weighted asset base, although the FME may stipulate a higher percentage. In the spring of 2009, the FME conducted an appraisal of the new banks and their business plans, including financial strength and economic capital, for a so-called sign-off project. In view of asset portfolio quality and the economic uncertainty on the horizon, the FME considered it necessary to raise the banks' capital adequacy requirement above the statutory minimum. The FME requires that the three largest commercial banks maintain a minimum capital adequacy ratio of 16%. The commercial banks have now reassessed their economic capital (the internal capital adequacy assessment process, or ICAAP), and the FME will then review this assessment (the supervisory review and evaluation process, or SREP) and set them minimum capital requirements.

year-end 2011, the largest commercial banks' liabilities totalled just over 540% of the book value of equity; that is, their liability ratio was 5.4, as opposed to 5.2 at the end of 2010. It is worth noting that, just before they collapsed in 2008, the old banks' liability ratio was 16, meaning that their liabilities amounted to 16 times their equity, and 30 if corrected for "weak capital".

Savings banks' position vulnerable

At year-end 2011, there were 10 operating savings banks in Iceland. In 2011, SpKef left the group and merged with Landsbankinn, and Byr hf. had received a commercial banking licence earlier on. The operating savings banks' total assets amounted to roughly 60 b.kr. as of end-2011. This corresponded to 1.5% of credit institutions' assets and 2% of DMBs' assets.

Operations have been rocky, with six of the savings banks running at a loss in 2011 and the others, except for Afl Savings Bank, operating at a negligible profit. Afl recorded a sizeable profit, but that was due to a write-down of its debt to Arion Bank. The savings banks' problem lies partly in their high operating expenses relative to regular income. For instance, operating expenses accounted for over 90% of regular income and nearly 4% of total assets.[8]

Landsbankinn has finalised an agreement for the purchase of Sparisjóður Svarfdæla,[9] and Arion Bank and Sparisjóður Ólafsfjarðar will merge. Arion owns 94.45% of guarantee capital in Afl Savings Bank and has been interested in a merger; however, in spite of this large holding, the merger has not taken place because of a lack of voting power. Should this merger materialise, however, the number of savings banks would fall to seven.

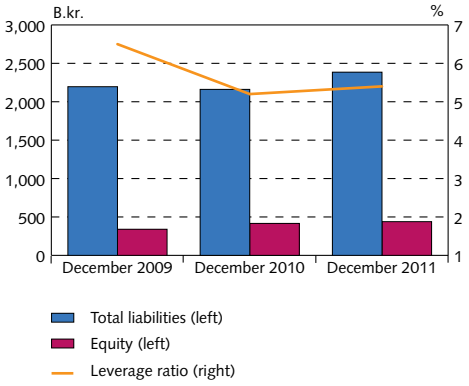
Of these seven savings banks, two have a capital adequacy ratio below the statutory minimum: Sparisjóður Vestmannaeyja and Sparisjóður Bolungarvíkur. The FME has set them a deadline for the submittal of a report stating what actions they plan to take to rectify their positions, in accordance with Article 86 of Act no. 161/2002. Sparisjóður Suður-Þingeyinga and Sparisjóður Þórshafnar have capital ratios close to the statutory minimum, and the Supreme Court judgment on full-payment receipts for exchange rate-linked loans could have severe repercussions for them. It is quite clear, then, that the savings banks' position is vulnerable, and in many cases the premises for continued operations is weak.

HFF capital ratio below long-term target

In 2011, the Housing Financing Fund (HFF) recorded an operating profit of 986 m.kr., as opposed to a 34.5 b.kr. loss in 2010.[10]

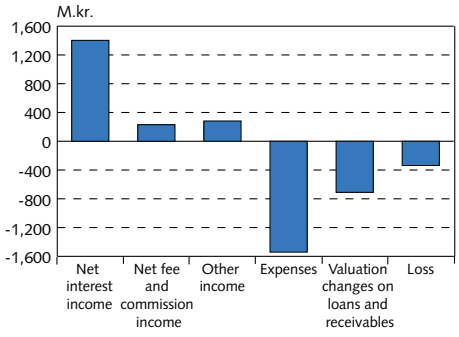
8. Regular income, net interest income, and commission income.
9. On 16 May 2012, the FME authorised Landsbankinn hf. to acquire all of the operations and assets of Sparisjóður Svarfdæla. The Competition Authority and the EFTA Surveillance Authority must also give their opinion before the transfer can take effect and Landsbankinn can take over the savings bank's operations.
10. According to the HFF's financial statements, it is assumed that the Fund is entitled to set off its claims on the old commercial banks due to bonds, derivatives, and debts against debt due to derivatives and HFF bonds. The settlement of the claims and derivatives and the Fund's authorisation to net out claims in this manner are uncertain.

Chart V-9
Liabilities, equity and leverage ratios of the largest commercial banks[1]



1. Consolidated figures.
Source: Commercials banks' balance sheets.

Chart V-10
Savings banks' income and expenses 2011[1]



1. Savings banks excluding Afl Savings Bank and Sparisjóður Ólafsfjarðar, which are part of the Arion Bank hf. group.
Source: Savings banks annual reports.

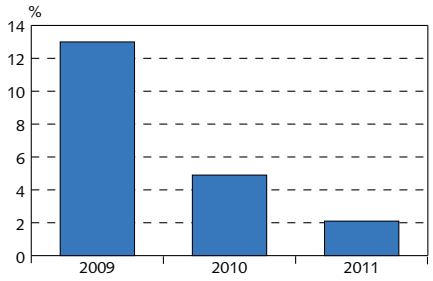
Table V-2 Savings banks' annual accounts 2011

	Sparisj. Vestm.	*Sparisj. S-Þing.*	*Sparisj. Norðfj.*	*Sparisj. Bol.*	*Sparisj. Þórshöfn*	*Sparisj. Strand.*	*Sparisj. Höfð.*	*Afl sparisj.*	*Sparisj. Ólafsfj.*	*Sparisj. Svarfd.*	*Total*
Loans	7,537	3,252	2,760	3,502	1,307	692	677	13,360	1,695	2,352	37,134
Other assets	7,065	3,415	2,470	1,418	1,271	1,525	1,266	1,459	1,319	1,026	22,234
Total assets	14,602	6,667	5,230	4,920	2,578	2,217	1,943	14,819	3,014	3,378	59,368
Deposits	12,285	6,117	4,428	3,230	2,246	1,950	1,699	8,106	2,936	3,090	46,087
Equity	891	334	578	454	286	238	123	838	-84	232	3,890
Direct State holding	55.25%		49.50%	90.95%	75.84%					90.00%	
Minimum capital ratio	16%	8%	16%	16%	16%	8%	8%	8%	8%	16%	
Equity ratio	13.9%	9.0%	18.2%	14.5%	16.4%	16.5%	14.6%	9.2%	-5.3%	12.5%	

Sources: Savings banks annual reports, ISFI.

Chart V-11

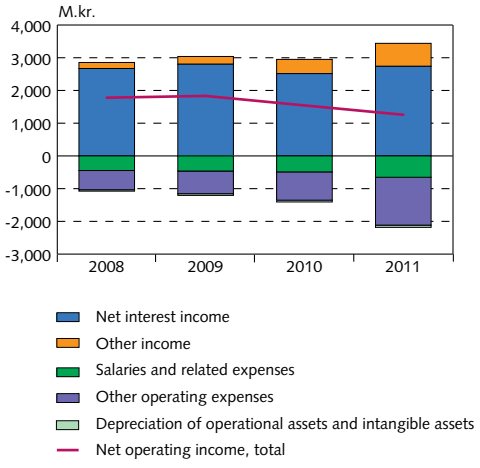
Savings banks' assets as a percentage of DMB assets[1]



1. Savings banks excluding Afl Savings Bank and Sparisjóður Ólafsfjarðar, which are part of the Arion Bank hf. group.
Sources: Savings banks annual reports, Central Bank of Iceland.

Chart V-12

Developments in Housing Financing Fund profit and loss account[1]



1. Without impairment.
Sources: HFF Annual accounts.

The abrupt turnaround is due primarily to the fact that, in 2010, a large number of loans to individuals were written down to 110% of the official property value or appraised value of the underlying property. Applications for this measure, the so-called 110% option, were fewer than expected, and impairment was therefore less. Thereafter, a portion of the previously recognised impairment due to the 110% option was adjusted in 2011 and estimated impairment of loans to individuals was revalued. Furthermore, a detailed analysis of legal entities among HFF customers revealed an increased need for impairment of their loans. As a result, a portion of the precautionary write-down was transferred from individuals to legal entities. It should be noted that increased loan losses sustained by the HFF since the crash have prompted the Fund to raise its interest premium. The Fund saw its expenses rise markedly between 2010 and 2011, due to increased wage costs, partly as a result of increased staffing, and new major expense items, such as mandatory participation in the cost of the Office of the Debtors' Ombudsman and the cost of real estate appraisals for the 110% option.

The HFF's equity totalled just over 9.5 b.kr. at year-end 2011, an increase of 986 m.kr. year-on-year. Its equity ratio was 2.3%, whereas its long-term goal is to maintain an equity ratio over 5.0%. The number of borrowers in default has risen, and uncertainty about loan quality could adversely affect the Fund's equity. It is clear that the HFF will be discussed in Parliament in the near future. The Fund will probably be allocated a sizeable additional capital injection in the budget supplement so as to enable it to achieve its long-term goal of a 5% equity ratio. A bill of legislation amending the Act on Housing Affairs has been presented before Parliament. The bill proposes increased supervision of HFF activities, sets clearer conditions for lending for development of rental property, and narrows the Fund's authorisation to extend loans for the purchase of high-priced residential housing. The planned amendments are proposed in response to comments on the HFF's activities, made last year by the EFTA Surveillance Authority (ESA).

Strong capital position essential in view of broad-based uncertainty

In general, capital requirements made of banks are becoming more stringent, and indeed, they were too lax before the crisis struck. The

commercial banks' capital position is well above the statutory minimum. However, the actual value of their loans is uncertain, owing to high default levels, continuing uncertainty about the legality of loan agreements, political uncertainty surrounding the fisheries management system, and other factors. Furthermore, it is likely that some firms will have to undergo debt restructuring a second time. The removal of the capital controls could cause exchange rate volatility and erode the banks liquidity. A temporary depreciation of the króna could affect the debt service capacity of borrowers that still have foreign-denominated loans but whose income is in Icelandic krónur. It is important to restructure both these loans and non-performing loans as quickly as possible so as to minimise credit risk. Furthermore, if inflation rises in excess of wages, borrowers with indexed loans could find it difficult to service their debt. Increased impairment could greatly affect the banks' capital ratios; therefore, a strong capital position is needed while debt restructuring is nearing completion and the above-mentioned uncertainties are being reduced.

Box V-1

The largest commercial banks' Q1/2012 financial statements

The commercial banks' quarterly reports and operating environment

In May, the large commercial banks published their financial statements for Q1/2012.[1] The financial statements are either reviewed or unaudited, and they reflect the many legal and political uncertainties in the banks' operating environment. Prominent among these are the interpretation of the Supreme Court judgments on exchange rate linkage and the proposed changes to the fisheries management system. In Q1/2012, the króna depreciated and inflation rose. Non-indexed interest rates increased, yields on indexed bonds dropped, and share prices on the OMXI6 Main List rose. The banks' financial statements are affected by all of these factors.

Operation of the commercial banks in Q1/2012

The large banks' combined profits for the quarter amounted to 17.8 b.kr. Return on total assets amounted to 2.5%, and return on equity was just under 17%, somewhat less than in the same period in 2011. Net interest income totalled 23.5 b.kr., and the combined interest rate margin was 3.3%. The banks' interest rate margins developed in differing ways during the quarter, in part because their indexation imbalances differ. The charge due to valuation changes of loans declined by 1.6 b.kr. between periods. There is some uncertainty about developments in loan valuation changes during the year, partly due to uncertainty about interpretation of court decisions. Commission income totalled 5.4 b.kr. after rising marginally between periods. Net income from financial operations totalled 9.5 b.kr. during the quarter, including capital gains on equities and

1. The discussion of the banks' profit and loss accounts and balance sheets in Q1/2012 is based on the largest commercial banks' consolidated accounts. Comparison figures are from Q1/2011 for the profit and loss accounts and from year-end 2011 for the balance sheets. Figures represent the aggregate position of the commercial banks unless otherwise stated. Discussion of the aggregate position may diverge from that of individual financial companies. Several changes occurred in the structure of the banking groups between Q1/2011 and Q1/2012, such as Landsbankinn's takeover of SpKef savings bank and Íslandsbanki's acquisition of Byr. Any comparison between the two quarters must be viewed in light of these changes.

bonds in the amount of 5.2 b.kr. and exchange rate gains due to foreign currency mismatches totalling 4.3 b.kr. One of the reasons for the drop in profit between quarters is the reduction in profit on discontinued operations (appropriated companies) in the amount of 1.5 b.kr., as the profit on the sale of appropriated companies was unusually high in Q1/2011. Operating expenses totalled 18.3 b.kr. in Q1/2012, an increase of 3.3 b.kr., or 22%, from the previous quarter. Expense ratios rose as well. The rise in operating expenses was due primarily to contractual pay increases, mergers with other financial companies (SpKef savings bank, Byr), the new administrative tax on salary payments, and increased supervision expense, among other items. Taxes (income tax, bank tax) rose sharply as well, or by 2.9 b.kr. In the near future, the banks will need to direct their attention increasingly towards operational streamlining.

The banks' largest asset classes and funding

The commercial banks' total assets amounted to 2,866 b.kr. at the end of March, an increase of 2% from the beginning of the year. Just over 2/3 of total assets are loans to customers and financial institutions, which increased by 41 b.kr. during the quarter. The depreciation of the króna, increased inflation, write-ups of transferred loan portfolios and, to some extent, new lending increased the loan balance, although impairment and debt retirement were considerable. Marketable securities totalled 491 b.kr. at the end of Q1/2012, a decline of 21 b.kr., or 4%, from year-end 2011. A large majority of marketable securities are bonds. As a share of equity, marketable securities have declined since the beginning of the year. As before, deposits constitute the bulk of the banks' funding. As of end-March, deposits in the commercial banks totalled 1,579 b.kr., or 78% of loans, after declining slightly since the beginning of the year. The banks' other borrowings totalled 614 b.kr. at the end of March. The borrowings consist primarily of the Landsbankinn settlement bond and covered bonds. New covered bonds were added during the quarter, when two of the commercial banks issued such bonds for a total of 5.8 b.kr. The commercial banks' equity totalled 456 b.kr. at the end of Q1/2012, the debt-to-equity ratio was 528%. The capital base amounted to just over 22% of the risk base, which is well above the 16% minimum required by the Icelandic Financial Supervisory Authority.

Table 1. The three largest commercial banks – Q1/2012 financial statements and comparison

Profit and loss account and key ratios, m.kr.	*Q1/2012*	*Q1/2011*
Net interest income	23,455	21,092
Net loan value changes	-1,414	-3,019
Net commission income	5,440	5,237
Net income from financial operations	9,464	7,511
Other income	1,469	1,310
Operating expenses	-18,296	-14,979
Taxes	-5,196	-2,264
Profit from discontinued operations	2,864	4,355
Profit	17,786	19,243
Return on total assets	2.5%	3.0%
Return on equity	17%	19%
Net interest income as % of total assets	3.3%	3.3%
Expenses as % of net interest and commission income	63%	57%
Expenses as % of total assets	2.5%	2.3%

Table 1. The three largest commercial banks – Q1/2012 financial statements and comparison (cont.)

Balance sheet and key ratios, m.kr.	*31.3.2012*	*31.12.2011*
Cash, claims against credit institutions	121,922	96,015
Loans	2,019,312	1,977,965
Marketable securities, etc,	490,720	511,546
Other assets	234,098	237,992
Total assets	2,866,052	2,823,518
Deposits	1,579,218	1,588,409
Borrowings	614,437	588,326
Subordinated loans	57,350	54,042
Other liabilities	158,742	154,236
Equity	456,305	438,505
Liabilities and equity	2,866,052	2,823,518
Marketable securities as % of equity	108%	117%
Deposits as % of loans	78%	80%
Liabilities as % of equity	528%	544%
Capital base as % of risk base	22.1%	21.7%
Tier 1 capital as % of risk base	19.7%	19.4%

Box V-2

Exchange rate-linked loans: Court decisions and impact on financial institutions

The legality of exchange rate-linked loan agreements has been a source of great uncertainty in recent years. According to the Icelandic Act on Interest and Price Indexation, it is permissible to grant loans in foreign currency but not to link obligations denominated in Icelandic krónur to foreign currency exchange rates; in other words, exchange rate linkage is prohibited.[1] The financial institutions concluded a large number of loan agreements containing exchange rate linkage clauses in 2004-2008, using a variety of differing forms of contract; as a result, the number of illegal exchange rate-linked loan agreements is still unknown.

Previous Supreme Court judgments and Parliamentary involvement

On 16 June 2010, the Supreme Court of Iceland handed down decisions in two cases, declaring that two asset leasing agreements were actually loan agreements containing illegal exchange rate linkage clauses.[2] The contracts in question were between financial institutions and individuals. These decisions clarified which points should be emphasised concerning legality of exchange rate-linked loans, and detailed information gathering ensued. Financial institutions were required to classify loan agreements with exchange rate linkage clauses into six categories, from A to F. Three factors were given particular consideration: principal, disbursed loan amount, and instalment payments. Category A contained loan agreements in which all three were in foreign currency. These loans are likely to be deemed legal foreign loans. Category F contained agreements in which all three were in Icelandic krónur, and categories B-E included loan agreements featuring various combinations of these factors.

In the wake of the June 2010 Supreme Court judgments, disputes arose concerning whether the interest rates specified in loan

1. Act no. 38/2011.
2. Cases no. 92/2010 and 153/2010.

agreements with illegal exchange rate linkage clauses were binding. A Supreme Court judgment handed down on 16 September 2010 eliminated this uncertainty, stating that the interest rates specified in the loan agreements concerned should be set aside in favour of the lowest rates on new, general loans as published by the Central Bank of Iceland pursuant to the Act on Interest and Price Indexation.[3]

At the end of December 2010, Parliament passed Act no. 151/2010, which stipulated how individuals' exchange rate-linked mortgages and motor vehicle loans should be recalculated. The aim of the Act was to ensure individuals non-discrimination, irrespective of whether a given form of contract had been deemed illegal or not. Uncertainty concerning the scope of exchange rate-linked loans to legal entities still remained.

On 9 June 2011, the Supreme Court handed down a decision in the so-called Motormax case. In that decision, an exchange rate-linked loan agreement between a legal entity and a financial institution was declared illegal for the first time. The case therefore set a precedent and reduced uncertainty to some extent.[4]

In 2011, discussion began of the value of so-called full-payment receipts. The Supreme Court judgment of 15 February 2012 focused on this point.[5] The Court concluded that it was prohibited to demand that an individual with an illegal exchange rate-linked loan remit additional payment for previously paid interest rate due dates if a receipt for full payment existed. The Supreme Court departed from a fundamental principle of claims law, according to which a creditor that has received a smaller payment than it is entitled to has an additional claim against the borrower for the shortfall if a receipt for full payment exists.

Impact of the Court decision on full-payment receipts

In the wake of the 15 February Supreme Court judgment, financial supervisory bodies began analysing the premises for the decision and formulating methodology to assess its effect on financial institutions' loan portfolios. The classification system from summer 2010, with categories A-F, was used. It was assumed that, if a borrower had remitted payment of interest in accordance with a remittance slip from the creditor, the payment in question would be considered full payment for that interest period, as a receipt for full payment was in existence. The loan agreements that had already been deemed unlawful fell into category F. A summary can be found in Table 1. In all, the book value of category F loans, all of which probably include illegal exchange rate linkage clauses, totalled 367 b.kr. Financial institutions' losses as a result of full-payment receipts for previously paid interest on loans in category F would be just under 86 b.kr., and the institutions have already expensed or recorded precautionary write-downs in the amount of 71 b.kr. For categories B-E, where legal uncertainty still exists, the book value of the loans is about 301 b.kr., and most of the counterparties are legal entities. If category B-E loans are deemed illegal, the financial institutions' additional loss would amount to some 79 b.kr. Total losses could run to 165 b.kr., including 118 b.kr. in loan impairment and 47 b.kr. for disbursement related to paid-up loans. About 24 b.kr. of that amount is attributable to category F loans. Most likely, about ¼ of the amount disbursed for category F loans will revert to individuals, and just under half will go to individuals with category B-E loans if such loans are deemed illegal. This shows that the 15

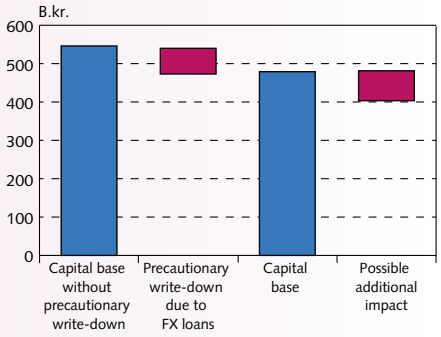
3. Case no. 471/2010.
4. Case no. 155/2011.
5. Case no. 600/2011.

February Supreme Court judgment will significantly affect the financial system if it covers both individuals and legal entities, although it will not jeopardise financial stability. Even if all loans in categories B-F were deemed to include illegal exchange rate linkage clauses, which is unlikely, the impact on the financial system would be manageable, and the three large commercial banks' capital adequacy ratios would be above the FME's 16% required minimum. The commercial banks also have strong liquidity, which will help them to meet possible payments due to illegal contracts. The FME's liquidity ratios would only decline by 2-4% and the Central Bank's by 5-10% if category B-F loans were declared illegal.[6] All of the commercial banks' liquidity ratios would still be above the regulatory minimum. The impact on smaller financial institutions' liquidity and capital ratios could be considerable, however, and it is not certain that they are all able to withstand the shock without outside assistance.

Chart 1

Supreme Court judgment of 15 February 2012 on FX loans, impact on commercial banks' capital base

December 2011



Sources: Commercial banks' annual accounts, Financial Supervisory Authority.

Table 1. Book value of exchange rate-linked loans and possible losses due to recalculation

Book value, 31.12. 2011

	Category F		*Categories B-E*		
	Individuals	*Legal entities*	*Individuals*	*Legal entities*	*Total*
Commercial banks	97,850	248,486	11,450	277,203	634,989
Savings banks	766	2,262	818	3,896	7,742
Others	6,652	11,105	0	7,644	25,401
Total	105,268	261,853	12,268	288,743	668,132
Category totals	367,121		301,011		668,132

Potential losses due to recalculation

	Category F		*Categories B-E*		
	Individuals	*Legal entities*	*Individuals*	*Legal entities*	*Total*
Commercial banks	16,544	57,654	8,762	61,924	144,884
Savings banks	353	707	406	2,377	3,843
Others	5,075	5,282	0	5,821	16,178
Total	21,972	63,643	9,168	70,122	164,905
Category totals	85,615		79,290		164,905

All figures are in ISK millions.
Source: Financial Supervisory Authority.

Many unanswered questions about legality of contract forms

The financial institutions have been authorised by the Competition Authority to work together to analyse and respond to the Supreme Court judgment of 15 February. This collaboration is taking place under the leadership of the Icelandic Financial Services Association, with assistance from the Debtors' Ombudsman. A number of questions remain unanswered about the legality of individual contract forms in categories B-E, the effect of debt relief measures on the validity of full-payment receipts, and the methodology to be used for recalculation. The parties are of the opinion that over a dozen court cases will be needed to eliminate the legal uncertainty that still exists in relation to exchange rate-linked loans. Several cases related to these issues will be decided in the near future. A case between Arion Bank and a legal entity concerning the validity of an exchange rate-linked loan agreement in category D was heard by a panel of seven Supreme Court judges on 29 May, and two days later a panel of seven Supreme Court judges heard a case filed by two individuals against Íslandsbanki concerning the validity of an exchange rate-

6. For further discussion of the banks' liquidity ratios, see Section IV.

linked loan agreement in category E.[7] However, these cases will only eliminate a portion of the uncertainty currently reigning in the area of exchange rate linkage. It is important that all of the uncertainty be eliminated as soon as possible and that parties in the financial market learn from experience so that this turn of events does not repeat itself. Finally, it should be noted that, in April, the EFTA Surveillance Authority (ESA) sent the Icelandic authorities a formal reminder that Icelandic interest rate legislation was in contravention of the European Economic Area (EEA) Agreement. The authorities are currently preparing their response to ESA.

7. Cases no. 3/2012 and 524/2011.

VI Capital controls and financial stability

Movement of capital has been restricted in Iceland since the banking system collapsed in autumn 2008, first with Central Bank guidelines, then with the Rules on Foreign Exchange, and finally, with amendments to the Foreign Exchange Act.[1] Restrictions were placed on movement of capital, and foreign currency was subjected to repatriation requirements. Since the controls were imposed, it has been necessary to amend the Rules or the Act a few times in order to close loopholes that permitted foreign exchange outflows; however, the rules pertaining to foreign exchange inflows have been relaxed. The most extensive changes to the capital controls were made in October 2009 and March 2012. In October 2009, all ambiguity concerning the prohibition on unilateral importation of offshore krónur was removed, and the restrictions on foreign exchange inflows were lifted. In March 2012, outflows of bond instalments and indexation were prohibited, and the exemptions previously enjoyed by the failed banks' estates were revoked.

Offshore krónur:
The term offshore krónur *applies to króna-denominated assets that are held by non-residents and are subjected to restrictions on outflows according to the Foreign Exchange Act. Owners of offshore krónur are non-residents – banks and investors – but there may be resident investors or offshore companies owned by residents behind them.*

1. Act no. 87/1992.

Box VI-1

What restrictions do the capital controls entail?

Restrictions on capital movements and foreign exchange transactions, commonly referred to as the capital controls, can be roughly divided into two categories. On the one hand is cross-border movement of capital, which is prohibited in Iceland, with a few exceptions, and on the other are general current account transactions related to external trade, which are permissible.

Free trade and restrictions
Since the capital controls were imposed, residents of Iceland have been permitted to carry out conventional trading in goods and services with non-residents. This includes using credit cards while travelling abroad in order to buy goods and services. Furthermore, cross-border movement of capital and foreign exchange transactions related to contractual instalment payments and dividend and interest payments are, for the most part, exempted from the controls. On the other hand, the controls place broad-based restrictions on foreign exchange transactions and movement of capital between countries. This includes investments in any type of foreign asset, such as transferable financial instruments issued in foreign currency and real estate or other assets in foreign currency, irrespective of whether these assets are sold by residents or non-residents. For instance, investment in bonds issued by a domestic party but denominated in foreign currency is restricted under the Foreign Exchange Act.

Lifting the capital controls
The first steps in lifting the capital controls (liberalisation) were taken in October 2009, when new inflows of foreign currency were permitted. New foreign currency inflows[1] that are converted to krónur in the domestic foreign exchange market for the purpose of

1. Excluding export revenues.

investing in Iceland[2] are not restricted by the capital controls if the investment is registered as a new investment with the Central Bank of Iceland. The proceeds from the sale of such new investments are exempt from the restrictions on foreign exchange transactions and cross-border movement of capital.[3] The objective of the next steps in the capital account liberalisation strategy is to unwind non-residents' offshore krónur holdings and channel them into long-term investment in Icelandic businesses, real estate, Treasury bonds, or other long-term assets. Investors have therefore been given the option of participating in foreign currency auctions in connection with long-term investment in Iceland.[4] They can purchase krónur at the Central Bank of Iceland's auction exchange rate for 50% of the intended investment amount, provided that the other 50% is exchanged in the onshore foreign exchange market. This option is referred to as the Central Bank of Iceland Investment Programme. In this case, the capital is restricted by the Foreign Exchange Act, just as other capital is in Iceland, and participating investors pledge to hold the investment for at least five years. Investors participating in Central Bank of Iceland auctions are also offered the option of purchasing Icelandic Treasury bonds in exchange for euros. Under this option, investors can sell all of their foreign currency to the Central Bank, but they pledge to hold the bonds for five years.

Concurrent with these auctions according to the Investment Programme, parties wishing to scale down or close out their króna positions are invited to participate in auctions in which they offer to sell krónur in exchange for foreign currency. This foreign currency is not bound by the provisions of the Foreign Exchange Act. In this process, the Central Bank's role is to pair parties interested in long-term investment in Iceland together with impatient investors wishing to unwind their króna positions, but without affecting exchange rate stability.

Exemptions subject to assessment of stability and precedent

The Central Bank is authorised to grant exemptions from the capital controls. In evaluating a request for an exemption, the Central Bank is required to consider the consequences of the capital controls for the applicant, the objective of the capital controls, and the impact that an exemption will have on monetary and exchange rate stability. Each request is considered in light of the effect an exemption would have and whether the precedent set by the exemption would undermine stability. Requests involving small amounts of money could therefore be rejected on the grounds that they could jeopardise monetary and exchange rate stability because of the precedent they set. Requests for exemptions have risen in number, but the proportion of approved requests has risen as well. It can be assumed that the experience gained in enforcing the capital controls affects the requests received. Currently before Parliament is a bill of legislation amending the Foreign Exchange Act, which includes provisions expanding the authorisations for foreign exchange transactions and movement of capital, particularly for individuals and small companies.[5]

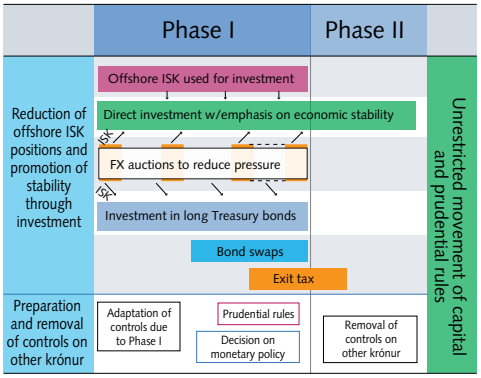
Further information on the capital controls and the liberalisation strategy can be found on the Central Bank website.

2. Derivatives contracts are not considered new investment.
3. Investment taking place after 31 October 2009 and based on new inflow of foreign currency that is converted to Icelandic krónur at a domestic financial institution is considered new investment in the sense of this provision.
4. This includes dematerialised equity and debt securities, unit shares in mutual and investment funds, and real estate.
5. Case no. 731, bill of legislation, at the 140th legislative session, http://www.althingi.is/altext/140/s/1169.html.

The Central Bank has been working towards removing the capital controls in accordance with the liberalisation strategy published in March 2011.[2] The principal objective of the strategy is to lift the controls in sequenced steps without causing significant foreign exchange market instability. Chart VI-1 illustrates the two-phase structure of the strategy. The objective of the first phase is to unwind offshore króna positions held by impatient foreign investors and direct that capital into the hands of long-term investors wishing to invest in Icelandic businesses, real estate, or long-term Treasury bonds. For this purpose, the Bank has held a number of foreign currency auctions in which, on the one hand, owners of foreign currency exempt from repatriation requirements can buy long-term Treasury bonds or Icelandic krónur at the auction exchange rate to be used for long-term domestic investment, and on the other, owners of offshore krónur are given the opportunity to sell them for foreign currency. Later in this phase, it is planned to allow owners of offshore krónur that own Treasury bonds in krónur to swap them for foreign-denominated bonds. It is possible that domestic banks could also offer impatient foreign investors the opportunity to swap their króna deposits for term deposits in foreign currency or for foreign bonds. Ultimately, investors still holding offshore krónur will be offered the chance to exchange them for foreign currency subject to payment of an exit tax.

The second phase of the liberalisation strategy centres on lifting controls on general foreign exchange transactions and capital movements. In order for this to be practicable, however, the balance of payments must indicate that the foreign exchange reserves are adequate, the spread between the onshore and offshore exchange rates must have narrowed, and domestic entities must have demonstrated that they have reasonably easy access to foreign credit markets. This phase entails greater risk of foreign exchange market instability than the first phase. Before the second phase begins, prudential rules will be implemented so as to reduce the foreign exchange risk faced by domestic financial institutions, corporations, public entities, and households.

Chart VI-1
Capital controls liberalisation: Phases and steps

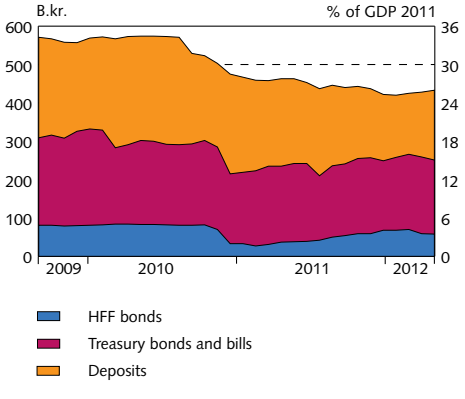


Source: Central Bank of Iceland.

Offshore krónur

One of the main impediments to removal of the capital controls in the near future is the stock of liquid króna positions held by non-residents interested in exchanging them for foreign currency at the first opportunity. Based on the end-April balance and the foreign currency auctions held in May, the stock of these krónur totals approximately 425 b.kr., or about 26% of year-2011 GDP, after having declined by 145 b.kr. since September 2009. The reduction is due in part to the so-called Avens agreement, according to which the pension funds, through the intermediation of the Central Bank, purchased 120 b.kr. in króna assets held by the Banque centrale du Luxembourg in exchange for foreign currency. In addition, through foreign currency auctions and direct transactions with holders of offshore krónur, by the end of May 2012 the Central Bank had acted as an intermediary in reducing the stock of offshore krónur by another 62 b.kr. Of that

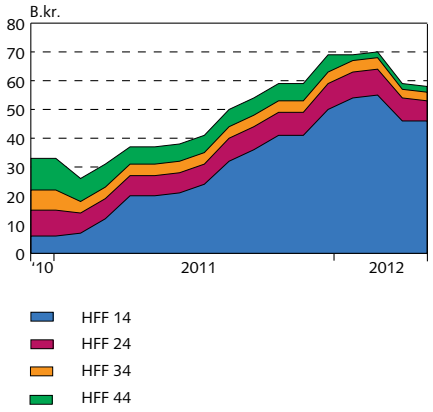
Chart VI-2
Offshore krónur
September 2009 - April 2012



Source: Central Bank of Iceland.

2. http://www.sedlabanki.is/lisalib/getfile.aspx?itemid=8673.

Chart VI-3
Developments in non-residents' HFF bond holdings
December 2010 - April 2012



Source: Central Bank of Iceland.

total, just under 55% were placed in the hands of parties intending to invest in Icelandic businesses and assets other than Treasury bonds. Offshore krónur in the total amount of 182 b.kr. changed hands during the period in question.

Holdings of offshore krónur fall into three main categories (figures as of end-April):

- Deposits with financial institutions in the amount of 142 b.kr. Virtually all of these are held in accounts with the three large commercial banks. They are considered the most volatile of non-residents' króna assets.
- Deposits with the Central Bank amounting to roughly 40 b.kr. These are related to foreign settlement systems' settlement of Icelandic securities. They do not earn any interest.
- Government-guaranteed bonds and bills in the amount of about 251 b.kr. Chief among these are Treasury bills (27 b.kr.), short Treasury bonds (165 b.kr.), and the shortest Housing Financing Fund (HFF) bonds (46 b.kr.). Developments in non-residents' holdings of HFF bonds in recent months can be seen in Chart VI-3. Increased holdings in HFF 14 are due to leakage in capital outflows that was stopped with the statutory amendments passed in March 2012.

According to the Foreign Exchange Act, owners of offshore krónur must invest their assets in financial instruments deemed eligible by the Central Bank as collateral for collateralised loan facilities if expatriation of interest payments on them is to be permissible.[3] Therefore, it can be assumed that impatient investors will invest in such assets and the amount of their investments will give a fairly clear indication of the amount of their offshore holdings. From October 2009 through May 2012, the stock of offshore krónur shrank by an estimated 145 b.kr. Over the same period, it was reduced by 182 b.kr. as a result of the Avens agreement, the foreign exchange auctions, and direct agreements with owners of offshore krónur. The difference is due to three main factors: yields can be higher than interest payments, accrued indexation cannot be expatriated, and it is not a given that all holders of offshore krónur transfer their interest payments out of Iceland.

Settlement of the failed banks' estates

Assets of the failed banks

When the failed banks' estates are settled, all of the estate assets will be used to reimburse legitimate creditors in accordance with the law. Because assets will not cover all of the liabilities of the failed banks, the outstanding amount will be written off. The majority of the failed commercial banks' assets are foreign, but the estates own substantial domestic assets as well. Chief among these are the stakes in the new banks and claims against the new banks. Non-residents own

3. With the passage of the amendments to the Foreign Exchange Act in March 2012, it is prohibited to convert payments of bond principal and indexation on bond principal to foreign currency. This makes non-indexed bonds a more attractive option for holders of offshore krónur wishing to transfer funds out of Iceland.

the majority of the claims against the estates. Residents also have claims against the estates, among them pension funds, mutual and other investment funds, the Treasury, and the Central Bank. A final list of approved claims is not available, and a number of disputes have arisen over the legitimacy of claims. The ultimate distribution between domestic and foreign creditors is uncertain, as is the value of the assets. Therefore, the figures presented here must be interpreted with caution.

Table VI-1 summarises the estimated assets of Landsbanki Íslands, Glitnir, and Kaupthing as of year-end 2011. The failed banks' total assets are estimated at 2,669 b.kr., or 164% of year-2011 GDP, including 1,264 b.kr. in domestic assets.[4] These assets will be divided among the estates' final creditors in accordance with the prioritisation of claims as set forth in the law. It should be noted that Landsbanki Íslands paid over 400 b.kr. to creditors in late 2011 and Kaupthing paid 130 b.kr. to owners of Kaupthing Edge deposit accounts soon after the bank collapsed. At year-end 2011, the estates' total assets plus the payments made by Landsbanki and Kaupthing amounted to just over 3,200 b.kr., or nearly 200% of year-2011 GDP. Valuations of the failed banks' assets have been carried out with caution, and asset values have gradually risen as outstanding claims have been collected and assets sold.

Table VI-1. Estimated assets of the failed commercial banks at year-end 2011

	Domestic assets			*Foreign assets*	
B.kr.	*in ISK*	*in FX*	*Total*	*in FX*[1]	*Total*
Deposits with DMBs	57	43	100	135	235
Deposits with the Central Bank	0	317	317	0	317
Loans to customers	17	27	44	476	520
Loans to financial institutions	3	17	20	100	120
Securities	39	8	47	462	509
Derivatives	60	0	60	44	104
Compensation bond from new bank for asset transfer	0	359	359	0	359
Holdings in subsidiaries and affiliates	251	52	303	178	481
there of stakes in the new banks	*213*	*0*	*213*	*0*	*213*
Other assets	14	0	14	10	24
Total	441	823	1,264	1,405	2,669

1. An insignificant portion of foreign claims are in ISK with FX underlying.

Source: Central Bank of Iceland.

Payouts to creditors and their impact

The distribution of claims among creditors varies somewhat among the failed banks. In broad terms, it can be assumed that nearly all of Landsbanki Íslands' creditors and just over 80% of the other banks' creditors are non-residents. Overall, it is estimated that residents' claims account for roughly 13% and non-residents' claims about 87%.

The Central Bank has reported on the estimated effect of the failed banks' payouts to creditors on Iceland's international investment position (IIP) on several occasions, most recently in a Box in *Monetary*

4. Based on reports of assets and liabilities of failed banks submitted to the Central Bank. The book value of assets may not be entered in accordance with IFRS standards.

Bulletin 2012/2. The IIP makes no distinction between whether a foreign obligation is denominated in domestic or foreign currency. However, the stock of offshore krónur grows only when payments are made to non-residents in Icelandic krónur. After adjusting for foreign assets reverting to domestic creditors and domestic assets reverting to foreign creditors, it is assumed that the IIP will be negative by 566 b.kr., or 35% of year-2011 GDP. As Table VI-1 shows, a portion of the failed banks' domestic assets are denominated in foreign currency. It is appropriate to bear in mind that the commercial banks own considerable foreign-denominated liquid assets that they can use to pay out the failed banks' deposits or other claims they have against the new banks without its affecting the IIP. It would also reduce the negative impact of the payouts on the IIP if the old banks' stakes in the new banks were sold for foreign currency.[5]

If no mitigating action is taken, the failed banks' payouts to creditors could lead to instability in the foreign exchange market, which would entail risks for Iceland's economy and financial institutions. An estimated 190 b.kr. in Icelandic krónur will fall into the hands of foreign creditors (see below). Placing the activities of the failed banks under the provisions of the Foreign Exchange Act in March 2012 provides an opportunity to come to agreements with the winding-up committees, which should ensure that it is possible to dispose of assets and pay the proceeds to creditors without significant instability. In this context, it is important to consider the following (see Chart VI-4):

i) To some extent, potential foreign exchange imbalances stem from the fact that residents whose debt to the failed banks is in foreign currency have underlying assets or payment flows in domestic currency. These parties must purchase currency in the foreign exchange market in order to service their debt to the old banks' estates. These are contractual payments that are not affected by the capital controls. Domestic resolution committee assets that are recognised in foreign currency are estimated at 823 b.kr. This amount includes 360 b.kr. in foreign-denominated deposits (see item a) in Chart VI-4). Excluding these deposits, the failed banks' foreign-denominated domestic assets total about 463 b.kr. (see item b) in Chart VI-4). These consist to a large extent of the debt instrument between old and new Landsbanki. The new bank has substantial liquid and illiquid foreign-denominated assets that generate regular foreign-denominated income, however. In addition, it would be possible to satisfy at least part of the new bank's purchasing needs in the foreign exchange market with other measures; for instanced, lengthened maturities or refinancing.
ii) In other respects, potential balance of payments problems lie primarily in the fact that foreign creditors will inevitably receive payment for a portion of their claims against the old banks in Icelandic krónur. In that instance, creditors will want to exchange them for foreign currency, or at least for an asset that can readily be sold for foreign currency. Resolution committee assets recognised in

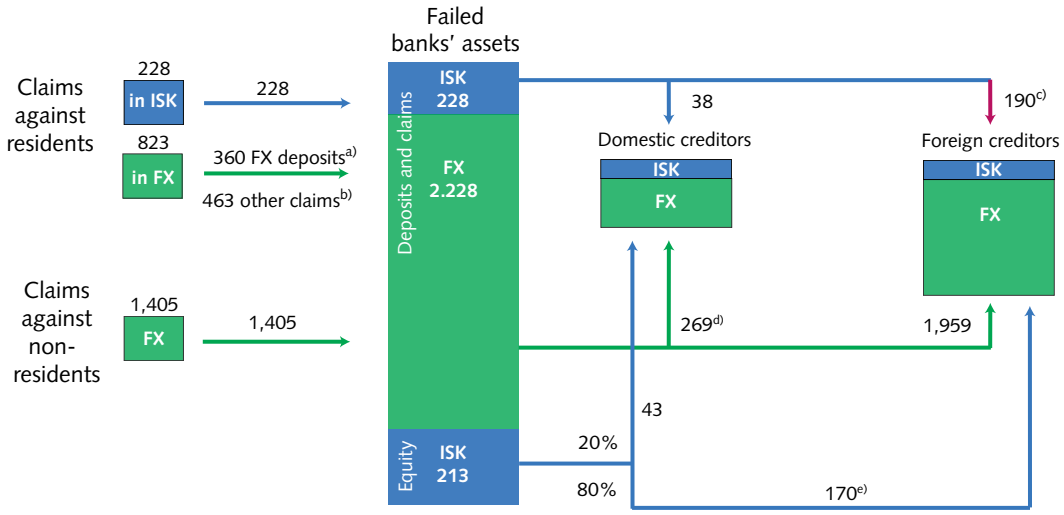
5. Foreign currency subject to repatriation requirements is considered the equivalent of krónur.

Icelandic krónur are estimated at 228 b.kr. (see item c) in Chart VI-4). As is previously mentioned, about 190 b.kr. of this amount will revert to foreign creditors. These are outflows that are held in Iceland by the capital controls unless specific negotiations are made.

iii) The net worth of the old banks' stake in the new banks is entered at 213 b.kr., an estimated 170 b.kr. of which belongs to foreign creditors (see item e) in Chart VI-4). These holdings are relatively illiquid assets and therefore not risky in the short term. If the stake is sold for foreign currency, it will not cause instability in the foreign exchange market.

iv) Offsetting possible foreign exchange outflows from the above-specified causes are expected foreign-denominated payments from the estates to domestic creditors. These payments are estimated at 269 b.kr. (see item d) in Chart VI-4). Because of the repatriation requirement provided for in the Foreign Exchange Act, these payments must be held in deposit accounts if they are not converted to Icelandic krónur. They will have a positive impact on the foreign exchange market and support the exchange rate of the króna if they are converted, or will weaken the negative impact on the króna later on.

Chart VI-4
The failed commercial banks: assets, claims against residents and non-residents, and disbursements



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.
Source: Central Bank of Iceland.

Setting aside the fact that the payouts from the failed banks have just begun and there is some uncertainty about both asset values and classification of creditors, the amount of highly liquid króna assets held by non-residents could increase upon settlement of the estates by up to 190 b.kr. In that case, the stock of offshore krónur would amount to 615 b.kr., or 38% of GDP. In addition, it is uncertain how

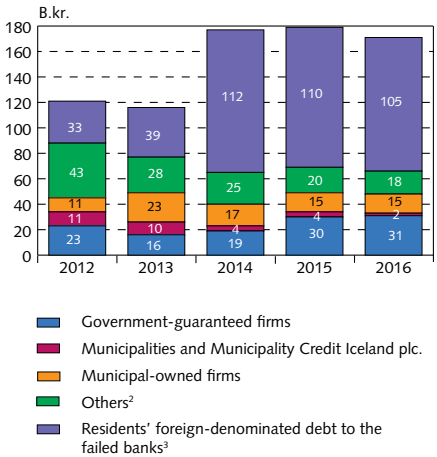
payment will be made for the foreign creditors' 170 b.kr. stake in the new banks.

Payment flows independent of the controls

Domestic entities apart from the Treasury and export firms with reliable foreign-denominated revenues have had extremely limited access to foreign credit markets since the banking system collapsed; however, they owe considerable amounts in foreign currency. To a large degree, they have no foreign income or assets that can be used to service the debt. Without access to foreign credit markets, these parties must purchase currency in the market in order to make payments on their foreign loans. If foreign exchange outflows greatly exceed inflows, instability can result.

Table VI-2 shows estimated instalments and interest payments on foreign loans by domestic borrowers (excluding the Treasury) to foreign creditors and the failed banks until 2016. These entities' foreign income is estimated at minimum 36 b.kr. per year.[6] The net purchasing need in the foreign exchange market is therefore estimated at maximum of 80 b.kr. in 2012 and 2013, and a maximum of 140 b.kr. per year thereafter, assuming no change in income. Payments on bonds between new and old Landsbanki, which begin in 2014, explain the steep rise in payments to the failed banks. This is a very heavy debt service burden relative to the current account balance for 2011; however, it could be reduced through extension of maturities or refinancing in order to avoid severe foreign exchange market instability.

Chart VI-5
Estimated instalments and interest on non-Treasury foreign loans[1]



1. All figures in b.kr, based on 31.12.2011 exchange rates. 2. Excluding DMBs in winding-up proceedings and Actavis. 3. Debt service of around 20% of the portfolio is unknown and therefore estimated.
Sources: Municipality Credit Iceland plc. annual accounts and Central Bank of Iceland.

Risks associated with capital account liberalisation

Table VI-2 Estimated foreign loan instalments and interest payments by parties other than the Treasury to foreign creditors and the failed banks

B.kr. at 31.12.2011 exchange rate	*2012*	*2013*	*2014*	*2015*	*2016*
Government-guaranteed firms	23	16	19	30	31
Municipalities and Municipality Credit Iceland plc.	11	10	4	4	2
Municipal-owned firms	11	23	17	15	10
Financial institutions, excl. Municipality Credit Iceland plc.[1]	9	8	8	8	7
Private corporations[2]	34	20	17	12	11
Residents' foreign-denominated debt to the failed banks[3]	33	39	112	110	105
Total	121	116	177	179	166
Percentage of 2011 current account balance[4]	242%	232%	354%	358%	333%
Percentage of CB foreign exchange reserves (end-March 2012)	12%	12%	18%	18%	16%

1. Excluding DMBs in winding-up proceedings. 2. Excluding Actavis. 3. Debt service on about 20% of the debt is unknown and therefore estimated. 4. Excluding DMBs in winding-up proceedings and Actavis.
Sources: Municipality Credit Iceland plc. annual accounts and Central Bank of Iceland.

Confidence in the Icelandic economy will be a crucial factor when the capital controls are lifted. If investors do not have confidence in the Icelandic economy and are in doubt about the Treasury's ability to fulfil its obligations, there is the risk of capital flight by foreign and

6. No estimate of private companies' revenue flows in Table VI-2 is available.

domestic investors alike. The Treasury's prospects have improved, and the outlook for its credit ratings is now stable. The Treasury recently issued a 10-year bond in foreign markets, with demand amounting to four times the available supply. The auction of this bond represented an important step in refinancing and lengthening the Treasury's foreign debt. Three main risks are associated with the removal of the capital controls:

i) Foreign exchange market instability could develop as a result of outflows. In the foreign currency auctions held by the Central Bank in preparation for lifting the controls, the auction exchange rate has not yet approached the onshore rate. This shows that significant downward pressure on the króna could still be expected if the controls were lifted without notice. A steep drop in the exchange rate following removal of the controls could weaken the banks' loan portfolios and trigger a rise in non-performing loans.
ii) A shortage of financial system liquidity could develop when non-residents holding 142 b.kr. in deposits in Iceland's large commercial banks want to convert them to foreign currency. Stress tests on the banks' liquidity (see Section IV) show that the banks should be well prepared to tolerate such outflows.
iii) Domestic funding will doubtless be more expensive. The impact of capital account liberalisation on demand for Treasury bonds and HFF bonds (particularly short ones) would probably be significant, as some 251 b.kr. of non-residents' assets are invested in these instruments, including 193 b.kr. in Treasury bonds and bills. The Treasury's cash balance is strong, however, and the State should be well prepared for fluctuations in demand. The foreign currency auctions also result in a considerable lengthening of Treasury financing, as the long-term investors participating in the auctions have invested large amounts in 30-year Treasury bonds. The impact on the HFF would probably be small, as its borrowing need is limited at present.

Broader effects on the financial system would depend on residents' response to liberalisation. Icelandic residents have been required to repatriate foreign currency since the controls were imposed and cannot invest in foreign assets. It is therefore possible that there is some pent-up demand for foreign assets. If non-residents' sales of domestic assets cause sizeable currency outflows, domestic confidence could be undermined. Deposits and other highly liquid assets could therefore prove volatile, exacerbating instability after the controls are lifted. This is why it is important that as large a share as possible of non-residents' volatile assets be invested through the foreign currency auctions and other options described in the Bank's liberalisation strategy. To some extent, it is also possible to contain the risk of post-liberalisation capital flows through the adoption of prudential rules. The Central Bank is working on setting prudential rules to limit the foreign exchange risk residents will face once free movement of capital resumes. Economic developments abroad could limit foreign exchange outflows from Icelandic residents.

Risks associated with the controls

The prospect of severe balance of payments instability following the collapse of the Icelandic banks made it necessary to impose restrictions on capital transactions between residents and non-residents. Maintaining a capital controls regime for a prolonged period is undesirable, however. Restrictions on movement of capital have a variety of adverse side effects within the economy, some directly affecting financial stability and others making an indirect impact through the real economy. Consequently, it is desirable to lift the controls once the balance of payments problems have been resolved.

Capital controls make streamlining of business more difficult and distort skew the premises for investment decisions. There is the danger that the longer capital controls are in effect, the more the economy's growth potential is eroded. Selection of investment options is based on potential returns within the capital controls regime, yet increased emphasis is placed on seeking ways to circumvent the controls. Over time, the composition of economic activity will be different within a capital controls environment than it would be outside it. Options decline in number, and output growth and living standards deteriorate.

In Iceland, the controls directly affect financial stability through the banks' competitive environment. The banks rely to some extent on funding from non-resident investors that will probably move their capital out of Iceland once the controls are lifted. Domestic funding is also more accessible under the capital controls, as investors have fewer investment options than they would in an unrestricted environment. This is reflected in part in the fact that domestic financial institutions' deposits are at an historical high, at approximately one GDP. At the same time, the banks can maintain larger interest rate spreads than banks in neighbouring countries because competition is scarce. This indicates that a portion of their profit is due directly to the controls and could prove unsustainable in a normal competitive environment. In that sense, the capital controls could allow them to postpone necessary streamlining, even though their operating expenses are high in international comparison.

Market interest rates are low and, to some extent, are held down by the controls. Low interest rates and a dearth of investment options could distort asset prices. Given that real estate appreciated by some 10% last year and bonds and equity securities rose somewhat in price, it is important to keep abreast of developments in asset prices under the capital controls regime (see also Box VI-2). In an environment of low market rates, the public sector has access to cheap domestic funding, which could delay necessary cutbacks and deleveraging. According to *Monetary Bulletin* 2012/2, fiscal consolidation efforts have probably been relaxed, and the temptation to undertake public investment escalates when financing costs are low, particularly during the run-up to elections.

Attempts will be made to steer capital account liberalisation so that domestic entities' funding is ensured and foreign exchange market fluctuations remain within tolerable limits. It is nonetheless important, in view of the above, that domestic entities – financial insti-

tutions in particular – prepare themselves for the liberalisation process. The banks must adapt their operations to a competitive environment and prepare themselves for increased competition. It is essential that they lengthen their domestic funding profile in addition to seeking out foreign capital. At the same time, the Treasury must pay down debt so as to reduce both its financing need and its refinancing risk. It must be able to afford domestic and foreign financing at normal market rates.

Box VI-2

Capital controls: the impact on asset prices

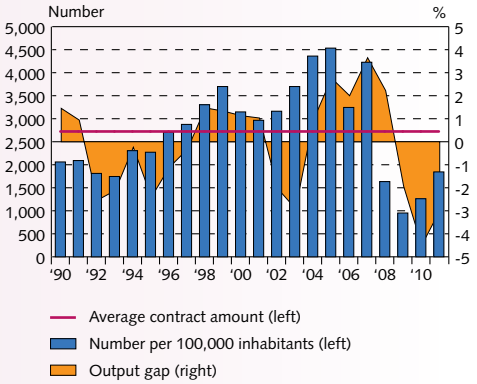
The capital controls were imposed in late 2008, with the objective of slowing down capital outflows, arresting the depreciation of the króna, and halting the ensuing rise in inflation and debt levels and the plunge in asset prices. After the controls were imposed, the drop in asset prices lost pace and soon certain assets began appreciating again. Consequently, there is good reason to assess the effect of the capital controls on asset prices and determine whether they have prevented prices from falling far below equilibrium levels, as commonly happens in a rapid decline. It is also important to assess whether the controls are still yielding results and determine whether they are perhaps contributing to excessive price increases. Domestic asset values have changed radically since the capital controls were introduced, partly because of changes in outstanding volumes and partly because of changes in price.

The real estate market before and after the controls

Of the 22 years covered by Chart 1, residential housing market turnover was lowest in 2009. The period 2008-2010 represents the three years with the fewest purchase contracts. Since 2009, purchase agreements have risen steadily in number. Nonetheless, in 2011 the number of contracts for the purchase of detached and condominium housing per 100,000 inhabitants was one-third below the average for the 22-year period. The chart shows clearly how the number of real estate purchase agreements follows the output gap. The sizeable slack in the economy in the past few years probably explains the limited number of contracts to a large degree. The relationship between real estate market fluctuations and the business cycle is also shown in Chart 2, which illustrates housing market turnover as a share of GDP.

Chart 1

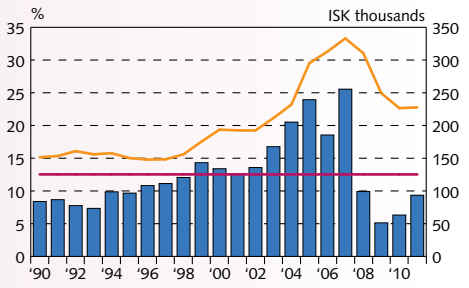
Number of residential contracts per year,[1] per 100,000 residents, and output gap



1. Figures include detached and condominium housing.
Sources: Registers Iceland, Central Bank of Iceland.

Chart 2

Annual turnover in detached and condominium housing as a share of GDP and cash price per square metre[1]



1. 1990 to 2011 at year-2011 prices.
Sources: Registers Iceland, Central Bank of Iceland.

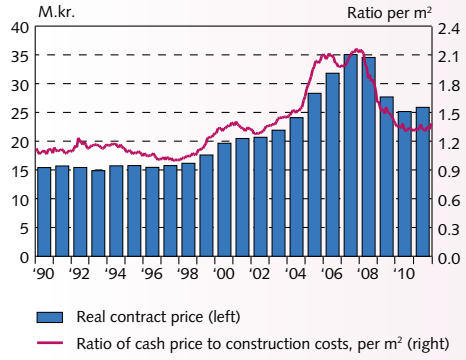
House prices skyrocketed early in this period, particularly in 2003-2007, when they rose by 58% in four years, measured at constant prices.[1] By 2007, the price per square metre was 120% higher than in 1990, also at constant prices. Prices plunged for the next three years, and by 2010 real house prices were down by a third from the 2007 peak. They remained broadly unchanged the following year (see Chart 2).

It is noteworthy that the real price per contract remained relatively stable from 1990 to 1998 (see Chart 3). It rose by an average of 9% per year from 1998 to 2007, for a total increase of 117%. It then tapered off slightly but has remained steady for the past two

1. During this period, the banks were actively penetrating the residential mortgage market. In addition, the Housing Financing Fund raised its loan-to-value ratios to 90% of the market value from the previous 70% of the official property valuation.

Chart 3

Average contract price for condominium and detached housing[1] and ratio of cash price to construction costs, per m²

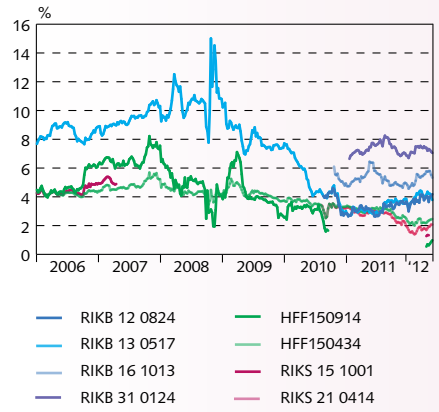


1. At year-2011 prices.
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Chart 4

Bond yields[1]

6 January 2006 - 31 May 2012

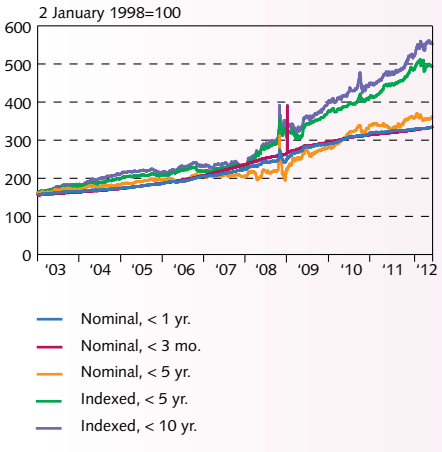


1. HFF bonds, indexed and nominal Treasury bonds.
Source: Central Bank of Iceland.

Chart 5

Bond indices

3 January 2003 - 31 May 2012



Source: Nasdaq OMX Iceland.

years at about 64% above the 1990-1998 average, in spite of a steep contraction in turnover. Although it should be borne in mind that contracts can vary and some are for the purchase or more than one property, these figures support the conclusions suggested by an examination of developments in price per square metre (see Chart 2). Real estate prices are rising again in spite of being somewhat above historical equilibrium.

A comparison of cash purchase prices and construction costs per square metre gives yet another indication that real estate prices are above market equilibrium (see Chart 3). It should be noted, though, that Registers Iceland calculates the cash purchase price from contracts concluded, while Statistics Iceland calculates building costs per square metre of the defined "average" home. Chart 3 shows that this ratio, which fluctuated to a large extent between 1.0 and 1.4 between 1987 and 2003, peaked at almost 2.2 in autumn 2007. It then fell during the 2008-2010 period but did not dip below 1.3, and is now back up to 1.4. The ratio of price per square metre to construction costs is now at a similar level, after having risen to a 15-year high before 2004.

Bond market rises

Bond market price formation is determined by a number of factors. In addition to supply and demand, the risk attached to the bond in question affects its price, as do the returns offered on other investment options. Price developments are then reflected in the yield on the bond. The yield on nominal Treasury and indexed Treasury bonds and HFF bonds can be seen in Chart 4.

Chart 4 shows that Treasury bond yields fell sharply in 2009 and 2010 and have fluctuated widely since, although they have remained low, particularly for short bonds. Yields on indexed bonds – HFF bonds and indexed Treasury bonds – have fallen rather steadily in the past two years and are now under 3% for all Government-guaranteed and indexed bonds in the market. The drop in yields is reflected in rising bond prices, which shows clearly in developments in the NASDAQ OMX Iceland bond indices (Chart 5). The chart shows clearly the swift rise in bond prices, particularly for indexed bonds, over the past three years.

In recent years, bond market turnover has been similar to that in 2006, when it rose sharply from previous years. Bond trading volumes have been at or above 150% of GDP since 2009, when they had contracted sharply after peaking at almost five times GDP in early 2008 (see Chart 6). The share of Treasury bonds has soared, hovering around 60% of all bond market trading in the past three years, up from about a fourth in 2006 and even less beforehand (see Chart 6).

Ownership of bonds has changed markedly in recent years as well. At present, the largest owners are banks and savings banks, with 28% of all outstanding Treasury bonds as of end-April, followed by pension funds (23%) and non-residents (21%). In addition, non-residents held about 69% of all Treasury bills. Ownership of Treasury bonds depends on whether they are short- or long-term and whether they are indexed or not. The pension funds have increased their holdings of long nominal Treasury bonds in the recent term, while non-residents are by far the largest owners of Treasury bonds maturing in the next two years.

The pension funds currently own about 54% of all listed bonds and 43% of listed equities on the Icelandic exchange, either directly or through mutual funds. In the beginning of 2008, they owned about a third of issued bonds and 10% of equities. The pension funds' importance as domestic securities owners has grown rapidly since the capital controls were introduced (see Chart 7).

Equity prices have also risen rapidly in the recent term, or by 26% in the past six months (see Chart 8).

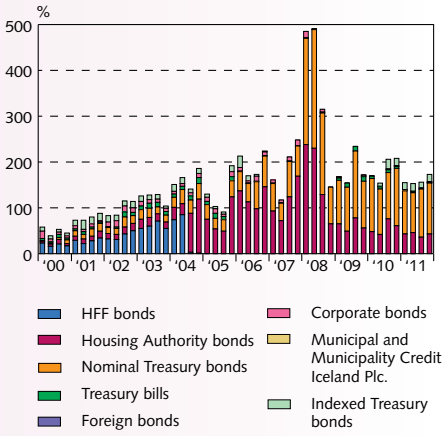
The relation between the capital controls and asset prices

The capital controls were imposed to stem capital outflows. They held foreign capital inside the Icelandic financial markets, as they were intended to do. The vast majority of non-residents' securities holdings are in short-term Treasury bonds. The capital controls also restrict foreign investment – by the pension funds, for instance – and the pension funds' holdings in the Icelandic stock and bond markets has risen swiftly in the past three years. The pension funds have been quite active in increasing their holdings in long Treasury bonds, although their importance as owners of listed equities has grown as well, and relatively speaking, they are considerably larger owners of Icelandic securities than they were before the crisis struck in 2008. Like non-residents' holdings, the pension funds' increased demand for securities is a direct consequence of the capital controls.

Capital inflows have now commenced under the Central Bank Investment Programme. Three foreign currency auctions have been held in connection with the Programme, in February, March, and May. In all, the auctions have brought in 25 b.kr., which means that the Investment Programme has brought in about 50 b.kr. The majority of this capital is being used for direct investment in businesses, followed by investment in bonds. In addition, nearly 2 b.kr. have been invested in real estate, including almost 1.5 b.kr. in February and March. Most of that amount may have been included in real estate market turnover figures, but it is only a small fraction of the 52 b.kr. in capital area housing market turnover year-to-date.

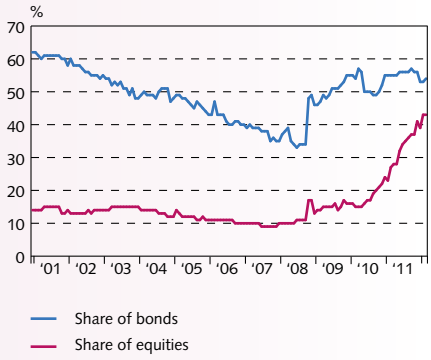
There are indications that the pension funds' growing share in the domestic securities markets leads to increased prices of both bonds and equities. Inflation expectations are high, while returns on securities and deposit interest remain low. The prospect of negative real returns in the financial markets make real estate an attractive investment option, at least for wealthy investors. This could explain why property prices appear to be rising in real terms, in spite of contradictory factors. The capital controls therefore appear to push domestic asset prices upwards, both directly and indirectly. This tendency is neither decisive nor beyond debate at present, however, although most market data indicate that asset prices have risen inordinately quickly in the past few months.

Chart 6
Bond market turnover as a percentage of GDP
Q1/2000 - Q4/2011



Sources: NASDAQ OMX Iceland Exchange, Statistics Iceland, Central Bank of Iceland.

Chart 7
Listed bonds and equities as a share of pension fund assets
Monthly data, December 2000 - February 2012



Source: Central Bank of Iceland.

Chart 8
OMXI6 index
2 January 2009 - 31 May 2012

Source: Nasdaq OMX Iceland Exchange.

VII Payment and settlement systems

Changed circumstances call for adjustment

Near the end of 2011, new payment intermediation legislation based on the European Economic Area (EEA) Agreement entered into force. In addition, Parliament is currently considering a bill of legislation for a new law on the issuance and handling of electronic money. The new legislation paves the way for increased competition in the field of electronic payment intermediation, although to an extent the capital controls currently in effect hinder free cross-border movement of capital, thereby restricting payment services as well. It is critical that all participants in the Icelandic financial markets look to the future and consider the short- and long-term effects of new legislation. In view of changed external circumstances and new legislation, the Central Bank of Iceland has initiated an appraisal of the payment card environment and is examining the possibility of becoming a centralised settlement agent for credit card transactions. It is noteworthy how large and steady an increase has taken place in cash in circulation since the financial crisis struck in 2008. It is unlikely that this growth is due entirely to the increased share of banknotes and coin in actual payment intermediation.

Payment services and payment cards

New legislation on payment services and handling of electronic money

On 1 December 2011, the new Payment Services Act, no. 120/2011, entered into force, incorporating into Icelandic law the provisions of the European Payment Services Directive, no. 2007/64/EC, on the basis of the EEA Agreement.

The Minister of Economic Affairs recently presented to Parliament a bill for new legislation on the issuance and handling of electronic money.[1] The bill proposes the incorporation into Icelandic law of the provisions of the new EU Directive on electronic money, no. 2009/110/EC, supplanting the previous Directive on the same topic (EMDI), which was incorporated into Icelandic law with Chapter IX of the Act on Financial Undertakings, no. 161/2002.

The Appendix on page 77 contains a more detailed discussion of the aforementioned legislation and legislative bill and their impact.

Payment card reports

In June 2011, the Central Bank of Iceland initiated the compilation of a report entitled "Payment card netting systems and settlement arrangements", which is published on the Bank's website. After the report was published, it became clear that a comparable appraisal of the Icelandic debit card market was needed, with emphasis on future arrangements for clearing and settlement of debit card transactions,

1. Parliamentary document 1141, Case no. 708 at the 140th legislative session, 2011-2012.

with an eye to security and the systemic importance of payment card transactions in domestic payment intermediation.

The Central Bank therefore initiated such an appraisal of the debit card market, entitled "Transaction flows and settlement of debit card activity." That project is now complete, and the resulting report was published on the Central Bank website in April 2012.

The debit card report placed particular emphasis on analysing transaction flows and arrangements for settlement, as well as the roles and interactions between participants.

The project revealed, among other things, that much of the current structure of Icelandic payment card business is rooted in decisions taken over 20 years ago. Those decisions were based on market premises that differed from those currently in effect, and they have not been fully adapted to reflect changes in environment and business practise. The Central Bank is of the opinion that this structure should be amended so as to align it with best practise and ensure compliance with regulatory provisions. Documentation of procedures has proven to be fragmentary, and in some areas formal contractual agreements are lacking. Older agreements have not been updated to accord with new regulatory instruments and a changed market environment. The project findings also confirm that market participants lack comprehensive knowledge of the payment card market and that only a small group have a clear overview of the topic. There is good reason to distribute knowledge and perspective beyond this relatively narrow group. The most important pointers that emerged in the report centre on parties engaged in clearing, issuance, and processing.

In the Central Bank's view, there is no need to take immediate action on these comments, which are discussed in greater depth in the project report. Nonetheless, there is good reason to encourage market agents to implement changes, and the Bank intends to follow up on the matter in the near future.

The Bank also plans to follow up on whether market participants have responded to the comments presented in the Bank's 2011 report on credit card netting system and arrangements for settlement.

The incorporation of Directives 2007/64/EC and 2009/110/EC into Icelandic law will stimulate competition in the field of payment services in Iceland and the entire EEA. With the advent of a new regulatory framework, it is likely not only that new domestic entities will establish operations in this field, but also that increased competition will come from abroad. Approximately 100 European payment institutions have already notified the FME of plans to provide payment services in Iceland. Technology is advancing constantly, and provision of cross-border electronic services is becoming ever easier. The Central Bank intends therefore to track developments closely and invest in increased knowledge in this area of payment intermediation.

By their very nature, Icelandic debit cards are international (bearing the names VISA and MasterCard), although their use is determined in part by domestic procedures. In this context, it is necessary to consider contingency measures, outsourcing of certain operational elements, and counterparty risk. It is necessary to pay closer attention to the technological infrastructure of payment card transactions

in Iceland in order to identify the points of tangency between various authorisation and settlement routes, with respect to security and alternate routing.

Centralised settlement agent

After the financial crisis struck, the Central Bank set rules on settlement of credit card transactions in order to ensure that settlement of domestic transactions would be routed through domestic financial institutions, so as to prevent foreign agents from intervening in the process and obstructing it.

At the time the rules were set, there were two domestic acquirers in Iceland, as well as one foreign acquirer working in collaboration with a domestic entity. The domestic acquirers were readily able to meet the set requirements, but exemptions were required for the foreign agent.

Changed external circumstances and the new Payment Services Act, no. 120/2011, necessitate a review of the present arrangement. The Central Bank of Iceland is currently examining the possibility of becoming a centralised settlement agent between issuers and acquirers, for settlement of credit card transactions. Discussions of such an arrangement are currently underway with the international card companies MasterCard and VISA.

Payment systems

Payment system turnover

Real-Time Gross Settlement (RTGS) system

Turnover in the RTGS system in the first four months of 2012 totalled 4,213 b.kr. and just under 28,000 transactions,[2] which is similar to the turnover for the same period in 2011.

Participants' authorised limits in the RTGS system totalled 16.5 b.kr. at the end of April 2012. As is set forth in the pertinent rules, authorised limits were fully collateralised with Treasury bonds, Housing Financing Fund (HFF) bonds, certificates of deposit, and term deposits.

Direct participants in the Real-Time Gross Settlement (RTGS) system at the end of April 2012 were Arion Bank hf., Clearstream Banking s.a., the Housing Financing Fund, Íslandsbanki hf., Landsbankinn hf., MP Bank hf., and Straumur Investment Bank hf., as well as the Central Bank of Iceland. The charts in the margin illustrate developments in turnover and number of transactions in the RTGS, netting, and securities settlement systems.

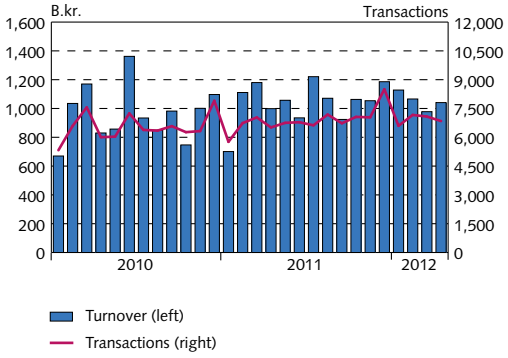
Netting system

Turnover in the netting system in the first four months of 2012 totalled 913 b.kr. and just under 23 million payment orders, an increase of 2.56% year-on-year.

Participants' intraday overdraft authorisations totalled 4.5 b.kr. at the end of April 2012 and were fully collateralised. At that time, direct participants in the netting system were Arion Bank hf., the

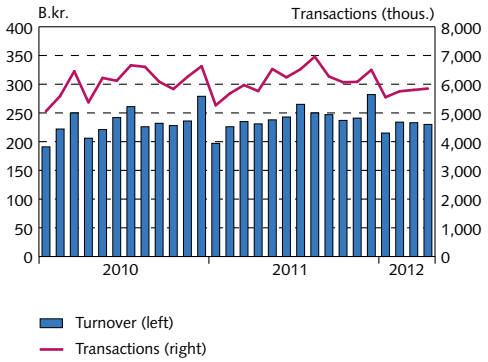
2. Payment orders; i.e., outgoing payments.

Chart VII-1
RTGS turnover



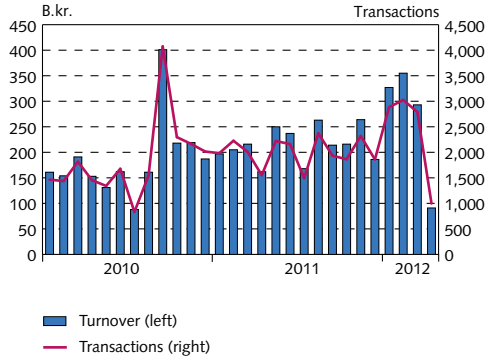
Source: Central Bank of Iceland.

Chart VII-2
Netting system turnover



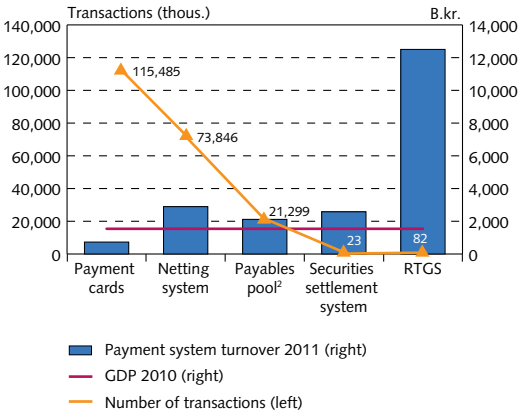
Sources: Greiðsluveitan ehf.

Chart VII-3
Securities settlement system turnover



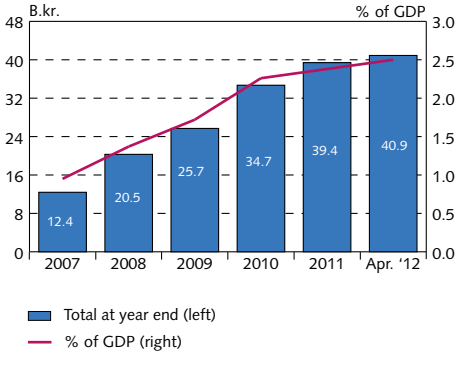
Source: Icelandic Securities Depository.

Chart VII-4
Payment systems[1]



1. Notes and coin in circulation at year-end 2011 amounted to 39.4 b.kr.
2. The payables pool includes unpaid claims in the Icelandic banking system; e.g., general claims, bonds, bills and giro remittance slips.
Source: System operators, Central Bank of Iceland.

Chart VII-5
Banknotes and coin in circulation



Source: Central Bank of Iceland.

Housing Financing Fund, Íslandsbanki hf., Landsbankinn hf., MP Bank hf., and the Central Bank of Iceland.

Securities settlement system

Turnover in the Icelandic Securities Depository's (ISD) securities settlement system totalled almost 1,064 b.kr. and 9,664 transactions in the first four months of the year. Of that turnover, 42% were so-called reported transactions (previously called off-exchange transactions), and system transactions/paired transactions accounted for 58%.

For the first four months of the year, 1% of turnover was in equities and 99% in bonds and bills. Bond transactions were concentrated in benchmark Treasury bonds and HFF bonds.

Scope of payment intermediation – banknotes and coin

As is described above, there are three systemically important payment systems operating in Iceland. The largest and most important is the Central Bank of Iceland's real-time gross settlement (RTGS) system. All payment orders in the amount of 10 m.kr. or over are routed through the RTGS system, and final settlement of netting system and securities settlement system transactions takes place in the RTGS system, irrespective of the amount involved. The chart in the margin shows turnover and transactions in Iceland's main payment intermediation infrastructure, both in volume terms and relative to GDP, plus banknotes and coin in circulation.

As the chart illustrates clearly, the transaction volume in the RTGS system is relatively low in proportion to its value. On the other hand, other systems are based on a large number of transactions, particularly payment card activity.

The Central Bank of Iceland and its subsidiary, Greiðsluveitan, are the owners of the RTGS system, the netting system, the RÁS system, and the payables pool.

For years prior to the financial crisis, the supply of cash in circulation remained virtually unchanged at just under 1% of GDP. Cash in circulation surged in early October 2008, however, spurred by depositors' fears of losing their deposits. Banknotes in circulation increased by about 20 b.kr. in the first nine days of October 2008, bringing cash in circulation to 35.3 b.kr., as compared with just under 13 b.kr. before the crash. By year-end 2008, the circulation of cash had tapered off again, as can be seen in Chart VII-5. However, it has risen steadily since then, to almost 41 b.kr., or just under 2.5% of GDP, as of end-April 2012.

It is unlikely that the increase is due solely to an increased share of banknotes in actual payment intermediation. The vast majority of the 13 b.kr. in circulated cash prior to the crisis was probably due to actual payment intermediation. A comparable amount today, assuming about 1% of GDP, would be about 16 b.kr. How, then, can the 25 b.kr. surge in cash in circulation be explained?

Actually, it is impossible to explain the change with complete certainty. It is well known that financial crises and other disasters trigger a spurt in demand for banknotes and coin, and this doubtless explains a portion of the increase in Iceland: depositors were afraid of losing their deposits and/or not having unrestricted access to them.

At the beginning of the crisis, the Icelandic authorities declared that all deposits in Icelandic financial institutions were guaranteed, and Icelandic payment intermediation has functioned normally throughout. The Government's declaration probably played a role in ensuring that outflows of banknotes did not rise even higher at the beginning of the crisis, as is suggested by the reversal of a large part of the increase towards the end of 2008.

But what has caused the constant rise in cash outflows since 2009? In part, it stems from a change in consumer behaviour, which can be seen in smaller increases in payment card use than could otherwise be expected. Presumably, investors view banknotes as a more valid means to store valuables than they did previously. Low deposit interest and increased taxes, including the introduction of (and increase in) the wealth tax and the reduction of the taxation threshold, could also explain the trend in part. The linkage of public benefits to income and asset levels may play a role as well. The rise in banknote withdrawals towards the end of the year tends to support this interpretation. It should be emphasised, however, that owners of cash are required to give account to the authorities of their cash holdings as well as other monetary assets. Finally, it is impossible to rule out the possibility of a rise in black-market operations.

Target2-Securities (T2S)

In previous issues of *Financial Stability*, the Bank has reported on the European Central Bank's (ECB) plans to develop and implement a new, centralised, multi-currency securities settlement system, called Target2-securities (T2S). The ECB invited the Central Bank of Iceland and other central banks outside the euro area to link their currencies to the system, which is to be phased into operation beginning in 2015.

At the beginning of April, the ECB requested the Central Bank's assistance in preparing a draft contract for the Bank's participation in the system. With reference to current legislation restricting foreign exchange transactions and the views expressed by market participants, financial institutions, and the ISD, the Bank decided not to participate in T2S at this juncture. The Bank will continue to follow developments in this area and will reassess the possibility of T2S membership in light of future developments.

Appendix I

New Payment Services Act and proposed legislation on issuance and handling of electronic money[1]

The Payment Services Act, no. 120/2011, incorporated the provisions of the EU Payment Services Directive, no. 2007/64/EC (PSD), into Icelandic law on the basis of the European Economic Area (EEA) Agreement. Parliament is currently considering a bill of new legislation on the issuance and handling of electronic money, based on EU Directive no. 2009/110/EC (the E-Money Directive II, or EMDII). These two Directives are the product of a comprehensive review of joint European legislation in the field of electronic payment intermediation. This Appendix summarises the substance of the Directives and the probable effects of a changed statutory environment on Icelandic payment services providers and on electronic payment intermediation throughout Europe.

The Payment Services Act and the PSD

On 1 December 2011, the new Payment Services Act, no. 120/2011, entered into force, incorporating into Icelandic law the provisions of the European Payment Services Directive, no. 2007/64/EC (PSD), on the basis of the EEA Agreement. The Act harmonises the requirements made of payment services providers as defined by law[2] and sets forth rules concerning new providers' access to the payment services market. The Act applies, among other things, to the execution of payments (including point-of-sale payment and payment via online banking or ATM), issuance and use of payment instruments (such as payment cards), and acquiring.

Chapter III of the Act contains detailed provisions on information disclosure in relation to the provision of payment services, with the aim of enabling payer and recipient to identify the payment. Chapter IV contains various basic rules for execution of payment, use of payment instruments, and liability in case of unauthorised payments.

In accordance with the joint European regulatory framework, only those defined *as payment service providers* in the sense of the Act are authorised to provide payment services in Iceland. The following parties will probably be most active in the payment services market in the future:

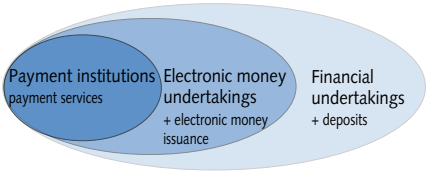
a) Financial undertakings licensed to take deposits or other repayable funds from the public and to grant loans on their own account (currently commercial banks, savings banks, and credit undertakings);

1. The author, Sigríður Rafnar Pétursdóttir, is a lawyer with the Central Bank of Iceland Payment Systems Department.
2. The term *payment services* is defined in Article 4 of the Act; however, Article 2 should also be considered in its interpretation (negative scope). Payment services is narrower in scope than payment intermediation.

b) Electronic money institutions;[3] and
c) Payment institutions.[4]

Of the above parties, financial undertakings have the broadest-based authorisations, in accordance with EEA rules. In addition to taking deposits, they are authorised to issue electronic money and provide payment services, as well as providing a variety of other financial services as provided for in the Act on Financial Undertakings, no. 161/2002, and other legislation. It can be assumed that, in the near future, *electronic money institutions* will be granted the second-most extensive operating authorisations in the field of electronic payment intermediation in Iceland, as is the case elsewhere in the EEA. They will be authorised to issue electronic money and provide payment services.[5] Finally, *payment institutions* constitute a new category of service provider subject to the provisions of Chapter II of the Payment Services Act, no. 120/2011. Payment institutions have narrower operating authorisations than financial undertakings and electronic money institutions. The differing operational authorisations of these three types of payment service providers are reflected in the EEA rules specifying the requirements made of the activities concerned. Less risk results in less stringent requirements, particularly as regards prudential rules governing the providers' activities and minimum capital requirements.

Chart 1
Payment service providers



Source: Central Bank of Iceland.

Payment systems are essential to modern payment intermediation. In spite of the PSD's declared objective of providing for a more open payment services market, neither it nor the newly passed Act assumes equal access to payment systems by all service providers. Different types of payment systems are governed by different rules, particularly as regards access. With the passage of Act no. 120/2011, Icelandic law now provides for a three-pronged classification of payment systems:

1. Systemically important payment systems, which have been recognised and reported as such to the EFTA Surveillance Authority (ESA) in accordance with the Act on the Security of Transfer Orders in Payment Systems, no. 90/1999.[6]
2. Internal payment systems governed by the Financial Supervisory Authority (FME) Guidelines on Information Systems Operated by Parties Subject to Supervision, no. 1/2005.[7]

3. Electronic money institutions according to the new E-Money Directive (EMDII), discussed in greater detail below.
4. According to Article 8, Item 14 of the Act, other payment service providers are: currency trading centres and transfer services for money or other valuables, pursuant to the Act on Measures to Prevent Money Laundering and Terrorist Financing, no. 64/2006; post office giro institutions licensed to operate according to the Postal Service Act, no. 19/2002; the European Central Bank and national central banks of EEA states when not acting in their capacity as monetary authority or other public authorities; and governmental authorities when not acting in their capacity as public authorities.
5. The implementation of the new E-Money Directive, no. 2009/110/EC (EMDII) is underway in Iceland. The substance and planned implementation of the EMDII are discussed below.
6. The Central Bank of Iceland RTGS system and the Greiðsluveitan ehf. netting system. Participation in such payment systems is restricted primarily to financial undertakings.
7. The service and online banking systems of individual financial undertakings/groups. It must be assumed that the owners of the payment systems falling into this category will have control over them. FME Guidelines no. 1/2005 could possibly apply to payment systems other than those falling into this category.

3. Other payment systems, which fall under Article 7 of Act no. 120/2011.[8]

Act no. 120/2011 is the first comprehensive Icelandic act of law in the field of payment services. The payment services field is also governed by provisions found in other acts of law, and further evolution of the statutory framework is foreseeable.

The EMDII Directive and proposed new legislation on issuance and handling of electronic money

The Minister of Economic Affairs recently presented to Parliament a bill for new legislation on the issuance and handling of electronic money (see Parliamentary Document 1141, Case no. 708 at the 140th legislative session, 2011-2012). The bill proposes incorporating the new EU Electronic Money Directive, no. 2009/110/EC (EMDII) into Icelandic law. The new Directive supplants the previous one on the same topic, which was incorporated into Icelandic law with Chapter IX of the Act on Financial Undertakings, no. 161/2002.

Electronic money institutions are one type of financial undertaking defined in current legislation. No such undertaking will be operating in Iceland on the basis of a licence from the FME, however.[9] If the above-mentioned bill of legislation is passed unamended, electronic money institutions will no longer be classified as one type of financial undertaking but will be defined as a type of provider of financial services, like payment institutions.

The EMDII provides for broader operating authorisations of electronic money institutions than the current provisions, and it sets forth more detailed rules on the issuance and handling of electronic money than did its predecessor. The term *electronic money* is now used and defined as in the PSD.

According to the bill of legislation, in addition to electronic money institutions, financial undertakings licensed to take deposits and other repayable funds from the public and grant loans on their own account, central banks and, under certain circumstances, government authorities, are *considered issuers of electronic money*.[10] Parties other than these will be barred from such issuance in Iceland.

Issuance of electronic money has been growing worldwide in recent years.[11] The popularity of electronic money is due in part to the fact that while financial undertakings generally make specific liquidity requirements of their customers, not all customers meet those requirements. EEA rules make a clear distinction between deposits and electronic money. For instance, according to the EMDII, it is prohibited to calculate interest or provide other benefits to holders of electronic

8. For instance, the Icelandic Banks' Data Centre debit card system. All providers of payment systems shall be guaranteed the right to participate in payment systems falling under Article 7 of Act no. 120/2011. However, it is permissible to set substantive conditions for participation, such as requirements concerning operational security and collateral.
9. A current list of supervised entities can be found on the website of the Financial Supervisory Authority: www.fme.is.
10. Cf. Article 4, Item 4 of the new bill of legislation on the issuance and handling of electronic money.
11. See, for instance, comparison table 10a, prepared by the Bank for International Settlements (BIS). The table can be found on the BIS website: http://www.bis.org/publ/cpss99.htm.

money based on the length of the holding period. The constantly expanding market for electronic money is cause for concern among official financial supervisors worldwide, as regards measures to combat money laundering and other aspects of organised crime. In this context, increased emphasis on measures aimed at electronic money institutions and payment institutions can be expected in the near future.

Probable impact of regulatory changes on the Icelandic payment card market

Until now, the regulatory environment for payment services and issuance of electronic money has been more stringent in Iceland than elsewhere in Europe. Before the Payment Services Act entered into force, the issuance and administration of payment cards[12] required an operating licence pursuant to Article 3, Paragraph 1 of the Act on Financial Undertakings, no. 161/2002. In other words, the provision of such services was restricted to financial undertakings. The issuance and administration of electronic money is still subject to an operating licence under that same provision. Therefore, currently operating Icelandic payment card companies are financial undertakings licensed as credit undertakings according to Article 4, Paragraph 1, Subparagraph 3 of Act no. 161/2002.

If the bill of legislation on the issuance and handling of electronic money is passed unamended, all of the substantive provisions in Icelandic law concerning electronic payment intermediation will be placed in special legislation other than Act no. 161/2002 (that is, the Payment Services Act, and the new law on the issuance and handling of electronic money). However, financial undertakings will be authorised, as before, to provide payment services and issue electronic money – now in competition with other payment service providers and issuers of electronic money.

The foundation for the current activities of Icelandic payment card companies will henceforth be found in legislation other than Act no. 161/2002. Changes will probably be made to the operating licences or operations of currently operating Icelandic payment card companies in the near future. It has been mentioned previously that the current regulatory framework governing payment service providers is and will continue to be onerous to varying degrees, as electronic money institutions and payment institutions will be subject to licensing and supervision by the FME, as other financial undertakings are.

Implementation of the PSD and the EMDII: the impact in the EEA

The implementation of the PSD and the EMDII will undoubtedly stimulate competition in the field of electronic payment intermediation. The Directives authorise payment service providers and issuers of electronic money to conduct cross-border operations throughout the EEA.[13]

12. It should be noted that only prepaid payment cards are considered electronic money according to EEA regulations.

13. It should be noted that the proposed legislation on the issuance and handling of electronic money assumes that the desired amendments will be made to the Payment Services Act as regards the provision of cross-border payment services.

It should be noted that Iceland's current regulatory environment for foreign exchange hinders free cross-border movement of capital – and therefore payment services – to some extent. This situation is temporary, however, and was imposed in an emergency. The authorities are determined to lift the capital controls, but it is entirely uncertain when conditions will allow it. The positive competitive effects of the PSD and the EMDII – providing users of payment services and holders of electronic money in the relevant member states with more a greater variety of services – will not come fully into play in Iceland in the immediate future.

It will be interesting to keep abreast of financial undertakings' competitive position versus electronic money institutions, on the one hand, and payment institutions, on the other, in the payment services market of the future. Broader and more complex regulatory instruments govern financial undertakings' operations, requiring larger and more costly superstructure than is needed for the latter two types of institution. In other words, it is likely that opportunities will arise for other providers to offer payment services on more advantageous terms than financial undertakings offer. The provision of payment services is not an inseparable part of core banking operations, which centre on deposits and lending. In this context, it should be noted that EEA rules do not assume unlimited deposit guarantees, and presumably the distribution of capital among more types of payment service provider will result in more diversified risk for users of the services.

As regards electronic money, it will be interesting to track developments in its use in Iceland versus Icelandic credit cards (which are billed retroactively) and debit cards (which provide for immediate payment from the user's account).

It can be expected that new domestic providers will commence operations as a result of the changed legal framework. Electronic payment intermediation is an expanding field in technologically sophisticated Iceland, and it will inevitably grow by leaps and bounds in a new statutory environment. Technology is advancing constantly, and provision of cross-border electronic services is becoming ever easier. Growth opportunities are sure to abound in the field as a result of cross-border operating authorisations. The same rules will apply in all EEA member states,[14] making it much easier than before for companies to establish activities outside their home country.

In the future, foreign companies will doubtless penetrate the Icelandic payment services market in the same way. The FME has already been notified by European providers of plans to offer cross-border payment services, although, as is mentioned above, the capital controls throw up a temporary barrier to potential service providers, both domestic and foreign. In the future, it is clear that international corporate giants with all the necessary infrastructure, such as Google, Apple, and Facebook, will probably have a competitive advantage in this field if and when they decide to set their sights on it.[15]

14. Both Directives are so-called "full harmonisation" instruments, which means that permissible deviations from substantive provisions by member states incorporating them into national law are extremely limited.

15. The last of these companies has already begun penetrating this market with so-called *Facebook Credits*.

Conclusion

It is vital that all participants in the Icelandic financial market look to the future and consider the short- and long-term implications of the Payment Services Act, no. 120/2011, and the proposed legislation on the issuance and handling of electronic money. Not only is it likely that new domestic operators will commence activities under the new legal framework, but foreign competitors will probably enter the field as well, on the basis of joint EEA regulations. From a technological standpoint, the cross-border provision of electronic services will steadily become easier, and a greater variety of services will be offered.

It is important that official supervision of electronic payment intermediation be strong and effective and that the various supervisory bodies collaborate closely. Technological advances call for broader and more powerful supervisory oversight than has been needed hitherto. It must be ensure that joint European regulations fulfil the most stringent requirements for supervision of financial activities, not least where cross-border operations are concerned.

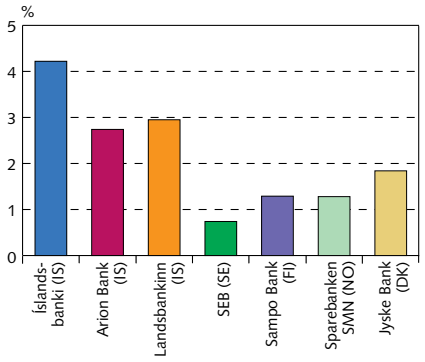
The nature of electronic payment intermediation is such that a constant stream of innovation and development is inevitable, necessitating regular review of the pertinent regulatory instruments. Holders of legislative and executive power must also ensure overall consistency when adopting regulatory instruments in this area, as in others. This is an important and highly specialised field within the financial system, and it is critical to ensure that both the public sector and the operators in the market understand it thoroughly.

Appendix II

Nordic comparison

Chart 1

Interest rate differential 2011[1]

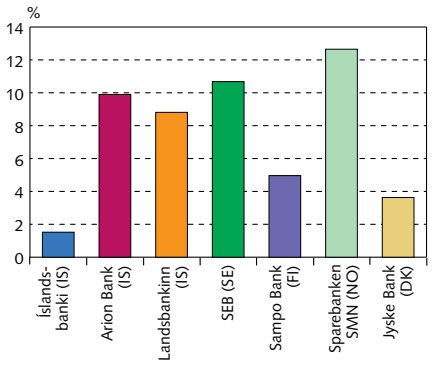


1. Interest rate differential = net interest income /average of total assets. Íslandsbanki's large net interest margin is due largely to a difference in financial reporting methods used by the banks; Íslandsbanki uses a different method for redemption of interest income from transferred loans.

Sources: Banks' annual accounts.

Chart 2

Return on equity 2011[1]

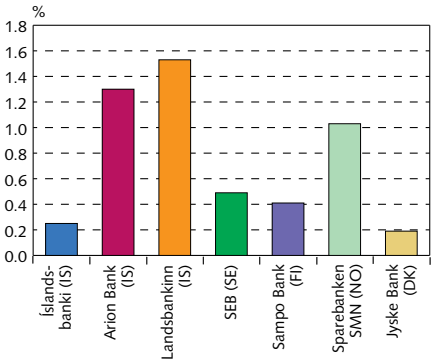


1. ROE = net earnings/average of total equity. Landsbankinn profited strongly on asset sales and the write-up of its unlisted equity securities during the year. An insigificant share of the profit of Íslandsbanki and Arion Bank derives from the same source. Write-offs of goodwill are included in Íslandsbanki's profit.

Sources: Banks' annual accounts.

Chart 3

Return on total assets 2011[1]

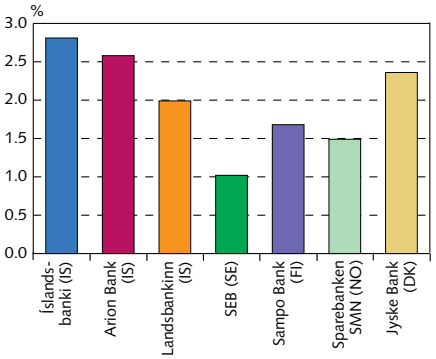


1. ROA = net earnings/average of total assets. Landsbankinn profited strongly on asset sales and the write-up of its unlisted equity securities during the year. An insigificant share of the profit of Íslandsbanki and Arion Bank derives from the same source. Write-offs of goodwill are included in Íslandsbanki's profit.

Sources: Banks' annual accounts.

Chart 4

Cost-to-assets 2011[1]

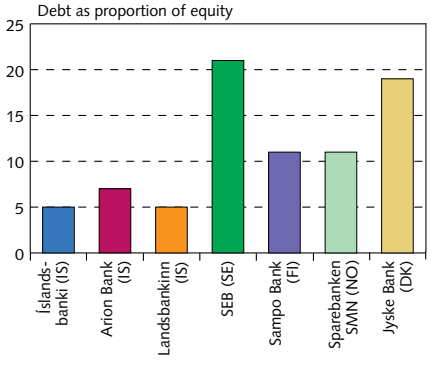


1. Cost-to-assets = operating expense/average of total assets. Íslands-bank's operating expenses do not include write-offs of goodwill.

Sources: Banks' annual accounts.

Chart 5

Leverage ratio 2011[1]

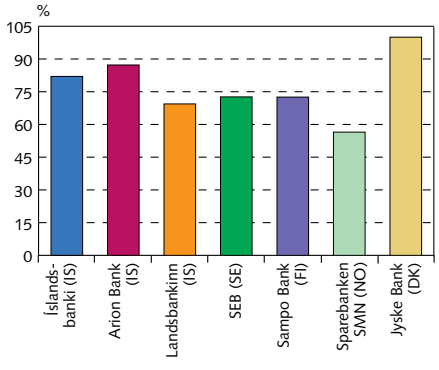


1. Leverage ratio = debt/equity.

Sources: Banks' annual accounts.

Chart 6

Deposit-to-loan ratio 2011[1]



1. Deposit-to-loan ratio = deposits from customers/loans and receivables to customers.

Sources: Banks' annual accounts.