FINANCIAL STABILITY

2017 • 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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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

Favourable economic conditions and resilient financial institutions

The foundations of financial stability have been strong in the recent term. The external conditions of the economy have seldom been better, as can be seen in a sizeable current account surplus, a positive net international investment position, and large foreign exchange reserves. Households' situation has continued to improve with a strong labour market and rapid growth in real wages. Firms' position is also favourable at present, although there are uncertainties in certain export sectors, owing to rising domestic costs and the appreciation of the króna.

Households and businesses have taken advantage of the favourable economic situation and strengthened their balance sheets. The ratio of private sector debt to income has continued to fall, and equity ratios have risen, as lending growth has been modest – below GDP growth – and default levels are low in historical context.

The buoyant economy and the strong position of borrowers are reflected in financial institutions' position, which is sound at present. The banks' capital is well in excess of Financial Supervisory Authority requirements, and their liquidity is strong as well. The financial system is therefore well equipped to withstand economic setbacks.

At present, risks in the financial system centre on increased demand pressures, the real estate market, rapid growth in the tourism industry, and a changed landscape following the removal of capital controls.

Further ahead, increased demand pressures could lead to financial imbalances if they trigger overheating and/or end with an abrupt turnaround. One of the clearest signs of such pressures can be seen in the housing market, where prices have risen sharply in the recent term because new construction has been unable to keep pace with demand stemming from population growth and the tourism boom. Prices are now high in historical context and appear to have risen in excess of wage growth in the past few months. The risk is that high property prices will give rise to increased indebtedness, which will make households and firms more vulnerable to potential economic headwinds.

Lending to tourism companies has increased markedly in the recent past, in line with increased investment in the sector. There are always risks associated with strong lending growth, and it is important to monitor them closely. On the other hand, lending has increased from a low point predating the tourism boom. At the end of 2016, lending to the tourism industry accounted for 8.5% of loans granted to the private sector. *Financial Stability* 2016/2, published last autumn, contained stress test results showing that the banks' strong capital position enables them to withstand a significant shock from the tourism industry and the potential loan losses that such a shock would entail.

In mid-March, virtually all of the remaining capital controls on households and businesses were lifted. This was the third stage in the liberalisation process that began last autumn. The measures have proceeded smoothly, and risks to financial stability have not materialised during the liberalisation process. This has reduced the level of assessed risk that was seen a year ago. With the liberalisation of the capital controls, the domestic financial system has entered an environment that could bring new risks with it. The domestic economy and financial markets will be more vulnerable to changes in financial conditions abroad. Risk appetite could increase in this new environment. The banks' readier access to

foreign credit markets could tempt them to grant foreign-denominated loans to resident borrowers without foreign income or assets. Furthermore, these new conditions, together with the changes in the banks' ownership structure that may be in the offing, could exacerbate the pressure to increase the banks' return on equity by reducing their resilience more than is prudent, through large dividend payments and a weaker composition of capital.

A sound regulatory framework and strong supervision are needed to lean against these tendencies. In this context, there have been numerous developments in recent years, including statutory amendments, new rules, and a new institutional framework for financial stability with the establishment of the Financial Stability Council and the Systemic Risk Committee, which works for the Council. The financial system has thereby been prepared in a number of ways for freer movement of capital. In 2012, the Central Bank of Iceland issued a report entitled *Prudential Rules Following Capital Controls*. In that report is a list of measures intended to prevent risks related to the banks' foreign balance sheets from escalating after liberalisation, as they did during the prelude to the financial crisis. Many of the measures listed in the report have already been implemented, such as liquidity coverage ratios and net stable funding ratios in foreign currency. However, no statutory amendments have yet been made to authorise restrictions on foreign-denominated lending to domestic borrowers without foreign income or assets that could protect them against the exchange rate risk associated with such loans. It is vital that the statutory basis for such rules be put in place as soon as possible and that decision-making procedures on the introduction of such restrictions be designed so as to enhance the likelihood that the rules will be activated before excess risk builds up.

I Key risks

An assessment of financial stability must take into account two major factors: risks and resilience, or the ability to withstand risks. The financial institutions' operating environment has been favourable in the recent past, and there are no obvious signs of imminent systemic risk. There are a number of factors, however, that merit close monitoring.

The tourism industry has grown by leaps and bounds and is now Iceland's largest export sector. Its growth has brought with it substantial foreign currency inflows, which, together with other inflows, have strengthened the króna in spite of large-scale foreign currency purchases by the Central Bank. There is always the risk that such rapid change will be accompanied by volatility and that adjusting to a new equilibrium will not be entirely smooth. Tourism has also put increased pressure on house prices. Demand for housing far outstrips the available supply, and there is the risk that credit growth will soar in the wake of steep increases in house prices. In the long term, overheating in the economy could spread to the financial system, although there are no signs of excessive credit growth yet. It should also be noted that although it is positive that the banks have good access to foreign credit markets and terms have improved, this opens up the possibility that unhedged resident borrowers will take foreign-denominated loans. If such loans are granted on a large scale, it could undermine the stability of the financial system.

At present, none of these risks poses a threat to financial stability, but they could evolve into systemic risk. The financial system is strong at present: capital ratios are high, liquidity is sound, and default is low, as borrowers' position is good. The banks are therefore well equipped to withstand shocks.

Table 1 Key risks[1]

Risk factor	*Current situation and changes from previous report*[2]
Tourism	↗
Real estate market	↗
Foreign-denominated lending to unhedged borrowers	→

Imminent systemic risk
Probable systemic risk
Possible systemic risk

1. The Central Bank's Financial Stability Department assesses the weaknesses in the financial system and the risk of potential financial shocks that could affect the economy. 2. The colours indicate the assessment of risk. Consideration is given to the probability that the risks will materialise and the impact from them if they do. The arrows indicate whether the risk has increased since the publication of the last *Financial Stability* report.

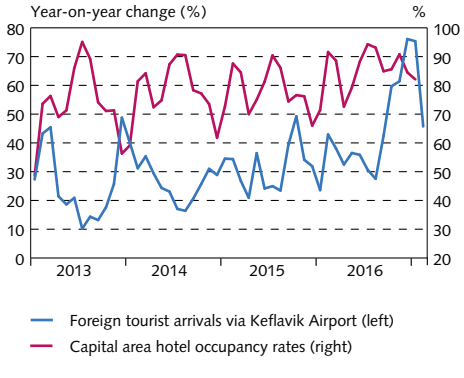
Tourism

Increase in non-peak traffic

Tourism has become one of the cornerstones of Iceland's economy and now generates more foreign exchange revenues than any other sector. Its growth in recent years – and particularly in the past few months – has been extremely rapid. In 2016, nearly 1.8 million foreign tourists arrived in Iceland via Keflavík Airport, an increase of 40% year-on-year. The year-on-year increase outside the peak season has been enormous, at over 60% in November 2016 and more than 75% in December and January.

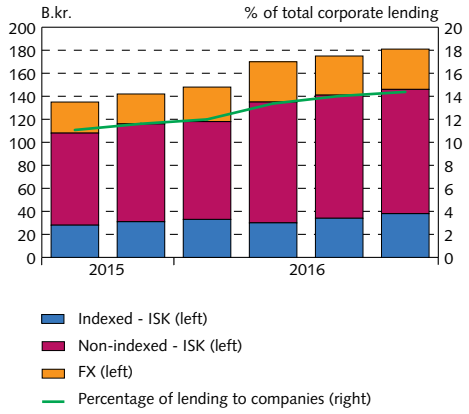
This year, 27 airlines are offering flights to and from Keflavík, the same as in 2016, while the number of destinations is a record-high 78. More frequent air travel to Iceland and an increased number of destinations have enabled tourists from more countries to visit Iceland. There has been a striking increase in tourist arrivals from North America. The number of American tourists rose by 70% year-on-year in 2016 and the number of Canadian tourists by nearly 80%.

Chart I-1
Number of foreign tourists and hotel occupancy rates



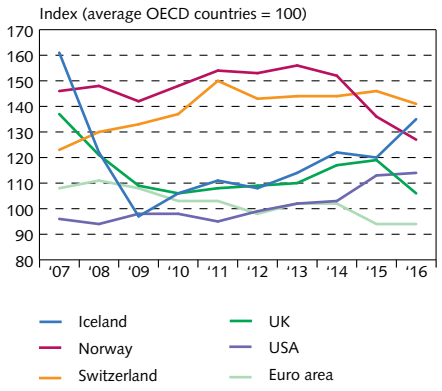
Sources: Icelandic Tourist Board, Statistics Iceland.

Chart I-2
Commercial bank lending to the tourism industry



Source: Central Bank of Iceland.

Chart I-3
Relative price level



Source: OECD.

Risks to the financial system are manageable

Loans to tourism companies account for just over 14% of the commercial banks' total corporate lending. The year-on-year growth rate was 27% in 2016. Tourism is now the third-largest industry class in the banks' loan portfolios, after real estate companies and fisheries. Loans to the sector constitute about 8.5% of total commercial bank lending to all customers. The figures above show that loans directly related to the tourism industry are not yet dominant in the commercial banks' accounts, yet the credit risk associated with them could be relatively significant. If there is a sharp contraction in the sector, economic conditions could deteriorate and loan losses could increase in other sectors as well, as the Central Bank's 2016 stress test indicated.[1] In some instances, definitions of what is classified as a loan to the tourism sector could differ from one bank to another, but this does not affect the overall picture.

Even though the rate of growth in commercial bank lending to tourism companies is nowhere near the rate of growth in tourist arrivals, the sector is booming. This upswing is financed to some extent outside the banking system, by individual institutional investment funds, or through the establishment of limited partnerships for specific investments. In many cases, the pension funds are primary investors.

Crowding-out effect on other export sectors and impact on house prices

From 2014 through 2016, a number of variables related to tourism nearly doubled: foreign tourist arrivals via Keflavík Airport, total foreign debit and credit card use in Iceland, and the surplus on services trade. With such a swift rate of growth, the risk of growing pains always exists. Tourism-generated foreign currency inflows and other inflows into the foreign exchange market have contributed to the appreciation of the króna in recent months. Thus far, the tourism sector is less sensitive to such exchange rate movements than other export sectors are, and in tourism the impact probably comes to the fore with a significant time lag. This could have a strong crowding-out effect on other export sectors.

The average hotel occupancy rate in the greater Reykjavík area was 87% in 2016, up from 79% in 2015. There is a severe shortage of hotel rooms, and it is unrealistic to expect to accommodate all of the tourists who visit the country without the sharing economy. The resulting contagion in the real estate market is obvious. Growth in tourism has put pressure on all of Iceland's infrastructure.

Because of growth in the tourism sector, the domestic economy is seeking a new equilibrium. If fluctuations in tourism are excessive, this rebalancing could prove volatile, and the financial system must be prepared for it.

Real estate market

Rapid rise in house prices could indicate growing systemic risk

House prices in greater Reykjavík have risen steeply in the recent term. This could contribute to the accumulation of systemic risk; therefore,

1. See *Financial Stability* 2016/2.

supervisory authorities must keep abreast of developments in the market.

The magnitude of the risk stemming from the real estate market depends on a number of factors: how fast prices are rising, whether debt is growing as well, whether underlying income growth is sustainable, and many others. Rising house prices are commonly associated with rapid growth in debt, and the two together exacerbate the risk facing households, construction firms, and lenders. Research shows that if the two increase in tandem, the subsequent contraction is more severe and a financial shock becomes more likely.[2]

Growing demand, but limited supply …

House prices have risen much more rapidly than the general price level in the recent past. Real house prices have risen uninterrupted since 2011, and the pace has picked up in recent months. In February 2017, the twelve-month rise measured 18.6%. This upswing has occurred largely because supply is relatively inelastic and lags behind demand.

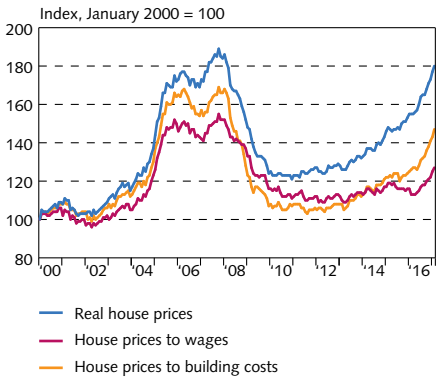
Demand for housing is determined by population, disposable income, wealth, and interest rates, among other factors. Most of these have stimulated demand in recent years. Disposable income has risen by a fourth in the past four years, and the population grew by 5.1% between 2013 and 2016, including 2.6% due to inward migration. Immigration was one of the apparent explanations for changes in house prices between 2004 and 2010.[3]

After a strong rise during the pre-crisis period, residential investment contracted sharply, but housing demand shrank as well, owing to declining real wages and net emigration. Investment took some time to recover but is now on the rise. The ratio of house prices to building costs has risen in the past six years, indicating the profit potential in new residential construction. According to the Federation of Icelandic Industries' survey of new construction, carried out in February, the supply of new housing in the capital area can be expected to rise for at least the next two years.[4]

… and rising tourist numbers exacerbate the mismatch between supply and demand

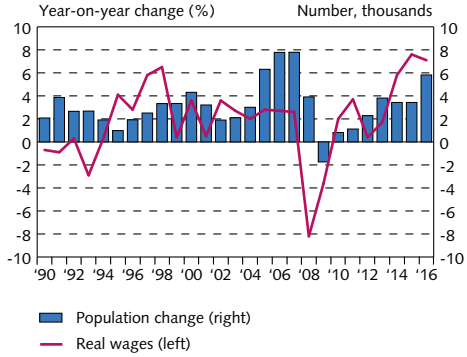
The number of flats listed for sale has fallen steadily over the past seven years, while the average time-to-sale has grown shorter. The time-to-sale has been under three months for a year and a half and was only five weeks at the end of 2016. In spite of this, turnover in the market is rising, which is a sign of a mismatch between supply and demand. At the same time that demand has increased in the private housing market, in line with rising income and population growth, demand for hotel rooms has grown even faster, stimulated by the

Chart I-4
House prices[1]



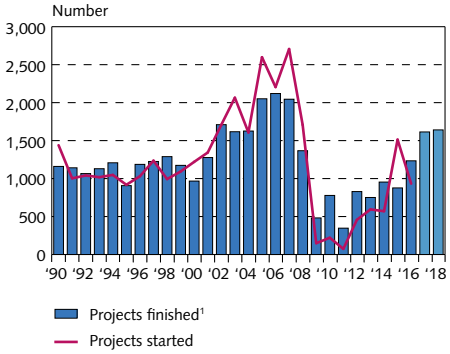
1. House price index relative to CPI, wage index, and building cost index.
Sources: Statistics Iceland, Register Iceland, Central Bank of Iceland.

Chart I-5
Population change and real wages[1]



1. Net assets excluding assets in pension funds.
Sources: Statistics Iceland, Central Bank of Iceland.

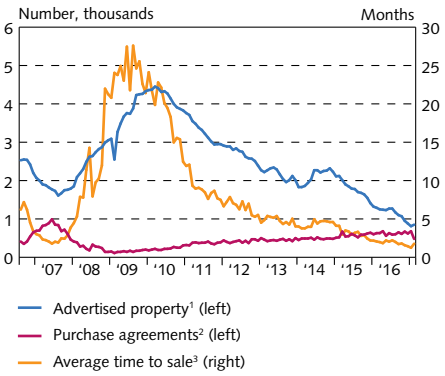
Chart I-6
Residential housing construction in the capital area



1. Projects at building stages 4 to 7 are projected to finish in 2017 and projects at building stages 2 to 3 to finish in 2018, based on their status in February 2017.
Sources: Statistics Iceland, The Federation of Icelandic Industries.

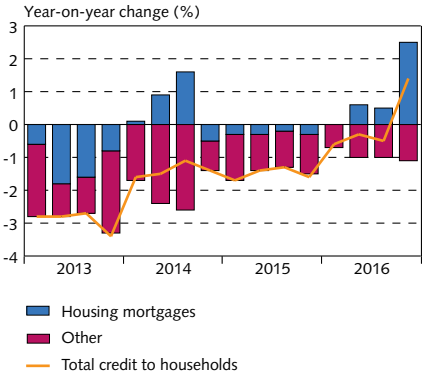
2. See, for example, Crowe, C., G. Dell'Ariccia, D. Igan, and P. Rabanal, (2013), How to deal with real estate booms: Lessons from country experiences, *Journal of Financial Stability*, Vol. 9, Issue 3.
3. Lúdvík Elíasson (2017), Icelandic boom and bust: immigration and the housing market, *Housing Studies*, 32(1), pp. 35-59.
4. http://www.si.is/media/_eplica-uppsetning/Talning-SI-a-hofudborgarsvaedinu-2017-og-spa-til-2020--1-.pdf

Chart I-7
Residental property sales



1. Monthly average of advertisements on Morgunbladid real estate website. The count is carried out by property code to avoid a repeat count of the same property. 2. Based on the date of puchase. Seasonally adjusted. 3. The average time to sale is the length of time (in months) that it takes to sell advertised property divided by the turnover for the month in question.
Sources: Morgunbladid Real Estate Website (mbl.is), Registers Iceland, Central Bank of Iceland.

Chart I-8
Credit to households, real growth[1, 2]
Contribution from residential mortgages



1. Claim value, adjusted for Government debt relief measures.
2. Percentages signify total credit growth due to growth in each subcategory.
Sources: Statistics Iceland, Central Bank of Iceland.

tourism boom. The construction industry's production capacity has been used in part to build hotels, perhaps causing delays in new residential construction. The increased tourist traffic to Iceland probably plays a relatively large role in the past few years' rise in real estate prices, on both supply side and demand side. The shortage of hotel space has been addressed to some degree with short-term private rentals of both rooms and entire flats. In February 2017, over 1,500 flats in Iceland were actively listed on Airbnb.[5] These properties are no longer in use as private residences, and the supply has therefore contracted accordingly. This is particularly the case with small flats near the city centrum. Private demand for residential housing has shifted towards the periphery of the greater Reykjavík area, where lots are cheaper and flats can be built more quickly and at lower prices than in built-up neighbourhoods. Whether the impact of tourism on the housing market increases risk in the financial system will depend to a degree on how lasting the sector's growth is. If tourism suffers a setback, the effect on the housing market could be significant.

Debt has not yet grown in line with price increases

The more heavily leveraged real estate purchases are in a high-priced market, the weaker borrowers and lenders will be if prices fall. A steep and rapid rise in real estate prices combined with growth in residential mortgage debt therefore creates the risk of instability in the financial system. Although residential mortgage lending has picked up, the ratio of household debt to GDP has fallen since 2010. The Government's household debt relief measures lowered households' mortgage debt by nearly 105 b.kr. Much of the decline occurred in early 2015 and 2016, most of it as a contraction in loans from the Housing Financing Fund. In Q4/2016, household debt measured about 78% of GDP, down from the peak of 120% seven years earlier. All of this has improved households' equity and lowered their loan-to-value ratios (for further discussion, see Box II-5). Growth in real household debt is driven by mortgage debt, however, while other types of debt, overdrafts in particular, have declined. Net new residential mortgage lending began to rise in mid-2015. This could be the first indication of increased household mortgage lending in the wake of price increases. As yet, however, growth in mortgage debt remains moderate.

Risk is limited in the short run but could escalate quickly

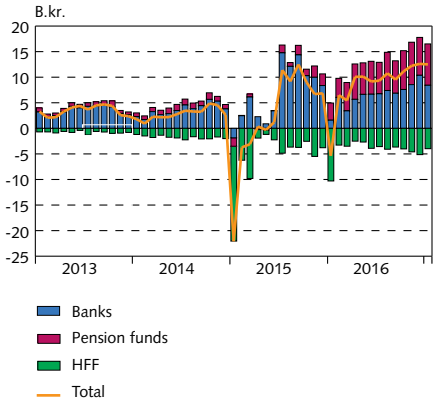
Even though real estate prices in greater Reykjavík have risen rapidly in the recent term, it appears unlikely that the associated financial system risk will cause instability in the next few years. In addition, loan-to-value ratios for new mortgages are not abnormally high in historical or international context. The recent increase in residential investment should keep housing inflation under control further ahead.

Another mitigating factor is that the rise in house prices, albeit rapid, has not outpaced disposable income growth until very recently. Nevertheless, it should be borne in mind that even if house prices

5. Entire houses or flats. Including separate rooms and shared spaces, active listings totalled 2,128.

develop in line with disposable income and other important economic indicators, it would be imprudent to assume that the uptick is permanent. Fluctuations in disposable income could turn out temporary, and the rapid rise could be unsustainable. Leveraged real estate purchases based on unsustainable disposable income can result in defaults when income levels normalise. It should be noted that under conditions like those currently prevailing – i.e., rapid real wage growth, increased collateral capacity, and a generally favourable outlook – debt levels can rise excessively in a relatively short time. This would push prices even further upwards, particularly if supply is inelastic enough to prevent market prices from normalising quickly. The impact of tourism on the housing market increases the risk of such a development. At present, measures designed to boost supply to match demand, together with measures to contain demand, could expedite the market's return to equilibrium and mitigate price volatility. In the coming term, such measures could impede the development of the systemic risk that the real estate market could pose for households and the financial system.

Chart I-9
New mortgages by lender



Source: Central Bank of Iceland.

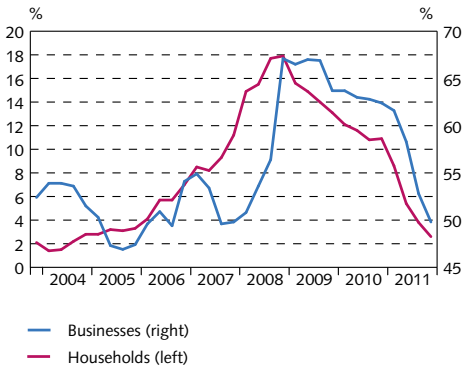
Risk factors: Foreign-denominated lending to unhedged borrowers

Domestic banks' access to foreign capital markets and the borrowing terms offered to them there have improved in the recent term, which should enable them to grant loans in foreign currency at better terms than before. Cheap foreign credit was one of the main drivers of Iceland's pre-crisis lending boom, with foreign-denominated and exchange rate-linked lending increasing markedly. The collapse of the króna in 2008 had a severely negative impact on the financial position of unhedged borrowers with exchange rate-linked or foreign-denominated loans.

The banks' lending rules are now much more stringent than they were before the crisis, and foreign loans are granted almost exclusively to borrowers with foreign income and/or assets. The share of foreign loans to the total credit stock has fallen – from 31% at the end of 2014 to just over 27% as of year-end 2016. At constant exchange rates, however, there has been an increase in the share of foreign loans, albeit a small one. In most cases, Icelandic households have their assets and income in Icelandic krónur and are therefore unhedged against exchange rate risk. The same is true of municipalities and domestic firms whose assets and/or revenues are in krónur. The banks' easier access to foreign credit at improving terms could tempt them to expand their balance sheets, which in turn could prompt unhedged borrowers to seek out lower interest rates. Risk appetite could therefore increase, and if such loans are granted on a large scale, it could undermine the stability of the financial system.

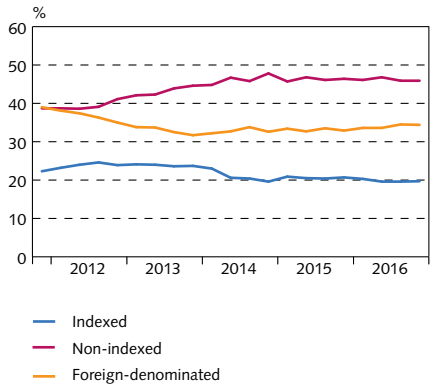
The Central Bank sets rules on the banks' foreign funding ratios so as to ensure that foreign-denominated loans and other assets are financed with foreign funding for one year or longer. If foreign-denominated loans are granted to unhedged borrowers, however, the foreign exchange risk shifts to the borrowers, and the rules will not prevent the development of a situation comparable to that during the

Chart I-10
Foreign currency loans as % of total loans



Source: Central Bank of Iceland.

Chart I-11
DMB loans by type[1]



1. Exchange rate- and price-adjusted.
Source: Central Bank of Iceland.

pre-crisis period. In order to prevent this risk from accumulating, the Government has twice presented before Parliament a bill of legislation authorising the Central Bank to restrict foreign-denominated lending to resident borrowers who are unprotected against exchange rate risk, among other provisions. It is important that it be possible to activate such a macroprudential tool if necessary, now that the capital controls have been lifted. The bills of legislation in question were not approved in Parliament. A similar bill has now been presented for the third time. It is important that such legislation be passed and that restrictions on foreign-denominated lending to borrowers who are exposed to exchange rate risk be designed so that they can be implemented swiftly and smoothly if they are needed.

II Financial institutions' operating environment

External conditions have been favourable to the Icelandic economy in the recent term. The credit ratings of the sovereign and the banks have been upgraded, terms of trade have improved, and GDP growth remains export-driven. This economic upswing has had a positive impact on the banks' operating environment. The ratio of private sector debt to GDP has continued to fall, owing mainly to strong GDP growth. Households' position continues to improve, with rising real wages and high employment levels. Firms' position has strengthened as well, as the buoyant economy has stimulated demand for goods and services. Iceland's international investment position (IIP) is positive for the first time in half a century, and a large external trade surplus plus other foreign currency inflows have put significant upward pressure on the exchange rate of the króna. In mid-March, virtually all of remaining capital controls on households and business were lifted. It is too soon to predict the impact of this, but without capital controls, the domestic economy will be more affected by external developments than before.

Macroeconomic environment and financial markets

Icelandic economy growing rapidly

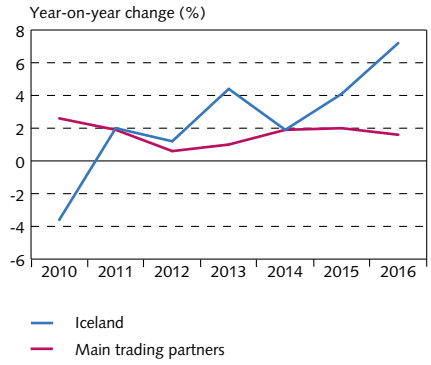
The global economy has been affected by weak GDP growth and low inflation in recent years. Central banks around the world have kept interest rates low – even negative – and many have used quantitative easing as a stimulative measure. This low-interest environment has affected banks' operations, and the European Central Bank (ECB) has mentioned the spiral of low returns and weak GDP growth as one of the principal risks to financial stability in Europe. European banks still face difficulties due to high non-performing loan ratios.[1]

Against this backdrop, the Icelandic economy has grown rapidly. Preliminary figures from Statistics Iceland suggest that year-2016 GDP growth was 7.2%, well above that in Iceland's main trading partners. In spite of this, inflation has remained at or below the Central Bank of Iceland's inflation target for three years. Low global inflation, improving terms of trade, and the appreciation of the Icelandic króna have lowered import prices, and monetary policy has kept domestic prices under control.

In recent years, GDP growth in Iceland has been driven by exports and investment. Private consumption has increased as well. Increased exports are due in large part to the tourism boom and the steady rise in foreign visitors' travel to Iceland (for further discussion of the tourism sector, see Chapter I). There are clear indications of demand pressures in the economy, which could spread to the financial system and exacerbate systemic risk.

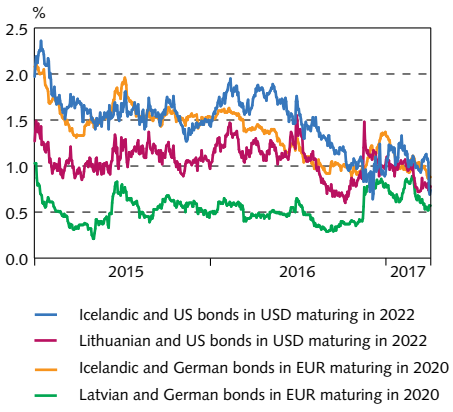
The interest rate spread between Icelandic Treasury bonds and comparable US and German issues narrowed in 2016 and is now similar to the spread on Latvian and Lithuanian bonds. This development

Chart II-1
Output growth



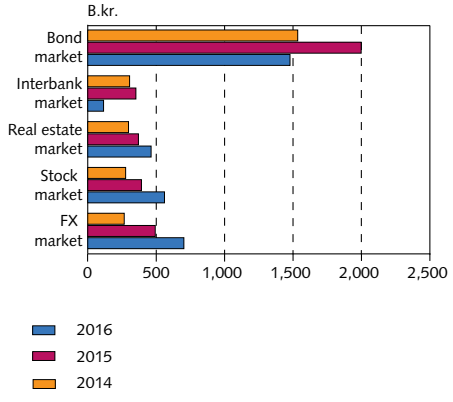
Sources: Statistics Iceland, Macrobond, Central Bank of Iceland.

Chart II-2
Government bond spreads



Source: Bloomberg.

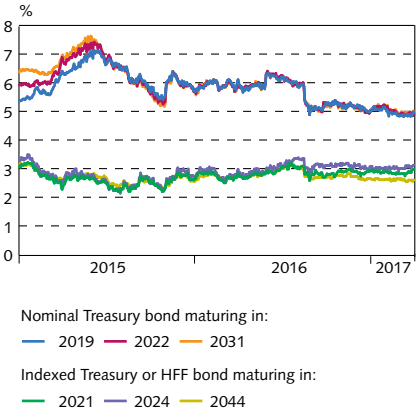
Chart II-3
Financial market turnover



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

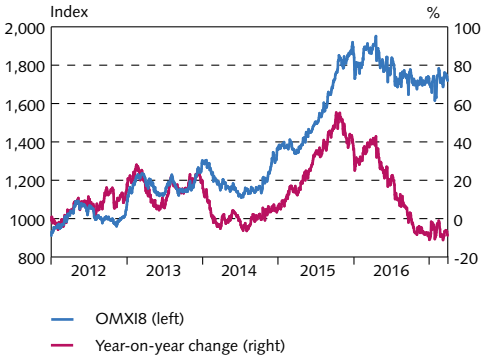
1. European Central Bank (2016). *Financial Stability Review*, November 2016.

Chart II-4
Bond yields



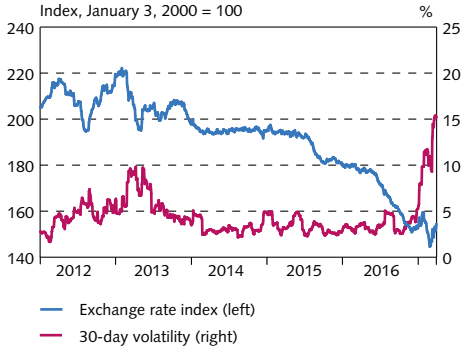
Source: Nasdaq Iceland.

Chart II-5
OMXI8 share price index



Source: Nasdaq Iceland.

Chart II-6
Trade-weighted exchange rate index[1]



1. Exchange rate index based on average imports and exports, narrow trade basket (1%).
Source: Central Bank of Iceland.

is in line with the upgrades of Iceland's credit ratings last summer. Standard & Poor's has upgraded the sovereign twice, first in January 2017, from BBB+ to A-, and again in March, from A- to A, with a stable outlook, following news of the virtually complete liberalisation of the capital controls. Fitch Ratings changed its outlook from stable to positive and affirmed Iceland's BBB+ rating in January. After the capital controls were lifted in March, Fitch affirmed the rating again.

Volatility in the domestic financial markets

Now that the capital controls have been lifted, the domestic financial markets can be expected to track foreign asset markets more closely. Resident investors can now rebalance their portfolios to include more foreign assets. It is unclear what impact such an increase in foreign investment will have on the domestic financial markets in the long run. Non-residents' investment in Iceland has increased somewhat in recent years as the outlook for the domestic economy has improved.

The domestic bond market was quite volatile in 2016. Yields on both nominal and indexed bonds rose at mid-year when the Central Bank exercised its authorisation to impose special reserve requirements in response to foreign demand for Icelandic bonds. Yields then fell in the wake of reductions in the Bank's key interest rate in August and December. Since spring 2015, the Treasury bond yield curve has remained flat, and pricing of the bonds has been relatively independent of maturity.

Equity market turnover rose year-on-year, but the OMXI8 index fell in 2016, after a bullish 2015. So far this year, the index has been more volatile but broadly unchanged overall. Developments in individual companies' share prices have diverged greatly, however, and for a while the market was affected by the drop in Icelandair shares after the company issued a profit warning in early February. The pension funds are dominant market players and can affect prices, as they own large holdings in listed companies (for further discussion, see the section on pension funds' shareholdings in Chapter III). One new company, the oil company Skeljungur, was listed on the Nasdaq Iceland exchange in 2016. There have been no listings as yet in 2017.

Foreign exchange market turnover rose further last year and is at its highest since the collapse of the financial system in 2008. The króna depreciated by 1.3% in the first quarter of this year. In 2016, however, it appreciated by 18.4%. The Central Bank intervened in the market, as it has done in recent years, to mitigate exchange rate volatility and prevent a spiral from developing. Because the Bank's intervention has been almost exclusively on the buying side, it has leaned against the appreciation of the króna. Since the capital controls were lifted in March, volatility has increased somewhat, and the Bank sold foreign currency for the first time in a long while.

Turnover in the real estate market has risen, and residential housing prices have increased far in excess of the general price level. Risks associated with the real estate market are discussed further in Chapter I.

Global economic outlook brighter than before

The global GDP growth outlook has shown signs of improvement in recent months. In the January update of its GDP growth forecast, the International Monetary Fund (IMF) took a more positive tone than in its November forecast. In H2/2016, global economic activity outpaced forecasts, and expected fiscal stimulus in the US and China should bolster demand and have a positive impact on global growth. In the UK as well, demand has been stronger than forecasts assumed in the wake of the Brexit referendum. The forecast is affected by geopolitical uncertainty, however, as the new US president's economic policy is still uncertain and the political uncertainty has grown in Europe. There is the risk that a nationalist upsurge will give rise to protectionism, which in turn will reduce world trade and migration, with negative repercussions for GDP growth.[2]

Inflation has also been inching upwards. It now measures over 2% in the US and the UK and is approaching 2% in Europe. In the US, the Federal Reserve Bank raised the policy rate in December and again in March, and the market expects further rate hikes this year. On the other hand, the central banks in Europe and Japan have held fast to their low-interest policy.[3]

The US presidential election in November triggered an upsurge in optimism in the asset markets. Expectations of tax cuts and increased government spending caused share prices to rise and the US dollar to appreciate. The US Treasury yield curve has also turned steeper, in part because of rising inflation. Share price volatility has grown in the US. In Europe and the UK, share prices have also risen in recent months, in line with expectations of increased GDP growth and inflation. After weakening significantly in the wake of the Brexit referendum, the pound sterling fell even further when the formal exit from the European Union began in late March.

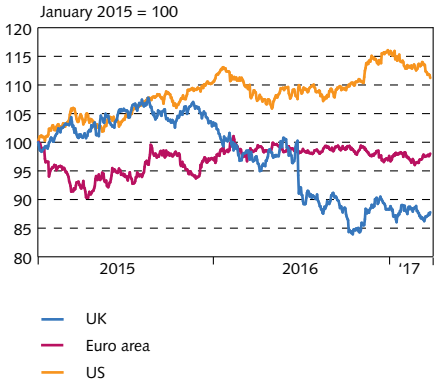
European banks are still in difficulties. Italian banks are beset by some of the highest non-performing loan ratios in Europe, and their position has deteriorated. In December, rating agencies Fitch and Moody's changed the outlook for the Italian banking system from stable to negative. In spite of this serious problem, many European banks' share prices have risen in the past six months, in line with the rise in share price indices throughout the continent.

Changed environment in Iceland

The liberalisation of capital controls on households and businesses began last autumn and was largely complete by March. As yet, post-liberalisation outflows are modest. The Icelandic economy is now more vulnerable to external shocks and volatility, and global developments could have a more pronounced impact domestically.

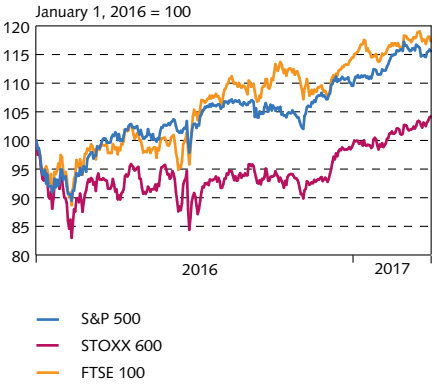
Global developments have been favourable for the Icelandic economy in the recent term. Terms of trade have improved, and there is still a sizeable surplus on external trade. It is important to prepare for a turn in the tide in the years to come.

Chart II-7
Currency exchange rates[1]



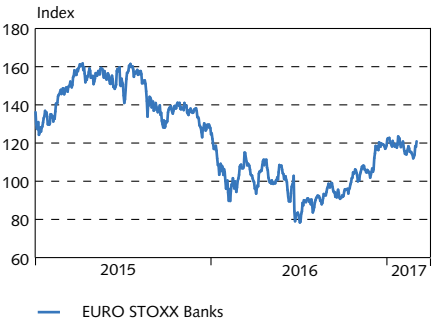
1. BIS nominal indices.
Source: Macrobond.

Chart II-8
Share price indices



Source: Macrobond.

Chart II-9
European bank share prices



Source: Macrobond.

2. International Monetary Fund (2017). *World Economic Outlook: Update*, January 2017.
3. Bank for International Settlements (2017). *BIS Quarterly Review,* March 2017.

Box II-1

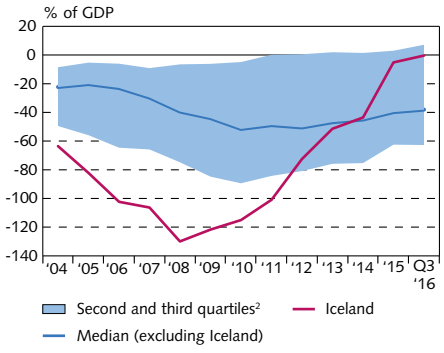
Capital account liberalisation

Effective 14 March 2017, movement of capital to and from Iceland is unrestricted, apart from controls on speculative trading in derivatives. The special reserve requirement imposed on new foreign currency inflows in mid-2016 is still in effect (see Box II-2, Changed composition of new investment). The removal of the capital controls was the last step in the liberalisation strategy announced by the authorities in June 2015. The strategy was divided into three main phases. The first, which centred on the failed banks' estates, concluded with composition agreements reached once the estates had fulfilled defined stability conditions early in 2016. The second phase focused on offshore krónur and concluded with the passage of the Act on the Treatment of Króna-Denominated Assets Subject to Special Restrictions and a foreign currency auction held in June 2016. The third, which entailed the removal of controls on households and businesses, began in autumn 2016 and concluded in mid-March. Concurrent with the aforementioned liberalisation of controls on households and businesses, the Central Bank bought just under half of the outstanding stock of offshore krónur. The Bank's offer is open to investors until 28 April. The remainder of the offshore krónur will continue to be subject to special restrictions in accordance with Central Bank rules.

1. The strategy is described in *Economy of Iceland* 2016, Chapter 8: http://www.cb.is/publications/publications/publication/2016/10/13/Economy-of-Iceland-2016/

Chart II-10

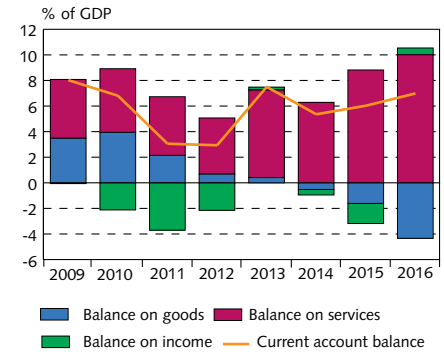
Iceland's NIIP, comparison with a selection of European countries[1]



1. Average for the year. 2. If the group of countries is divided into quartiles, the shaded area shows the second and third quartiles.
Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart II-11

Current account balance[1]



1. Adjusted for the effects of the old banks on factor income and the balance on services from Q4/2008. Secondary income is included in factor income. From 2009 through 2012, the balance on income was also adjusted for the effects of Actavis, owing to inaccurate data during the period.
Sources: Statistics Iceland, Central Bank of Iceland.

International investment position (IIP)

Positive net IIP and large current account surplus

Iceland's net international investment position (NIIP) has improved substantially in the recent term and is now positive by 1.1% of GDP. In other words, Iceland is now a net lender rather than a net borrower. The NIIP has improved rather rapidly during the post-crisis period, and the ratio of foreign debt to GDP has been almost cut in half since 2009.[4] The improvement in 2016 is due in part to the current account surplus, whereas exchange rate and price movements during the year had a negative impact.

Iceland's current account balance was positive by 8% of GDP in 2016. The surplus was about 1 percentage point smaller after adjusting for the effects of the old banks' holding companies. As in recent years, tourism has been the mainstay of the current account surplus, generating a sizeable surplus on services trade to counterbalance a deficit on goods trade, which was broadly similar to that in 2008. Declining external debt in the recent term has resulted in a positive balance on income.

Strong foreign currency inflows and large foreign exchange reserves

The Central Bank has remained active in the foreign exchange market, but in spite of large-scale foreign currency purchases by the Bank, the króna has appreciated by 15% in the past 12 months. Inflows in connection with new investment contracted slightly year-on-year, and the composition of inflows changed after the Bank adopted the Rules on Special Reserve Requirements for Foreign Currency Inflows, as is further described in Box II-2. Capital outflows have been moder-

4. External debt excluding special purpose entities and the old banks.

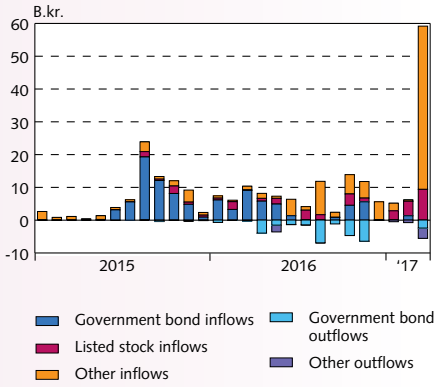
Box II-2

Changed composition of new investment

In mid-2016, the Central Bank of Iceland activated a new capital flow management measure (CFM) designed to temper and affect the composition of capital inflows into the domestic bond market and high-interest deposits and strengthen monetary policy transmission. The CFM, which applies to investments in electronically registered bonds and bills issued in domestic currency and domestic currency deposits bearing annual interest of 3% or more, entails a special reserve requirement of 40% on new foreign currency inflows at 0% interest for a period of one year. Since the measure was introduced, investors have focused almost entirely on equity securities, including foreign direct investment, and demand for Treasury bonds has virtually dried up, apart from reinvestments that are not subject to the special reserve requirement. Investments in 2017 to date have been predominantly in listed equities. In March, there were substantial inflows into unlisted equities in connection with the sale of the holding in Arion Bank to foreign investors.[1] The CFM reduces investors' returns on certain asset classes, and the impact on short-term investments is greatest. This has affected the composition of capital inflows to Iceland. It is important that the Central Bank be able to use the CFM in order to prevent excess inflows from exacerbating systemic risk and posing a threat to financial stability.[2]

1. For further discussion, see Box III-2.
2. Capital flow management measures are discussed in detail in Box 1 in *Monetary Bulletin* 2016/4.

Chart 1
New investment[1]



1. Net new investment is the difference between inflows and outflows due to new investments. Outflows from Government bonds before September 2015 are unknown. Total outflows before that time are therefore classified as "other outflows".
Source: Central Bank of Iceland.

ate since the capital controls were lifted, but expectations concerning exchange rate developments could affect investors' plans to diversify risk by investing overseas. The foreign exchange market is discussed in Box II-4.

The Central Bank's foreign exchange reserves have grown substantially in the recent term as a result of the above-mentioned purchases in the market. At the end of February 2017, the reserves amounted to 811 b.kr., about ¾ of that amount financed in Icelandic krónur. The reserves are large enough in terms of commonly used criteria for reserve adequacy, such as the reserves-to-imports ratio or the International Monetary Fund's (IMF) reserve adequacy metric (RAM). At the end of 2016, the reserves stood at 190% of RAM, well above the 150% that the Bank and the IMF considered necessary prior to capital account liberalisation (for further discussion, see Box II-3). In krónur terms, the reserves shrank in Q1/2017 because of the appreciation of the króna. Furthermore, they declined by 75 b.kr. as a result of the Bank's purchase of 90 b.kr. in offshore krónur at an exchange rate of 137.5 per euro. However, the Bank also bought 28 b.kr. worth of foreign currency in direct transactions relating to foreign inflows associated with Kaupþing's sale of a 29% stake in Arion Bank to foreign hedge funds and asset management companies. The reserves declined by 100 b.kr. in early April as a result of the Treasury's buyback of its own US dollar bonds.

The IMF's reserve adequacy metric (RAM)

The reserve adequacy metric (RAM) was developed by the International Monetary Fund (IMF) as a criterion for desirable size of foreign exchange reserves, which can be determined with respect to a number of factors that affect a country's balance of payments and could provide indications of potential capital outflows. The RAM consists of four elements:

i. Export revenues: Reflect the risk of contraction in foreign currency accumulation
ii. Money holdings: Reflect potential capital flight in connection with liquid assets
iii. Foreign short-term liabilities: Reflect the economy's refinancing risk
iv. Other foreign debt: Reflects outflows of portfolio assets

The RAM is the sum of 30% of current foreign short-term liabilities, 15% of other foreign debt (20% at constant exchange rates), 5% of money holdings (10% at constant exchange rates), and 5% of export revenues (10% at constant exchange rates).

Low-risk repayment profile

The credit ratings of the sovereign and other domestic borrowers were upgraded during the year. This, together with an overall

Box II-3

Reserve adequacy criteria

The Central Bank of Iceland's foreign exchange reserves have grown significantly in recent years, as a result of both preparation for capital account liberalisation and the Bank's intervention policy. In determining when foreign exchange reserves are large enough, consideration is given to how large they must be to withstand potential shocks such as sudden reversals in capital inflows. Strong foreign exchange reserves contribute to economic and financial stability and reduce the likelihood of a balance of payments problem. In addition, large reserves can lower foreign borrowing costs, as they contribute to improved credit ratings for the sovereign and other domestic borrowers. Various criteria and metrics can be used to assess reserve adequacy. The criteria selected can depend on the monetary and exchange rate regime, the depth of the financial markets, access to foreign credit markets, and possible restrictions on capital inflows and outflows, to mention just a few.

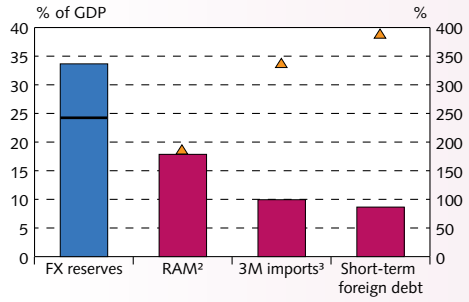
One metric is the number of months of imports the reserves can cover – generally at least three. At present, Iceland's reserves would suffice to cover 9.5 months' worth of imports. For countries that are integrated with foreign capital markets, it is worthwhile to use criteria that take account of potential capital outflows; for instance, the ratio of the reserves to short-term foreign liabilities.[1] In this case, the benchmark is a minimum of 100%, whereas Iceland's ratio was 389% at the end of 2016.[2] Because short-term liabilities can fluctuate widely between years, it is desirable to consider other criteria as well, including broader ones. In recent years, the International Monetary Fund's (IMF) reserve adequacy metric (RAM) has been assigned increased importance as an indicator of sufficiently large foreign exchange reserves.[3] It is assumed that the ratio of the reserves to the RAM should not fall below 100%, and on average, a ratio of 100-150% is deemed desirable.[4] At the end of 2016, Iceland's ratio of reserves to RAM was 190%, above the level considered adequate and high in comparison with a group of emerging countries.[5] The exchange rate regime affects RAM criteria, in that the benchmark would be more than 40% higher if Iceland should adopt a pegged exchange rate, and the ratio of reserves to RAM would therefore be lower, or about 134%.

It should be noted that the above criteria for foreign exchange reserves indicate not optimal reserve size but adequate size. In order to assess the most economical reserve size, it is necessary to consider the costs and benefits of holding the reserves (i.e., the economic benefit and the direct financial expense), risk aversion, and the likelihood that the reserves will come under pressure. Once these factors have been taken into account, an assessment of the most economical reserve size could differ from the assessment of adequate size, depending on the assumptions on which the assessments are based.[6] It is important to maintain strong foreign exchange reserves while the economy is adjusting to the post-capital controls environment.

Chart 1

Central Bank reserve adequacy[1]

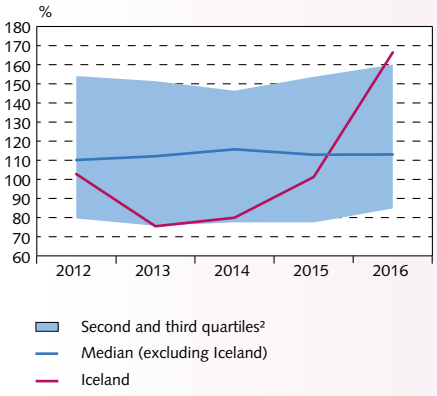
Position at year-end 2016



1. New investment in Treasury bonds is classified as short-term debt. Offshore krónur are classified as long-term debt. 2. IMF Reserve Adequacy Metric. 3. Average of three months of imports in the last four quarters.
Source: Central Bank of Iceland.

Chart 2

Ratio of reserves and RAM for Iceland and selected emerging economies[1]



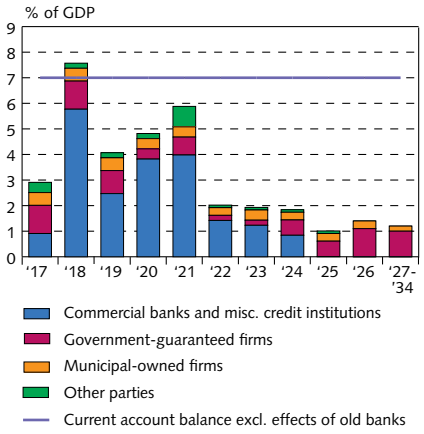
1. Average for the year. 2. If the group of countries is divided into quartiles, the shaded area shows the second and third quartiles.
Sources: International Monetary Fund, Central Bank of Iceland.

1. Short-term liabilities are defined as liabilities payable within one year. For precautionary reasons, net new investment in Treasury bonds is included with short-term liabilities for the purpose of the assessment, as non-resident investors could easily liquidate those assets and export the capital. Offshore krónur are classified as long-term liabilities.
2. According to the Guidotti-Greenspan rule; however, in the interest of increased prudence, it is not uncommon to use a higher ratio.
3. See the Fact Box entitled *The IMF's reserve adequacy metric (RAM)*.
4. See the IMF report: http://www.imf.org/external/np/pp/eng/2014/121914.pdf.
5. The aforementioned metrics for desirable reserve size are sound criteria to use, but conditions unique to each country must also be taken into account. The composition of the current account balance is one such. It is possible to argue that commodity-intensive economies need an additional cushion against possible fluctuations in commodity prices. Yet another metric that is often used for countries with a large banking system and few restrictions on movement of capital is to compare the reserves with the money supply so as to assess the impact of domestic capital flight.
6. See the IMF report: https://www.imf.org/external/np/pp/eng/2016/060316.pdf.

improvement in economic conditions, has given residents expanded access to foreign credit markets. The Treasury's recent buyback of its own US dollar bonds maturing in May 2022 reduced foreign debt by about half. The remaining debt after that transaction totals about 100 b.kr., maturing in 2020 and 2022. Iceland's foreign debt repayment profile appears quite manageable, but because the commercial banks have refinanced a large share of their debt to the old banks' holding companies, it is more front-loaded than it was a year ago.[5] The residual maturity of the commercial banks' foreign marketable bonds and foreign-denominated debt to the old banks' holding companies was just over three years as of end-March. The commercial banks' refinancing risk is discussed in Chapter III. In other respects, Iceland's debt service burden has eased somewhat because of the appreciation of the króna and retirement of foreign debt. Public entities, Landsvirkjun and Orkuveita Reykjavíkur in particular, have paid down foreign debt in recent years. If these companies' financial projections materialise in the next few years, their foreign debt can be expected to decline further. Estimated instalments in coming years based on the end-2016 position will be much less than the current account surplus, particularly if it is assumed that the commercial banks will obtain full refinancing in foreign credit markets.

Chart II-12

Repayment profile of long-term foreign loans, excluding the Treasury[1]



1. Foreign long-term loans and foreign-denominated debt to the holding companies of the failed banks. Based on position at year-end 2016 and exchange rate of 22 February 2017, plus commercial banks' foreign issuance in Q1/2017.
Sources: Financial information from DMBs and old banks' holding companies, Statistics Iceland, Central Bank of Iceland.

Box II-4

Foreign exchange market

Steep appreciation of the króna and sizeable foreign currency purchases

Inflows of foreign currency to the foreign exchange market have surged in recent years. The Central Bank has been very active on the buying side of the market, but the króna has appreciated strongly nevertheless, and the real exchange rate is now broadly in line with its peak in 2005 and 2007. The domestic economy has changed radically since then, and foreign currency generation rests on much more solid foundations than before.

In the first quarter of 2017, the Bank's net foreign currency purchases totalled 50 b.kr., as compared with 97 b.kr. during the same period in 2016. The Bank bought currency for 386 b.kr. in 2016 as a whole and 272 b.kr. in 2015. This is unprecedented in Iceland.

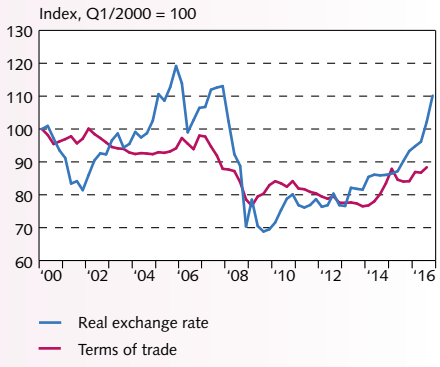
The foreign exchange market in 2016

It is estimated that year-2016 purchases in the market were due mainly to payments on foreign loans (by energy companies in particular), exemptions granted to pension funds and third-pillar pension savings custodians, and intervention by the Central Bank. These purchases totalled around 515 b.kr. Table 1 gives a summary of the main activity in the foreign exchange market in 2016.

On the selling side, the trade surplus weighs heaviest, at just under 200 b.kr. In addition, the three large commercial banks sold foreign currency assets from long positions for just over 50 b.kr. and sold another 30 b.kr. in forward contracts as a hedge against

Chart 1

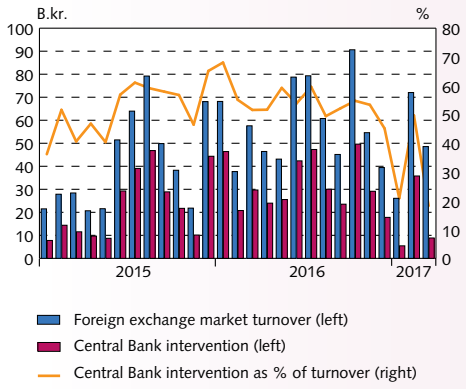
Real exchange rate of the króna and terms of trade



Sources: Statistics Iceland, Central Bank of Iceland.

5. During the year, Íslandsbanki retired its debt to Glitnir, which consisted of subordinated bonds and term deposits. Landsbankinn and Arion Bank have paid into the foreign currency bonds owned by LBI and Kaupþing. The outstanding balance of the bonds plus LBI's term deposits with Landsbankinn is about 45 b.kr.

Chart 2
Foreign exchange market turnover and Central Bank intervention



Source: Central Bank of Iceland.

derivatives contracts with customers. Foreign-denominated deposits in the banks declined by 29 b.kr., after adjusting for exchange rate movements and excluding deposits held by the failed banks' holding companies. Because exportation of capital was restricted, these deposits were used for foreign currency sales in the market. New foreign-denominated lending to resident borrowers totalled about 70 b.kr. Within the capital controls, this amount was used in krónur or was used to finance goods and services purchases from abroad, which would then show as a net trade-related sale of foreign currency. In all, these items relating to the large commercial banks channelled about 180 b.kr. into the foreign exchange market. In addition to the above, inflows net of outflows of new investment totalled almost 65 b.kr., and various one-off items, in particular the sale of foreign assets owned by residents, account for foreign currency inflows totalling about 60 b.kr. Other items, such as loans from non-residents and changes in accounts payable/receivable, have a smaller impact. Foreign currency sales totalled roughly 525 b.kr.

The difference between purchases and sales is due to errors, which could be significant in an analysis such as this one. Among other things, exchange rate movements during the period could cause errors. There may be a time lapse between foreign currency flows and offsetting entries. Estimated trade-related foreign exchange flows are based on the current account balance, but it is not a given that all current account balance variables cause foreign exchange flows, particularly in the income account.

Adjustment to a new equilibrium

The current account surplus remains sizeable, inflows from non-residents to the foreign exchange market were large in 2016, terms of trade have improved, and Iceland's external position is now positive. All of this contributes to a higher real exchange rate. The appreciation of the króna entails an adjustment of the economy to a new equilibrium due to changes in the relative size of individual sectors, which is supported by strong inflows from resident entities into the foreign exchange market.

Analysing the foreign exchange market will become more complicated with free movement of capital. In order to assess risk, supervisory authorities must have access to detailed information on market developments and on capital inflows and outflows.

Table 1 Estimated foreign currency flows in 2016[1]

	B.kr.
Net FX flows due to current account	195
The three large commercial banks	181
new FX loans to residents	71
reduction in FX deposits[2]	29
reduction of long position	52
forward sale	29
New investment	64
New foreign loans utilised in Iceland, excl. commercial banks	15
Changes in accounts payable and receivable	10
Miscellaneous one-off items	59
Central Bank of Iceland	-386
Pension funds and third-pillar pension custodians	-68
Foreign loan repayments	-60
Difference between purchases and sales	10

1. Some individual items are highly uncertain. This represents the Central Bank's estimate of net foreign exchange flows in individual items. 2. Adjusted for exchange rate movements, excluding the holding companies of the failed banks.

Sources: Commercial banks' annual accounts, Central Bank of Iceland.

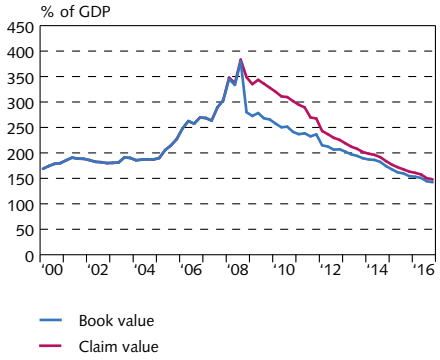
Private sector debt and current position

Credit-to-GDP ratio continues to fall

Since the financial crisis, the ratio of household and corporate credit-to-GDP has fallen steadily, first as a result of deleveraging, although in recent years the decline has been driven by GDP growth to an increasing degree.

The credit-to-GDP ratio at claim value is broadly similar to its book value at present. Claim value represents the value of the debt from the borrower's standpoint, whereas book value reflects lenders' expected recoveries on their loan portfolios. In the wake of the financial crisis, the difference between book value and claim value grew swiftly, in line with reductions in expected recoveries on the loan portfolios. The difference between the two has narrowed steadily in the past few years because of loan portfolio restructuring and improved prospects for borrowers' debt service capacity, but more importantly, because of debt write-downs following bankruptcy proceedings.

Chart II-13
Private sector credit-to-GDP ratio



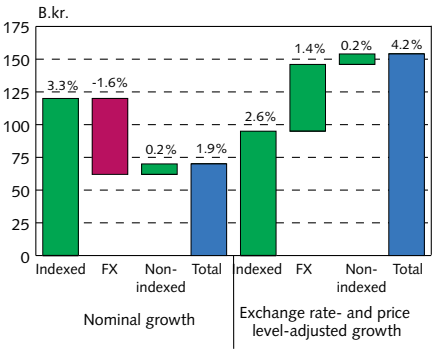
Sources: Statistics Iceland, Central Bank of Iceland.

Appreciation of the króna camouflages growth in debt

Private sector debt increased by 1.9% in nominal terms in 2016 but remained unchanged in real terms. In nominal terms, both indexed and non-indexed debt rose, whereas foreign-denominated debt contracted. The appreciation of the króna therefore played a major role in these developments, as foreign-denominated debt increased when calculated at constant exchange rates. The total price- and exchange rate-adjusted debt stock increased by 4.2% in 2016 and has grown uninterrupted since year-end 2014.

Household debt has increased in real terms in the past four quarters, while corporate debt has contracted in spite of 23% investment growth and robust GDP growth. Price- and exchange rate-adjusted household debt grew by 3.3%, while corporate debt thus adjusted increased by 5.3%. This indicates that private sector demand for credit has increased, albeit somewhat less than GDP growth.

Chart II-14
Effect of price level and exchange rate on credit growth[1]



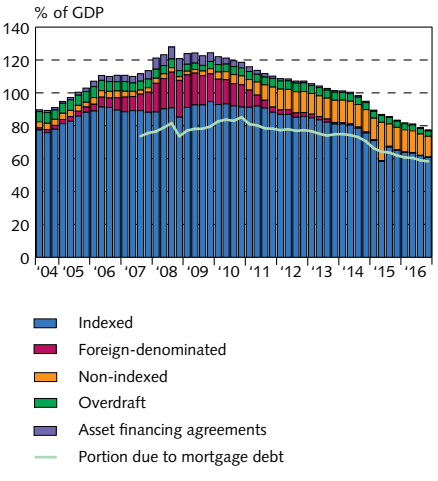
1. Adjusted for Government debt relief measures. CPI-indexed credit at end-2016 prices and foreign-denominated debt at end-2016 exchange rate. Percentages signify year-on-year growth in total credit due to growth in each credit type.
Sources: Statistics Iceland, Central Bank of Iceland.

Household indebtedness continues to decline …

At the end of 2016, the claim value of household debt totalled 77.5% of GDP, after declining somewhat year-on-year. Household debt was reduced by 33 b.kr. in 2016 in connection with the Government's debt relief measures: 19 b.kr. due to a direct write-down and 14 b.kr. due to the use of third-pillar pension savings for deleveraging. At the autumn legislative session, Parliament extended the authorisation to use third-pillar pension savings to reduce mortgage debt for another two years, until mid-2019. On average, household debt is paid down in the amount of 1.1 b.kr per month with third-pillar pension savings; therefore, other things being equal, borrowers should be able to reduce their debt by 1.5-2% of GDP before the programme concludes.

An increase in household mortgage debt could be discerned late in 2016, but other types of consumer loans have contracted steadily in recent years. Households' non-indexed mortgages remained unchanged in real terms in 2016, and therefore the increase in credit

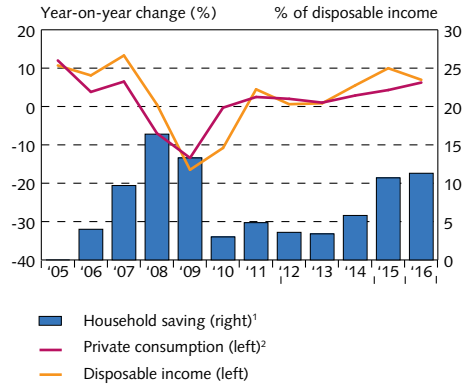
Chart II-15
Households: Debt as % of GDP
Q2/2004 - Q4/2016



Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-16

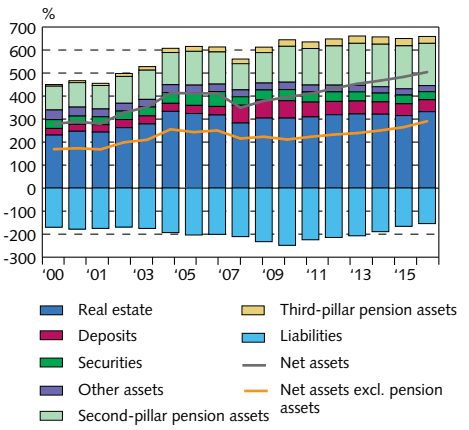
Private consumption, real disposable income, and household saving



1. There is some uncertainty about Statistics Iceland's figures on households' actual income levels, as disposable income accounts are not based on consolidated income accounts and balance sheets. The saving ratio is calculated based on the Central Bank's disposable income estimates. 2. Central Bank baseline forecast 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-17

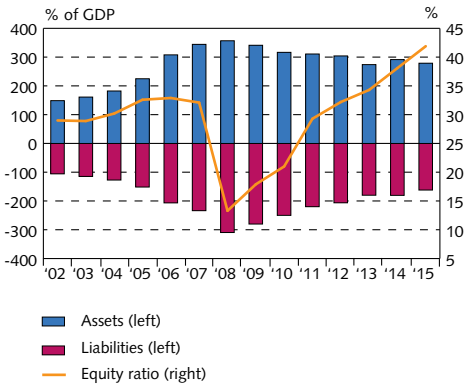
Households: Assets and liabilities as % of disposable income[1]



1. Pension fund assets are based on payouts after deduction of 30% income tax.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-18

Companies: Assets and liabilities as % of GDP and equity ratio[1]



1. Commercial economy excluding pharmaceuticals, financial, and insurance companies (ÍSAT no. 03-20, 22-63, 68-82, 95-96)
Sources: Statistics Iceland, Central Bank of Iceland.

is due to indexed loans. The share of nominal fixed-rate mortgages has also increased in the past two years.

The increase in total household debt is outpaced by both GDP growth and disposable income growth. Household debt is estimated to have been about 156% of disposable income at the end of 2016. This ratio has declined very quickly in recent years because of deleveraging and, not least, because of rising disposable income.

… and growing purchasing power strengthens households' position even further

Households' position has improved year by year since 2010, and forecasts assume that the trend will continue.[6] Many factors are pulling in the same direction at present: rising asset prices, low unemployment, low inflation, and increased purchasing power have catalysed private consumption growth. Disposable income is rising even faster than private consumption, and the rate of saving has therefore continued to grow, as can be seen in households' strong asset position. Net household wealth relative to disposable income rose by 21 percentage points in 2016, to 504% at the year-end. The increase is due mainly to higher house prices, which have pushed loan-to-value ratios downwards (loan-to-value ratios are discussed further in Box II-5). Households' pension fund assets contracted relative to disposable income last year, and their net wealth excluding those assets rose by 26 percentage points. The improvement in households' position is much more sustainable than before, and households have seldom been as resilient against external shocks.

Decline in personal bankruptcies and default

Households' improved position can also be seen in figures on personal bankruptcies and the number of individual on the default register (see Charts III-7 and III-9 in Appendix I). In 2016, the number of individuals declared bankrupt declined by 15% year-on-year. The number of individuals on the default register has continued to fall and is now down by 14% since mid-2013. Given that households' position has improved each year since 2010, the number on the default register could have been expected to fall even faster, especially relative to the situation just after the crisis struck in 2008. Such a comparison is not realistic, however, as more entities report individuals in default than used to be the case; therefore, it can be said that the default register is more comprehensive and accurate than before.

Companies' position continues to improve …

The overall position of Icelandic companies has improved in the past year. The vibrancy of the domestic economy has led to increased demand for goods and services. Terms of trade have improved, and the Central Bank forecasts further improvement this year.[7] Furthermore, business investment has increased considerably. The economy has changed rapidly with the surge in foreign tourist arrivals and the associated impact on the exchange rate of the króna. Such rapid changes

6. See, for example, *Monetary Bulletin* 2017/1.
7. See *Monetary Bulletin* 2017/1.

can prove difficult for exporters, while importers benefit and the cost of imported inputs declines. The tourism industry and the potential crowding-out effect on other sectors is discussed in Chapter I. In spite of these major changes, there has not been a noticeable impact on the operations of companies listed on the Nasdaq Iceland exchange. On the whole, their key financial ratios show little change in the past four years. Return on equity has averaged 14%, while equity ratios have been on the rise and are generally around 40% or more. Furthermore, the ratio of net debt to EBITDA has averaged around 5, with the three listed real estate companies pushing the average strongly upwards.[8]

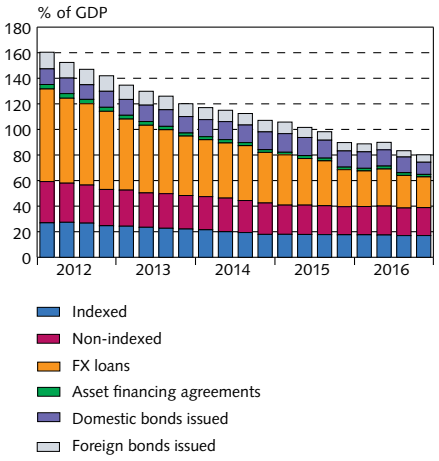
… and there are signs of growing demand for credit

At claim value, the end-2016 corporate debt ratio was 80.2%, a significant reduction from the previous year, owing mainly to GDP growth, although the appreciation of the króna has also reduced debt in krónur terms. Denmark is now the only Nordic country with a lower corporate debt ratio. A higher equity ratio and rising asset prices could indicate that companies' collateral capacity is increasing. The conditions for increased debt are therefore in place. In addition, there is the risk that increased access to cheap foreign credit will tempt borrowers that are unprotected against exchange rate risk. In recent years, companies have financed their investments largely with equity, according to Central Bank surveys of investment plans. The share of equity financing hovered around 80% from 2012 until last year, when it dropped suddenly. The outlook is for a further decline this year, to about 58%. The reduction is due mainly to firms in the tourism industry. This indicates that companies are seeking out credit financing to a greater degree, in line with price- and exchange rate-adjusted growth in corporate debt. Signs of this can also be seen in figures on systemically important banks' net new corporate loans, as is discussed in Chapter III.

Corporate default on the decline

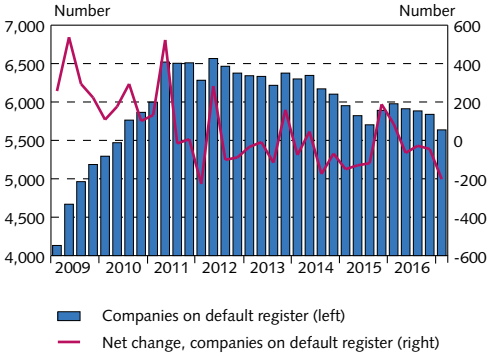
The number of companies on the default register is falling, and as a share of all companies, those in default accounted for 13.2% at the end of March, a 1.3 percentage point decline from the previous year. The decline in default has been distributed across all sectors, although it is most pronounced in construction and tourism. The number of firms declared insolvent rose steeply between years, however, although strikes in 2015, both at the Commissioner's office and at the Directorate of Customs, meant that some of the company failures that otherwise would have been registered in 2015 were registered in 2016 instead. As a result, it is difficult to draw conclusions on actual developments. The corporate insolvency rate – company failures as a share of the total number of companies – is now 2.5%, roughly similar to that in 2002-2004. There was little year-on-year change in the age composition of the insolvencies, and there was a slight decline in unsuccessful distraint actions.

Chart II-19
Companies: Debt as % of GDP[1]



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

Chart II-20
Companies: Default



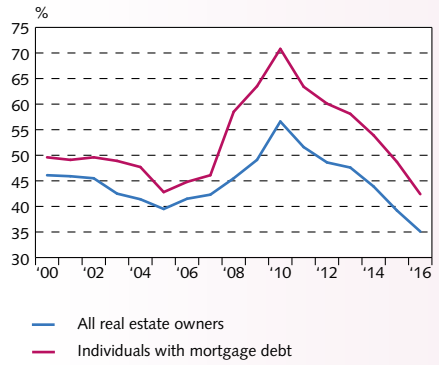
Source: CreditInfo.

8. These are simple unweighted averages. Companies can differ from one to another, and there may be fluctuations from year to year within the same company.

Box II-5

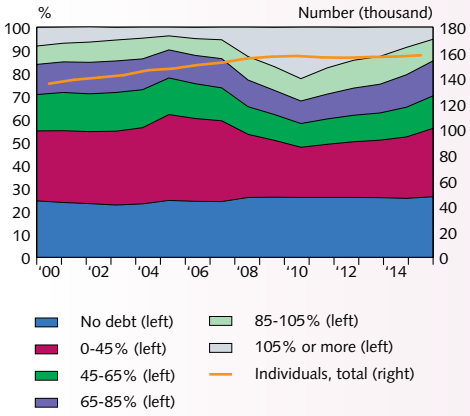
Loan-to-value ratios

Chart 1
Residential LTV ratios



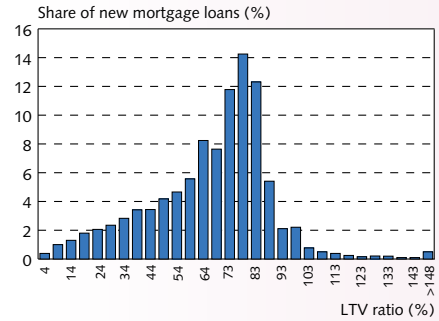
Sources: Statistics Iceland, Central Bank of Iceland.

Chart 2
Individuals classified by LTV ratio



Sources: Statistics Iceland, Central Bank of Iceland.

Chart 3
LTV ratios of new mortgage loans[1]



1. Based on new mortgage loans to individuals from 1 July 2015 to 31 January 2017.
Source: Financial Supervisory Authority.

New legislation on mortgage lending to consumers entered into force on 1 April 2017. The new Act authorises the Financial Supervisory Authority, upon receiving an opinion from the Financial Stability Council, to adopt rules setting maximum loan-to-value (LTV) ratios for mortgage loans in the 60-90% range and setting a ceiling on mortgage loans or specifying a maximum ratio of debt service to income. The maximum LTV ratio is a macroprudential tool and is probably the most commonly used tool to mitigate the formation of housing bubbles driven by excess household leverage.[1] Another objective in specifying LTV ratio requirements is to enhance the resilience of borrowers and lenders against shocks stemming from unfavourable developments in the real estate market. The authorisation to specify a maximum permissible LTV ratio has not yet been used in Iceland, but where this macroprudential tool is used, the most common maximum is 80-90%.[2]

The estimated overall LTV ratio in Iceland averaged around 35% at the end of 2016, after falling rapidly from the 2010 peak. There are two causes: debt has declined as a result of the Government's debt relief measures and court judgments on the illegality of exchange rate linkage, among other things, and house prices have risen. Households therefore have much greater scope to take on additional debt. In the recent term, the drop in LTV ratios has been driven mainly by rising house prices. Individuals with mortgage debt (excluding those who own their homes debt-free) had an average LTV ratio of just over 42% at the end of 2016. This figure has fallen by nearly half since 2010.[3]

Just under one-seventh of all homeowners have an LTV ratio of 85% or more. Among individuals with mortgage debt, one-fifth have an LTV ratio of 85% or more. As these figures show, there is still a group of homeowners with substantial debt. The Financial Supervisory Authority regularly conducts in-depth analysis of new mortgage loans granted by the commercial banks, the Housing Financing Fund, and the largest pension funds. The most recent analysis covers the period from 1 July 2015 through 31 January 2017. In terms of LTV ratio, it was most common that borrowers had a ratio of 80% when purchasing a new home, although the average was slightly less. About a fourth of new loans were for 80% or more of the value of the property, and just over 8% were for 90% or more. In terms of mortgage loans granted during this period, restricting the LTV ratio to 80% would have affected one-fourth of loans, and imposing a ceiling of 85% would have affected 15%.

In most cases, lenders that currently offer mortgages restrict the ratio to 75-85%, although first-time buyers have the opportunity to borrow 90% under certain conditions. One building contractor recently began offering supplemental loans that would raise the LTV ratio as high as 95%. Such arrangement were well known before the financial crisis, and as house prices rise – and the necessary down payment likewise – more borrowers could begin to offer supplemental loans bringing the LTV ratio to higher levels than are currently customary. Homebuyers' options for highly leveraged purchases will be monitored and assessments made of whether it is desirable to adopt rules imposing limits on mortgages.

1. See, for example, https://www.ecb.europa.eu/pub/fsr/shared/pdf/sfafinancialstabilityreview201405en.pdf
2. Overview of measures - European Systemic Risk Board - Europa.eu.
3. The information is based on tax return data from the Directorate of Internal Revenue, processed by Statistics Iceland for the Central Bank.

III Financial market entities

The structure of the financial system has changed in recent years. The pension funds have increased their share, deposit institutions' share has shrunk, and the shadow banking system has grown.[1] The assets held by domestic systemically important banks (D-SIB) account for about 98% of deposit institutions' assets.

Financial system structure
At the end of 2016, four commercial banks and four savings banks were in operation in Iceland, comprising about a third of the financial system. The pension funds account for just over a third of the financial system, and the remaining third comprises other financial institutions, with the Housing Financing Fund's assets accounting for about 23% of that portion.

III a Systemically important banks

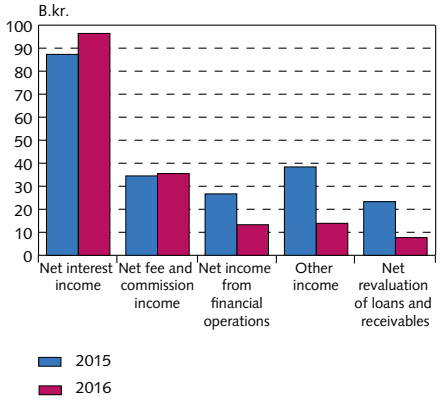
The combined returns and profits of Iceland's systemically important banks declined markedly between 2015 and 2016. There was a marked decline in income from irregular items and an increase in net interest income. Credit growth has picked up, and default is low. There is limited demand for the banks' domestic market issues, but their foreign market funding efforts have been successful. The banks are strong, their liquidity and leverage ratios are high, and their capital position is good. In March, a group of foreign hedge funds and asset management companies acquired a 29% stake in Arion Bank, and further sales of holdings in the banks lie ahead.

III Operations and equity[2]

Sharp decline in irregular and estimated income items

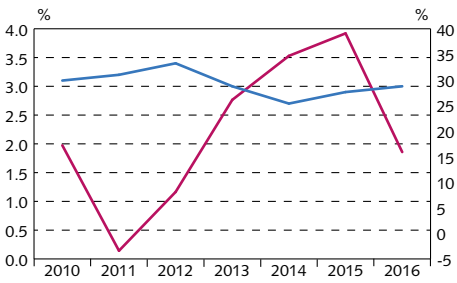
D-SIBs' combined profits and returns declined by nearly half between 2015 and 2016. Income from equity securities and upward loan value adjustments contracted significantly, and operating expenses rose. On the other hand, net interest income rose markedly. In 2016, net interest income increased by just over 10% year-on-year, and the interest rate differential widened slightly. Net fee and commission income rose 3%, although developments differed across income-generating units. The rise in interest income was attributable mainly to an increase in interest-bearing assets as a share of total assets. Because interest income and fee and commission income have increased and, no less important, because other operating income has declined, the former now constitutes a larger share of total income. The banks' net income from financial activities declined by about half between years. In 2015 there was substantial income from sales and upward value adjustments of equity securities, whereas in 2016 the vast majority of income from financial activities derived from the sale of bank subsidiaries' stake in Visa Europe Ltd. to Visa Inc. The banks' other income also declined markedly, including miscellaneous income from associated companies. Combined income from equity securities and income from discontinued operations (real estate, sold companies,

Chart III-1
D-SIB: Operating income[1]



1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' financial statements.

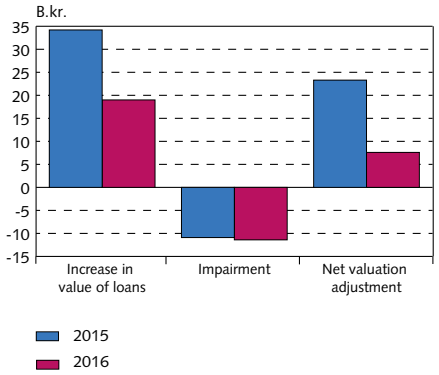
Chart III-2
D-SIB: Interest rate differential and irregular income[1]



1. Domestic systemically important banks, consolidated figures. Income from equity securities in 2014, 2015 and 2016 includes income from sale and valuation adjustments of the largest affiliates.
Sources: Commercial banks' financial statements.

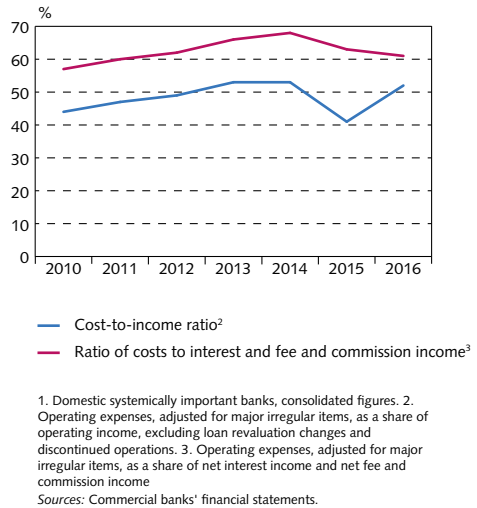
1. See the definition of shadow banks in Appendix III.
2. In 2015, the Financial Stability Council defined Iceland's three largest banks – Arion Bank hf., Íslandsbanki hf., and Landsbankinn hf. – as systemically important financial institutions. The discussion in this chapter is based on the year-2016 consolidated accounts of these domestic systemically important banks (D-SIB) and comparison figures for 2015. Figures are consolidated unless otherwise stated. The aggregate position may diverge from that of individual financial companies.

Chart III-3
D-SIB: Income and expenses due to revaluation of loans and receivables[1]



1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' financial statements.

Chart III-4
D-SIB: Cost-to-income ratios[1]



1. Domestic systemically important banks, consolidated figures. 2. Operating expenses, adjusted for major irregular items, as a share of operating income, excluding loan revaluation changes and discontinued operations. 3. Operating expenses, adjusted for major irregular items, as a share of net interest income and net fee and commission income
Sources: Commercial banks' financial statements.

Foreign exchange balance
The Central Bank of Iceland sets rules on credit institutions' foreign exchange balance. According to the rules, neither the overall foreign exchange balance nor the open position in individual currencies may be positive or negative by more than 15% of the capital base.

etc.) amounted to nearly 26 b.kr. If this is added to the income from loan valuation increases, irregular and estimated income items totalled about 16% of total income for 2016, as opposed to 39% in 2015.

Loan valuation adjustments still positive

D-SIBs' combined net loan valuation increase was substantial in 2016 but declined markedly between years.[3] In general, loans to individuals were adjusted upwards and corporate loans downwards. The banks' loan portfolios have now been largely restructured, and in the near future loan value adjustments can be expected to flip from being positive to being negative in the amount of net loan impairment. Other things being equal, this will have a significant impact on the banks' operating results.

The IFRS 9 financial reporting standard takes effect on 1 January 2018. Among the changes to be implemented with the new standard are that loan impairment will be estimated based on the expected credit loss instead of the incurred credit loss. At this point, it is not possible to project what impact IFRS 9 will have on loan valuations. It is likely, though, that fluctuations in valuation will increase, as it will be necessary to predict the future, which exacerbates uncertainty, and comparability between banks will diminish. If loan impairment increases, it will reduce the banks' capital and will probably affect the pricing of loan products. On the other hand, if impairment is recognised earlier in the banks' accounts, it could prompt the banks to be better prepared for shocks when they materialise.

Developments in operating expenses

The D-SIBs' combined operating expenses rose by nearly 8% year-on-year, although the costs developed differently from one bank to another.[4] Wage costs account for just over half of the banks' operating expenses. Combined wage costs rose by 7% between years, mainly as a result of the new wage agreements, as staffing levels continued to decline during the year. There were a number of one-off expenses during the year, including costs due to branch mergers, housing, and electronic solutions. Cost control will be one of the key challenges in the banks' operations in the coming term. Increased automation could reduce expenses.

Scenario analysis of banks' operations

In recent years, the D-SIBs' operating results have been affected by unusually numerous estimated items, adjustments of holdings in companies, and other irregular items. This has been reflected in the banks' returns and other key ratios. Under such circumstances, it can be difficult to assess the banks' operations solely from the figures published in their annual accounts. In *Financial Stability* 2015/1 and 2016/1, estimated operations were presented in two scenarios. Based on these same scenarios, the D-SIBs' estimated return on equity in 2016 lay in the 4-5% range, slightly less than in the previous year.

3. In 2016, loan valuation changes differed greatly from one bank to another.
4. Operating expenses net of bank tax.

Estimated interest income rose considerably between years, and fee and commission income rose as well, while estimated impairment and cost increases exceeded the increase in income.[5] It should be noted that the premises underlying operations scenarios excluding irregular items are always subject to debate. For example, which income should be classified as regular income is debatable, and estimating impairment can be difficult. In the future, impairment will depend on developments in the composition of the banks' loan portfolios and the economic environment.

Differing developments in indexation and foreign currency imbalances

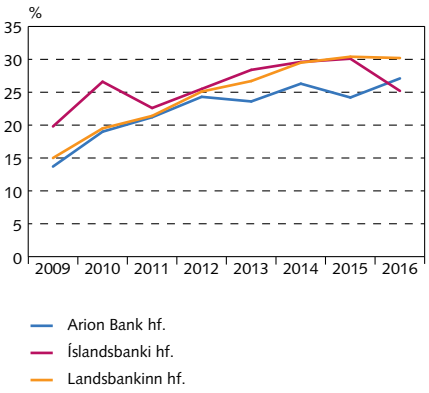
The D-SIBs' combined indexation imbalances increased markedly in 2016, owing in particular to an increase in indexed mortgage loans without corresponding market funding. The combined ratio of the indexation imbalance to the capital base rose as well, to just over 60% at the year-end, although the ratio differed from one bank to another. Last year, the D-SIBs' consolidated foreign exchange imbalances declined markedly, and the combined imbalance was slightly positive at the year-end.

Strong capital position

The D-SIBs' year-end capital position was strong and both capital and leverage ratios were high. Their combined capital ratio was 27.7%, a slight decline year-on-year, owing mainly to dividend payments and retirement of subordinated loans, but their risk-weighted assets declined. The capital base consisted almost entirely of share capital and accumulated operating profit, or common equity Tier 1 capital (CET1). The banks use the standardised approach to calculate the risk-weighted assets for credit and market risks, but they use the basic indicator approach to calculate their operational risk. The ratio of risk-weighted assets to total assets is therefore high in comparison with many foreign banks that use the internal ratings-based approach. Credit risk is the largest risk facing the banks, and its share of risk-weighted assets has grown as market risk has diminished. At the end of the year, the D-SIBs' leverage ratios were high, at 16-20%.[6] By law, the minimum leverage ratio is 3%, but it can be said that the leverage ratio is a requirement in addition to the risk-weighted capital ratio.

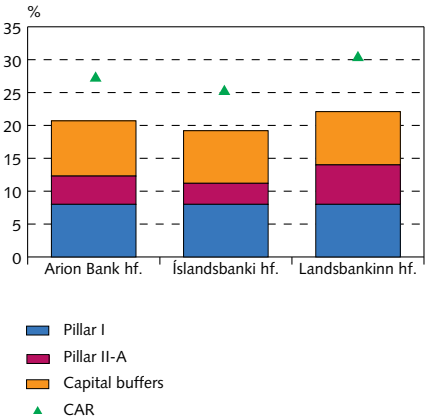
The Financial Supervisory Authority's SREP capital requirement for D-SIBs, based on full implementation of capital buffers, is between

Chart III-5
D-SIB: Capital adequacy ratios[1]



1.Domestic systemically important banks, consolidated figures. Capital base as % of risk-weighted assets.
Sources: Commercial banks' financial statements.

Chart III-6
D-SIB: Capital requirements and capital adequacy ratios[1]



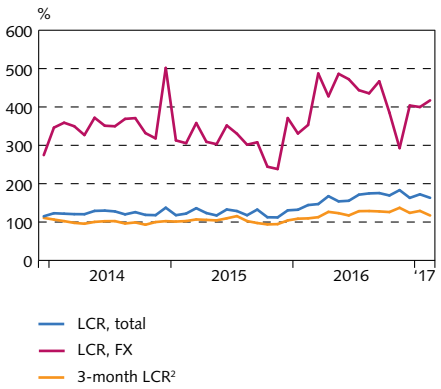
1. Domestic systemically important banks, consolidated figures. Consolidated figures. Pillars I and II according to SREP at year-end 2015. Capital buffers assuming full implementation. Adjusted for reductions in systemic risk and countercyclical capital buffers for foreign exposures. Capital ratio at year-end 2016.
Sources: Commercial banks' financial statements and other published materials.

Liquidity rules
The Central Bank's liquidity rules are based on the liquidity coverage ratio (LCR) requirements developed by the Basel Committee on Banking Supervision (BCBS) and are largely harmonised with European Union liquidity rules. Credit institutions must always have sufficient high-quality assets to cover potential liquidity needs over the coming 30 days under stressed conditions. The LCR may not fall below 100% for all currencies combined or for all foreign currencies combined.

5. The core operations scenarios assume the following: Scenario I: 3% calculated interest rate spread, 1% net loan impairment, commission and fee income according to the annual accounts, and half of other operating income according to the annual accounts, and Scenario II: a 2.8% calculated interest rate spread, 0.8% net loan impairment, and fee and commission income according to the annual accounts. These scenarios are the same as those used in *Financial Stability* 2016/1 and 2015/1. In both scenarios, operating expenses for the year are adjusted for the largest irregular items. The scenarios do not include tax payments. Therefore, the calculated profit is presented on a pre-tax basis and does not include discontinued operations.

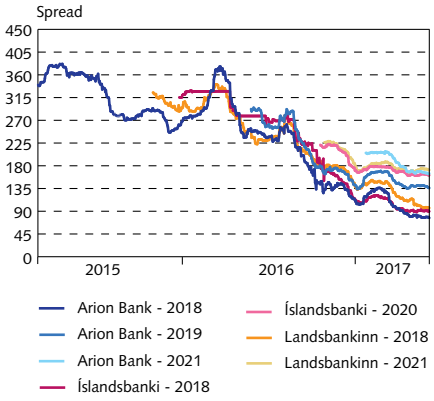
6. Leverage ratios are calculated in accordance with the Act on Financial Undertakings, no. 161/2002.

Chart III-7
D-SIB: Liquidity coverage ratio[1]



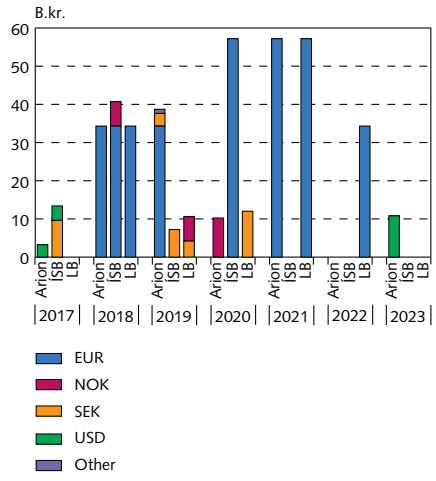
1. Domestic systemcally important banks, consolidated figures. 2. In accordance with liquidity rules, the Central Bank also monitors three-month liquidity coverage ratios.
Source: Central Bank of Iceland.

Chart III-8
D-SIB: Spread on listed foreign bonds, EUR[1]



1. D-SIB: Domestic systemcally important banks. Spread on euro benchmark curve.
Source: Bloomberg.

Chart III-9
D-SIB: Foreign bonds by maturity and currency[1]



1. D-SIB: Domestic systemcally important banks. At 7 March 2017 exchange rate. The total outstanding balance of the Landsbankinn-LBI debt, 17.9 b.kr., is in USD and matures in 2024.
Source: Nasdaq Iceland.

19% and 22%, but the banks themselves have internal capital criteria that are higher. Credit rating agencies calculate their own capital criteria when they assign credit ratings.

The banks paid out dividends equivalent to 36% of the previous year's profit in 2016. In addition, Íslandsbanki paid an extraordinary dividend at the year-end, and Landsbankinn bought back some of its own stock. These two measures together totalled 67 b.kr. Two of the banks now intend to pay dividends in the amount of 23 b.kr. on their year-2016 profit. The banks' strong capital position gives the some latitude for further dividend payments or other disposal of capital, provided that their liquidity position is also strong. Furthermore, there is some scope for subordinated loan issuance. It is clear, though, that they need to maintain a strong capital position and high capital ratios. In the short run, there is uncertainty associated with the recent liberalisation of the capital controls and the impact of implementing expected credit losses with the adoption of the IFRS 9 financial reporting standard. In the long run, a strong capital position is one of the mainstays of a sound banking system and financial stability.

Liquidity and funding

The banks' liquidity is strong

The commercial banks' liquidity position improved last year, and all of them are well above the minimum laid down in the Central Bank's liquidity rules. To an extent, the banks have converted their stock of liquid assets from foreign to domestic assets, and at present these assets consist largely of term deposits with the Central Bank. Their term deposits have limited the impact that the Bank's large-scale foreign currency purchases last year have on money holdings, as it is the Monetary Policy Committee's (MPC) declared objective to sterilise this intervention in the foreign exchange market. Further discussion of the impact of foreign currency purchases and system liquidity can be found in Box III-1 on the banks' ample liquidity. The banks' excess liquidity provides them with considerable scope for growth or dividend payments; however, such decisions must always be made based on the banks' internal and external requirements and must not erode their long-term resilience.

Abundant liquidity makes the banks well prepared to face uncertainty and to withstand the outflows that could accompany capital account liberalisation. Stress tests conducted by the Central Bank have shown that the banks can tolerate significant outflows of deposits. As yet, the removal of the capital controls has not had a substantial impact.

New Central Bank liquidity rules took effect in March 2017. The new rules aim to implement the definitions and presentation laid down in EU rules on banks' liquidity, but no major changes were made in the liquidity requirements themselves. Minimum liquidity ratios for foreign currencies are still in effect.

Deposits have increased

As before, the systemically important banks are funded largely with deposits. Excluding the deposits owned by the failed banks' estates,

deposits grew faster than the banks' balance sheets in 2016 and therefore constituted a larger share of funding than in the previous year. The most prominent deviation from this is pension fund deposits, which declined by about a fourth. Deposits held by other financial institutions, including mutual funds, increased by a full 40%, or 55 b.kr. in 2016. Individuals' deposits increased by 70 b.kr. and now account for 22% of the banks' funding.

Favourable terms in foreign credit markets

The banks have all issued bonds in foreign capital markets in the past twelve months, and the terms available to them have improved. This is due both to good foreign market conditions for banks' funding and to the strength of the Icelandic economy, which is reflected in credit rating upgrades, among other things. Rating agency Standard & Poor's upgraded all of the banks to BBB ratings in October 2016. Conditions like these could prompt the banks to step up foreign-denominated lending to unhedged borrowers and create risk in the financial system, as is discussed further in Chapter I.

In the past twelve months, the banks have issued bonds in the amount of 299 b.kr. in twelve separate issues with maturities ranging up to five years as part of their medium-term note (MTN) programme. The terms on Landsbankinn's September eurobond issue were equivalent to 190 basis points above the interbank rate. In March, the bank issued another bond at a rate equivalent to 130 basis points above the interbank rate. The original maturities of the issues were four-and-a-half and five years, respectively. The banks have issued their foreign bonds mainly to refinance other loans taken on less favourable terms, particularly to include the bonds issued to the failed banks' holding companies. The net increase in foreign funding is therefore not significant as yet.

Limited refinancing risk due to foreign funding at present

The equivalent of 110 b.kr., just over a fourth of the banks' foreign funding, matures next year. The banks' funding ratios according to the Rules on Funding Ratios in Foreign Currencies are strong in terms of funding for both one year or more and three years or more. For the next five years, instalments and interest payments on the banks' foreign-denominated loans averaged 68 b.kr. a year as of end-2016, or 21% of their foreign loan portfolio. This is about 3 percentage points lower than at the end of 2015.

The banks' domestic market issues

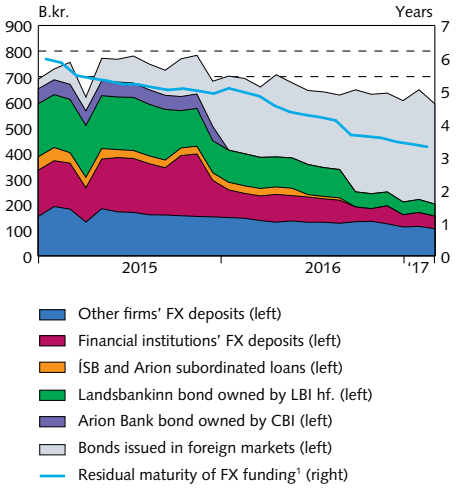
The banks have continued to step up domestic funding as a share of their total funding. The banks have increased their covered bond issuance, mainly indexed bonds. Issuance slowed in mid-2016 and then picked up again in the autumn. Secondary market yields on covered bonds fell markedly with the reduction in the Bank's key rate in August, and in some cases, yields on nominal bonds fell more than the 0.50 percentage point reduction in the key rate. Net covered bond issuance in 2016 totalled 58 b.kr., somewhat less than the banks' new mortgage lending, which totalled 73 b.kr. net of loan retirement

Funding rules

The Central Bank of Iceland sets rules on foreign currency funding ratio. The rules are based on the net stable funding ratio (NSFR) developed by the BCBS. The rules are designed to limit the extent to which banks can rely on unstable, short-term foreign funding to finance long-term loans granted in foreign currency. The ratio is subject to a minimum of 100%.

Chart III-10

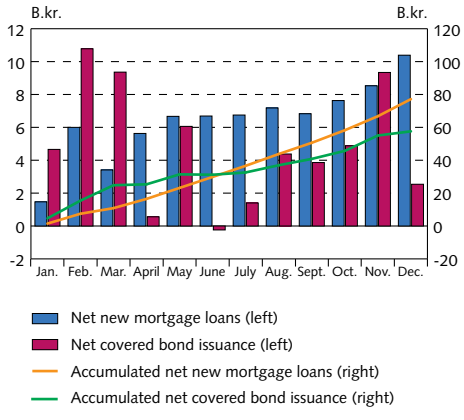
D-SIB: Funding in foreign currency and average residual maturity[2]



1. D-SIB: Domestic systemically important banks. At variable prices.
2. Residual maturity of listed foreign bonds, Arion Bank and Íslandsbanki's subordinated loans, Arion Bank bond owned by CBI, and LBI bond.
Source: Central Bank of Iceland.

Chart III-11

D-SIB: Net covered bond issuance and net new mortgage lending in 2016[1]

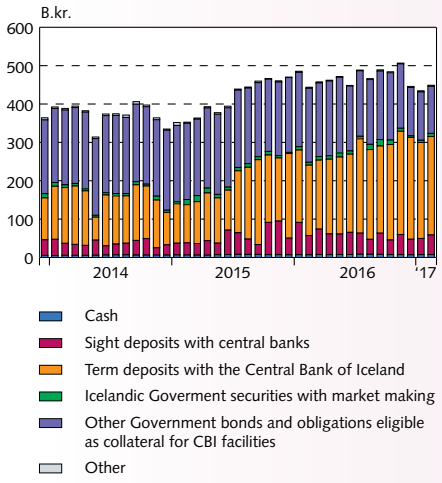


1. D-SIB: Domestic systemcally important banks.
Source: Central Bank of Iceland.

Box III-1

Ample liquidity

Chart 1
D-SIB: Liquid assets[1]



1. Liquid assets in Icelandic krónur. 2. Domestic systemically important banks, parent companies.
Source: Central Bank of Iceland.

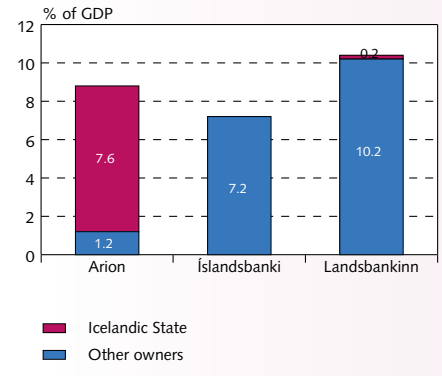
Since 2013, the Central Bank has bought more than 800 b.kr. in foreign currency net of sales. Without mitigating measures, purchases in the foreign exchange market could increase the supply of money in circulation. This has not happened, however, because of various mitigating measures that have reduced money holdings. Examples of such measures are the sale of assets held by the Central Bank of Iceland Holding Company's (ESÍ) and Lindarhvoll, the retirement of the bond between the Treasury and the Central Bank, the payment of stability contributions, and the segregation of offshore krónur.

In recent years, systemically important banks (D-SIB) have greatly increased their liquid assets in the form of sight deposits and term deposits with the Central Bank, which has reduced the supply of money in circulation, at least temporarily. Concurrent with the increase in these banks' króna-denominated assets, the composition of the assets has changed somewhat. For example, sight deposits and term deposits with the Central Bank totalled about 150 b.kr., or 40% of D-SIBs' liquid króna-denominated assets at the end of 2013, as opposed to more than 300 b.kr., or nearly 70% of liquid króna-denominated assets, at the end of 2016. The increase in the banks' deposits with the Central Bank has reduced the market risk and refinancing risk associated with their liquid assets. This abundant liquidity position increases the banks' scope for organic growth or dividend payments. However, such decisions must always be made based on the banks' internal and external requirements and must avoid eroding their long-term resilience.

Box III-2

Change in ownership structure of systemically important banks

Chart 1
D-SIB: Share of equity[1]
At year-end 2016



1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' financial statements, Statistics Iceland.

The State owns a controlling share in two of the three systemically important banks

In 2016, the State acquired all shares in Íslandsbanki, and it had previously owned a 98% stake in Landsbankinn and a 13% stake in Arion Bank. It therefore owns a controlling share in two of Iceland three largest systemically important banks. Furthermore, it has a pre-emptive purchase right to shares in Arion Bank and can exercise that right if these shares are sold at a price-to-book ratio of 0.8 or less or are not sold by end-2018. The sale of Kaupþing's 29% stake in Arion Bank was announced in March 2017. The sale price was 0.81 of the book value of the bank, or 49 b.kr., and will revert to the Treasury as part of Kaupþing's stability contribution. The buyers were a group of foreign hedge funds and asset management firms. Following the sale, Kaupþing owns a 58% stake in the bank. Furthermore, when the sale was executed, it was announced that the new owners have an option to purchase the equivalent of 22% of issued share capital.

According to the draft of the Government's ownership strategy for financial institutions, published on the Ministry of Finance website on 10 February, the aim is that the State will hold a long-term stake of 34-40% in Landsbankinn. The rest of the Landsbankinn holding will be sold in coming years, as conditions permit, as well the entire stake in Íslandsbanki and Arion Bank.

Many factors must be considered in selling holdings in systemically important banks

It is clear that the future banking system architecture, ownership structure, and capital position will be under discussion in the coming term. In recent years, increases in the value of loans and equity

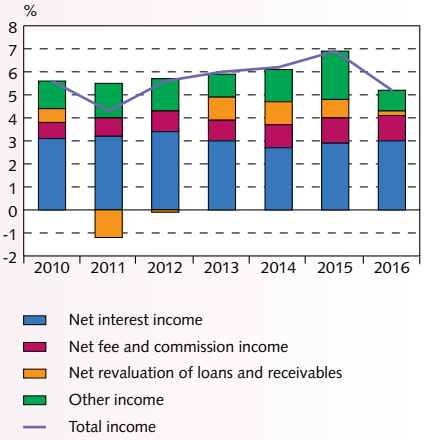
securities have been prominent in the banks' financial statements. The restructuring of the banks' asset portfolios is now almost complete, and their activities focus more fully on actual banking activities. Furthermore, the capital controls have been lifted. These factors should make it easier to sell the holdings in the banks. There are many things that must be considered, including the arrangements for the sale, the price of the holdings, the eligibility of potential owners of qualifying holdings, potential restrictions on treatment of ownership shares, and so forth. The actual worth of the holdings in the banks is unclear. At present, the market value of foreign banks is low, and increased regulation has discouraged many potential buyers from investing in them.

Possible reductions in capital must be consistent with prudential requirements

At the end of 2016, the book value of the systemically important banks' capital was just over 600 b.kr. In order to facilitate the sale of the State's holdings in the banks, it is likely that their balance sheets will be downsized with dividend payments. Possible reductions in capital and changes in the composition of the capital base must take place in accordance with the minimum requirements for the capital base, with full capital buffers, and the liquidity position. It is desirable that possible dividend payments be handled so as to limit the impact on the foreign exchange market.

Chart 2

D-SIB: Ratio of income to total assets[1]



1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' financial statements.

during the year. As a share of the banks' mortgage loan portfolios, however, covered bonds increased between years from 31% to 36%.

There was a net increase in the banks' issuance of bills in the first half of 2016; however, issuance has remained unchanged since mid-year, and the banks have merely rolled over existing bills. Demand has been strong in the banks' bill auctions, and interest rates have been falling, in line with the reduction in the Central Bank's key rate.

Encumbrance ratios

There were changes in the systemically important banks' encumbrance ratios in 2016. Landsbankinn's ratio changed the most, falling by seven percentage points, to 11%. It has fallen by nearly 20 percentage points in three years, largely due to the refinancing of the Landsbankinn-LBI bond. The scope for covered bond issuance has increased over the same period. Íslandsbanki and Arion Bank's encumbrance ratios were 15% and 21%, respectively. Arion's has been high because of the mortgage loan portfolio bought from Kaupþing in 2011 and used to back covered bonds.

D-SIB lending: developments and loan quality

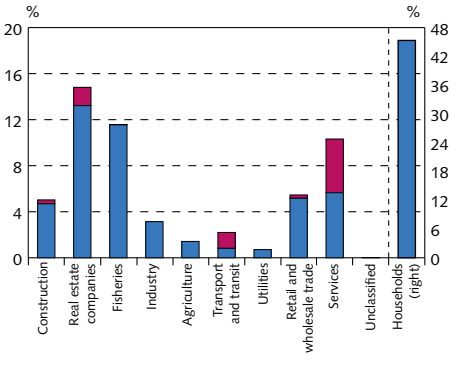
Loan stock up slightly year-on-year

Loans to customers are the largest single asset class on the D-SIBs' balance sheets. At the end of 2016, they accounted for 71% of total assets, an increase of 2 percentage points between years. Some 49% of D-SIB loans are to companies and 41% to households. Both percentages rose slightly from the previous year. In real terms, the book value of D-SIB loans rose by just over 2% in 2016. The pace of credit

Chart III-12

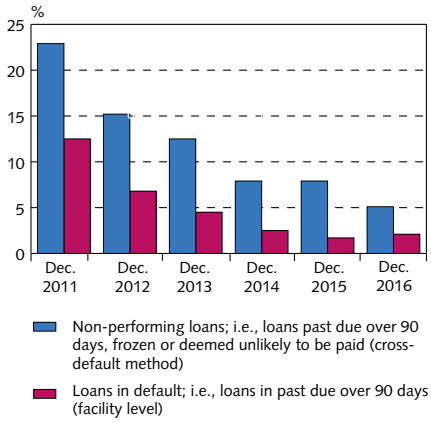
D-SIB: Sectoral classification of commercial bank lending[1]

Year-end 2016



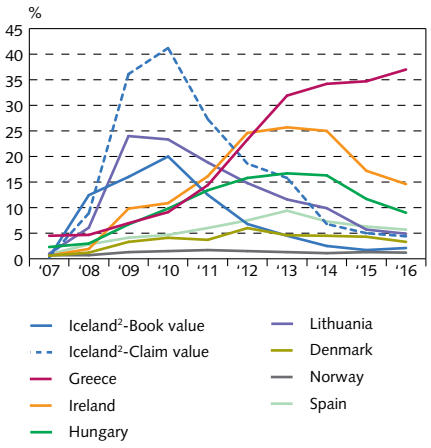
1. Loans to each sector as a share of total lending to households and operating companies as well as the portion in each sector due to tourism. D-SIB: Domestic systemically important banks.
Source: Central Bank of Iceland.

Chart III-13
D-SIB: Default ratios[1]



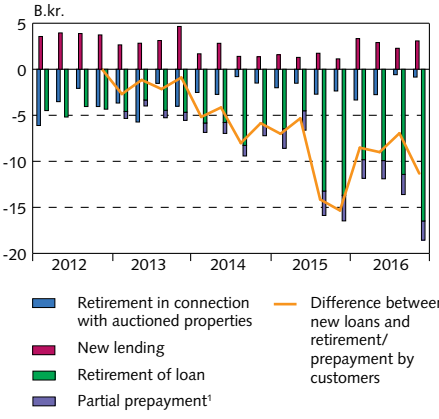
1. Domestic systemically important banks, parent companies, book value.
Sources: Financial Supervisory Authority.

Chart III-14
Default ratios[1]



1. Households and businesses. Q3 figures for year 2016 except Iceland. Banks' non-performing loans as a percentage of gross loan portfolio w/o write-downs. 2. 2007: Figures estimated from the annual accounts of the failed banks. 2008: Central Bank estimates.
Sources: International Monetary Fund, World Bank, Financial Supervisory Authority, Central Bank of Iceland.

Chart III-15
HFF: Retirement/prepayment of customer loans and new lending



1. Data for 2012 not available.
Source: Housing Financing Fund.

growth appears to be picking up, as net new bank loans increased between years. The banks provided a smaller share of new loans to households than they did the previous year, which indicates that the uptick in credit growth is due mainly to corporate loans. The increase in corporate lending was most pronounced in net new foreign-denominated loans. The banks' loan portfolios show an increase in the share of loans to service companies and construction firms. This development is due in part to tourism, as the upswing in the sector has increased diversity and reduced the sectoral concentration in D-SIB loans.

Residential mortgages account for about 77% of D-SIB loans to individuals, and in 2016, some 75% of net new household loans were residential mortgages. The amount of net new mortgage loans is somewhat less than in 2015, owing mainly to a steep increase in household mortgages from pension funds. Retirement of non-indexed D-SIB mortgages exceeded new non-indexed loans last year, for the first time since the Central Bank began collecting data on them at the beginning of 2013. The share of residential mortgages has been rising in recent years, whereas the proportion of other types of loans – overdraft loans in particular – has declined.

Default rises year-on-year[7]

The share of D-SIB loans in default rose by 0.4 percentage points between years, to 2.1% at the end of 2016, the first year-on-year rise since the collapse of the financial system. This is a sign that there is limited scope for further reduction in default. In terms of claim value, the non-performing loan ratio was 4.4% and had declined by 0.6 percentage points between years.

Developments in non-performing loans (NPLs) differed, however, as 5.1% of D-SIB loans were non-performing at the end of 2016, a decrease of nearly three percentage points from the prior year. NPLs are proportionally greater among firms than among households. About 5.8% of D-SIBs' corporate loans were non-performing at the end of 2016, a significant decline from the previous year. The reduction is due for the most part to frozen loans to large companies, which fell by half year-on-year. NPLs declined in most sectors but increased among construction and industry. The share of non-performing D-SIB loans to individuals declined by nearly two percentage points in 2016, to 4.2% by the year-end. The majority of non-performing loans to individuals are frozen or in collections.

III b Other financial market entities

The Housing Financing Fund (HFF) is still battling large-scale early retirement of loans at a time of limited demand for new loans from the Fund. There has been a significant increase in pension fund assets backed by domestic real estate, through direct lending, real estate company bonds, and specialised investments. The shadow banking system's share in the financial market has grown, as have its links to deposit institutions.

7. See the definitions of default and non-performing loans in Appendix III.

HFF still facing severe prepayment problems

Last year, the role and tasks of the HFF were changed with the passage of amending legislation. Previously, the Fund served primarily as a lending institution, but now it focuses on administration and implementation of housing affairs. In 2016, the HFF recorded an operating surplus for the third year in a row. Its year-end capital ratio was 7.3%, above its 5% long-term target. The Fund continued to sell appropriated assets during the year, cutting its holdings of such properties in half. The number of flats appropriated by the HFF declined markedly between years in 2016 but was still over 200.

The Fund still faces problems stemming from the fact that the bonds it issues have no prepayment penalty. New HFF lending is limited, and loan retirement and prepayments, some using third-pillar pension savings, are sizeable. The resulting surge in liquid assets cuts into the Fund's interest rate spread. In order to address this problem, the HFF has invested liquid assets in indexed asset-backed bonds with a repayment profile comparable to that of its funding. The Fund has not issued bonds in the market since 2012.

Pension funds are growing ...

At the end of 2016, the pension funds' assets totalled almost one-and-a-half times GDP, after increasing in real terms by 5% year-on-year. Just under half of their assets are in the form of marketable bonds and bills. Indexed bonds other than those issued by the HFF increased by more than 130 b.kr. Covered bonds issued by deposit institutions accounted for nearly a third of the increase, and the rest stemmed from specialised investments, particularly in industrial and commercial housing and real estate companies. The proportion of HFF bonds in the pension funds' portfolio has declined and is offset by an increase in much riskier real estate-backed bonds. Domestic equity securities and unit shares comprise about a fifth of the funds' assets. An examination of the 20 largest shareholders in listed companies reveals that the pension funds directly owned at least 43% of these companies as of year-end 2016. This percentage has risen in recent years, in part because of a dearth of other investment options.

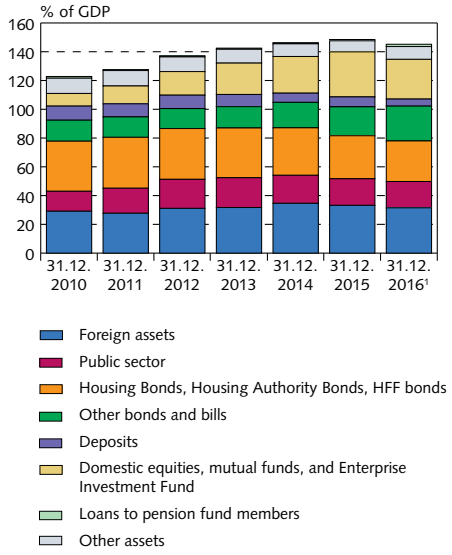
New loans granted by pension funds to their members more than tripled year-on-year in 2016. The ratio of loans to total assets is now 6% and has been broadly unchanged in the past five years. Competition has stiffened in the mortgage lending market since the pension funds began offering loans to fund members, commonly with a loan-to-value ratio of 75%.

... and can now invest abroad without restrictions

Since autumn 2015, the pension funds have been granted special exemptions for foreign investment. Under these exemptions, they invested nearly 70 b.kr. abroad last year, or about 2% of their total assets. In spite of this, their foreign assets contracted as a share of total assets, to just over a fifth by the year-end. The decline is due almost entirely to the appreciation of the króna, which erodes the funds' real returns. In the first two months of 2017, the pension funds invested a total of 13 b.kr. abroad. With the full liberalisation of the capital controls in March, pension funds are authorised to invest abroad without

Chart III-16

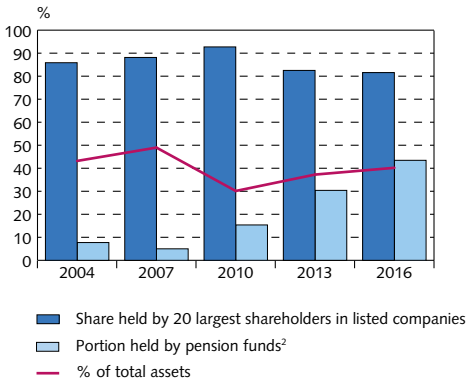
Pension funds: Distribution of assets[1]



1. Based on preliminary figures.
Sources: Statistics Iceland, Central Bank of Iceland.

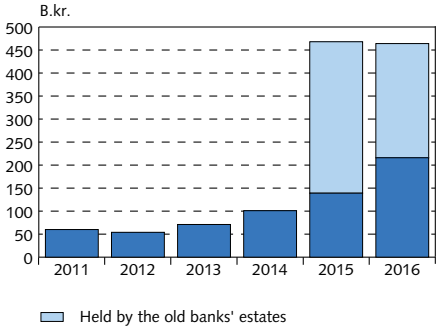
Chart III-17

Pension funds' equity securities holdings in listed companies[1]



1. Based on preliminary figures. 2. Direct ownership; i.e., excluding assets held by pension funds through mutual funds and the Enterprise Investment Fund.
Source: Central Bank of Iceland.

Chart III-18
Shadow banking system financial holdings in Icelandic banks



Source: Central Bank of Iceland.

restrictions. They can be expected to step up their foreign investments in coming years so as to achieve better risk diversification.

Shadow banking system growing, as are its links to financial institutions[8]

Two changes have recently been made in the assessment of the size of Iceland's shadow banking system. It now includes information on limited partnerships (slhf), discussed more fully in Box III-3, and the holding companies of the old banks, which are now considered part of the shadow banking system, retroactive to year-end 2015.

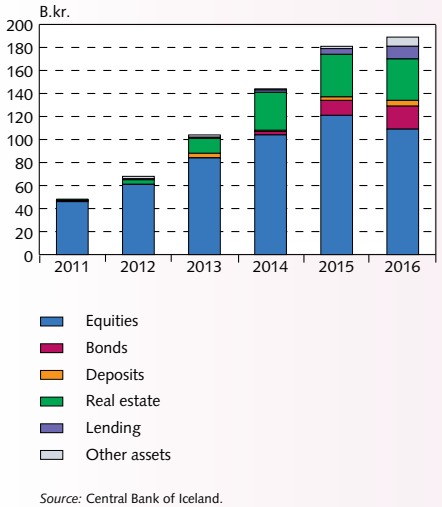
The shadow banking system has grown in recent years. It has also grown as a share of the financial system, to about 9.8%.[9] Shadow banks' assets currently amount to just over 61% of GDP. Their financial holdings in the banking system have increased rapidly. Apart from the old banks' bondholdings and their stake in the new banks, these holdings are mainly in the form of money market deposits. Over half of the deposits are available on demand, while the majority of the term deposits mature in one to three months. The increased interconnectedness between shadow banks and the banking system could be a sign of increased contagion in the financial system. The Central Bank's liquidity rules mitigate this risk and should ensure that the banks hold enough liquid assets to cover potential outflows of these deposits. It is necessary to continue monitoring developments in the shadow banking system and the potential contagion from it.

Box III-3

Limited partnerships

In order to have a clear view of developments in the domestic financial market, it is necessary to have an overview of the entities that are active in the financial system. Shadow banks constitute a growing share of the financial system, and limited partnerships, which function like specialised funds, are classified as shadow banks.[1] In recent years, limited partnerships have increased somewhat in number and grown more active in the Icelandic economy. There is a certain problem with definition, however, which hinders the regular collection of data on them in Iceland. As a result, they have been excluded from estimates of the size and scope of the Icelandic shadow banking system. The Central Bank has recently sent out queries and compiled information on the asset position of limited partnerships. Because limited partnerships' activities can be diverse and their participation in the shadow banking system is often unclear, the queries were directed at limited partnerships engaged in oversight of mutual, investment, and institutional investment funds' management companies over a specified period, as well as those limited partnerships that have been explicitly notified to the Financial Supervisory Authority (FME).[2]

Chart 1
Assets of limited partnerships



Source: Central Bank of Iceland.

1. Limited partnerships are a type of company where one or more general partners bear direct and unlimited liability for the company's obligations, while limited partners (shareholders) bear limited liability on the basis of the contributions that create the company's share capital. General partners can also be shareholders.
2. Information on 39 companies was received, but according to Statistics Iceland, 70 limited partnerships were in operation in Iceland at year-end 2016.

8. Shadow banks are financial institutions not classified as banks, central banks, insurance companies, pension funds, public financial institutions, or financial auxiliaries.
9. The share of shadow banks in the financial system as a whole, but excluding the old banks' holding companies.

These companies have grown rapidly in recent years, and their assets amounted to 7.8% of GDP at the end of 2016. The assets consist largely of stock in commercial undertakings, although a fair share is in real estate, loans, and marketable bonds. Conglomerations involving limited partnerships can be complex, and there are examples where the only listed assets owned by the partnership are shares in one or more holding companies that hold the end investments. The actual division of assets can therefore be hidden, and in addition, the market value of unlisted shares is often unclear. Limited partnerships' shareholdings in unlisted companies often do not give an accurate indication of the actual underlying asset.

The pension funds own large holdings in limited partnerships. According to an appraisal carried out at the end of 2015, they owned more than a 50% stake in the companies covered by the Central Bank's query. Some limited partnerships have also acquired financing with bond issues, with aggregate issuance since 2011 of about 1.8% of GDP. Information on the outstanding amount of these bonds and their owners is not available.

Rapid growth in specialised investments through limited partnerships can have a negative impact on other financial market entities, including systemically important entities. The manifestation of this is that the market's investment need is satisfied to an increasing degree with riskier investment opportunities that also generate higher returns than more conventional investment such as bonds. This can make it more difficult for the conventional banking system to obtain funding in the market.

Box III-4

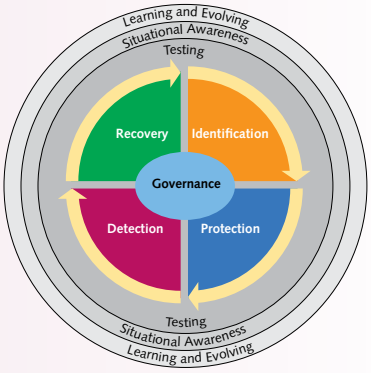
Cyber resilience and contingency planning

Information security is a topic of increasing concern to government authorities around the world. Network security problems in financial operations can prove extremely costly for society, and cyberattacks against systemically important infrastructure (interbank systems) and regulated entities can even jeopardise financial stability. Due attention must therefore be paid to operational risk via an appropriate risk management framework; i.e., documented procedures to ensure uninterrupted operations and contingency plans, as is required pursuant to Article 78(g) of the Act on Financial Undertakings.

Various administrative institutions are tasked with functions relating to cyber security, and some cooperation is desirable, such as the sharing of information, knowledge, and experience. It is planned to implement EU Directive no. 2016/1148 concerning measures for a high common level of security of network and information systems, which applies to credit institutions and financial market infrastructure, among other things. The Directive covers important subjects for which Iceland currently lacks an appropriate statutory framework.

Macroprudential supervision involves monitoring factors that could pose a threat to financial system stability, and it is the Central Bank's goal to help prevent systemic risk and respond to it, including in the field of payment intermediation. In the Bank's *Financial Market Infrastructure* report from 2016 is a discussion of the recent CPMI/IOSCO[1] guidelines on cyber resilience. According to the guidelines, there are five main topics of particular importance in

Chart 1
Cyber resiliance guidance components



Source: CPMI-IOSCO release guidance on cyber resilience for financial market infrastructures (2016), p. 7.

1. Committee on Payments and Market Infrastructures/International Organization of Securities Commissions.

connection with cyber security: governance, identification, protection, detection, and response and recovery. Testing, situational awareness, and learning and evolving are no less important, according to the guidelines. The methods used to conduct cyberattacks are constantly evolving; therefore, regular reassessment of preventive measures and contingency planning is vital.

A brief discussion of cyber security will be included in the next issue of *Financial Market Infrastructure*, to be published in early June.

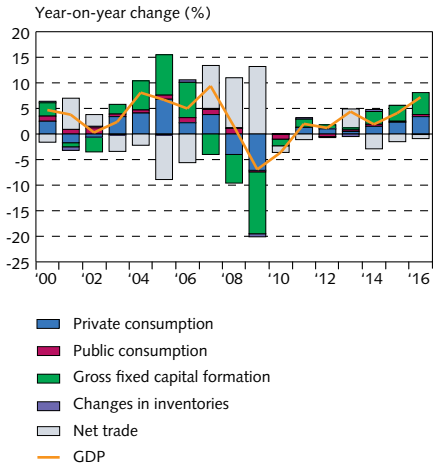
Appendix I

Charts

I Macroeconomic environment

Chart I-1

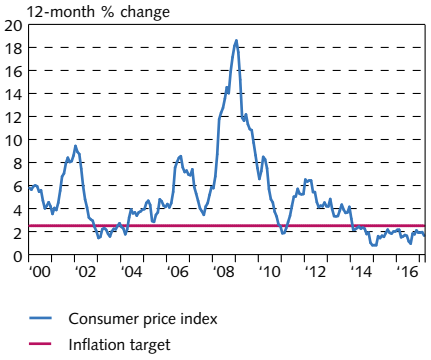
Output growth[1]



1. Contribution of individual components to output growth.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-2

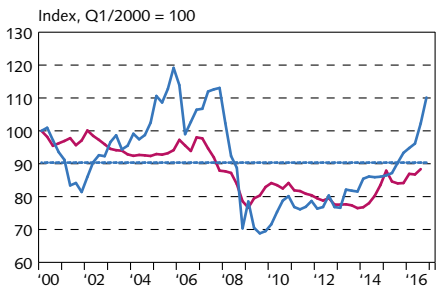
Consumer price inflation



Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-3

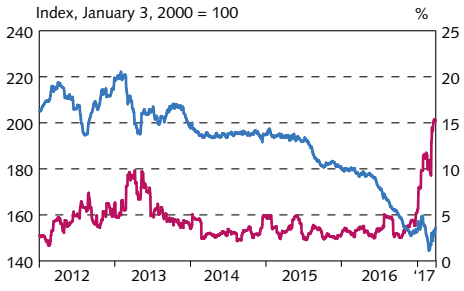
Real exchange rate of the króna and terms of trade



1. Real exchange rate average over the whole period.
Sources: Statistics Iceland, Central Bank of Iceland.

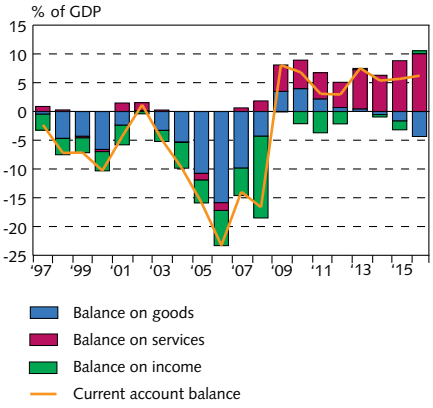
Chart I-4

Trade-weighted exchange rate index[1]



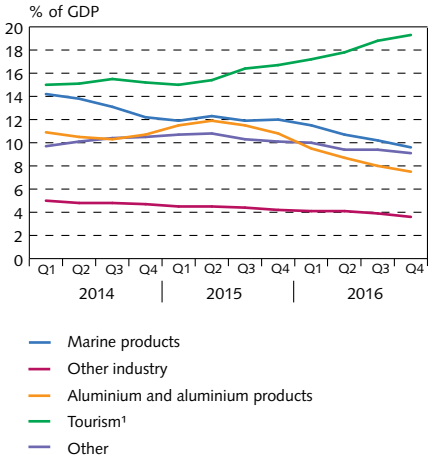
1. Exchange rate index based on average imports and exports, narrow trade basket (1%).
Source: Central Bank of Iceland.

Chart I-5
Current account balance[1]



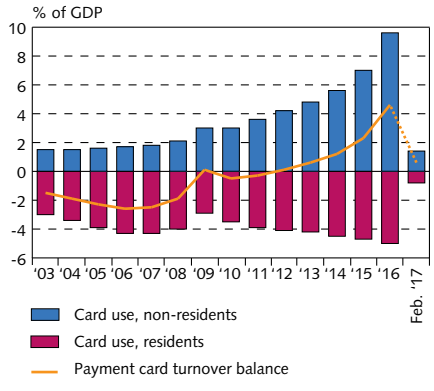
1. Adjusted for the effects of the old banks on factor income and on the balance on services from Q4/2008. Secondary income is included in factor income. From 2009 through 2012, the balance on income was also adjusted for the effects of Actavis, owing to inaccurate data during the period.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-6
Goods and services exports
Four-quarter moving total



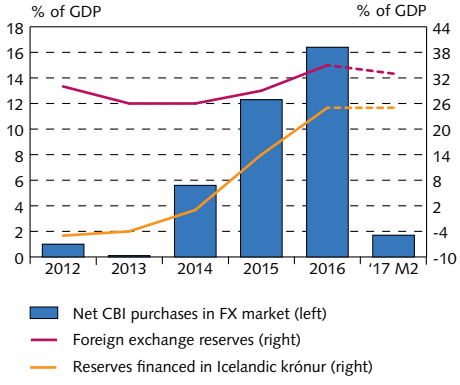
1. Revenues from foreign tourists in Iceland and Icelandic airlines' revenues from transporting foreign passengers to and from Iceland and other destinations.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-7
Payment card balance[1]



1. Residents' card use abroad is expressed with a negative sign. The card turnover balance shows the difference between foreign payment card use in Iceland and Icelanders' payment card use abroad.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-8
Central Bank FX market transactions and developments in foreign exchange reserves

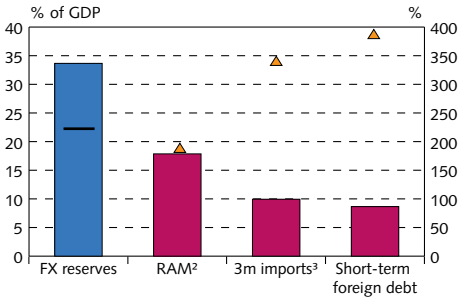


Source: Central Bank of Iceland.

Chart I-9

Central Bank reserve adequacy[1]

Year-end 2016

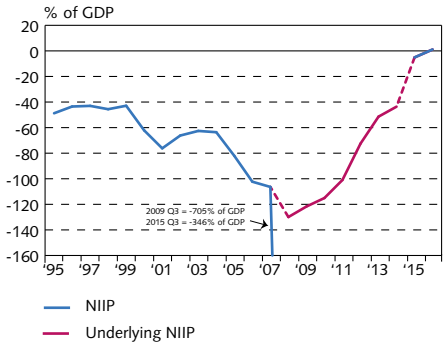


1. New investment in Treasury bonds is classified as short-term debt. Offshore krónur are classified as long-term debt. 2. IMF Reserve Adequacy Metric. 3. Average of three months of imports in the last four quarters.

Source: Central Bank of Iceland.

Chart I-10

Net international investment position[1]

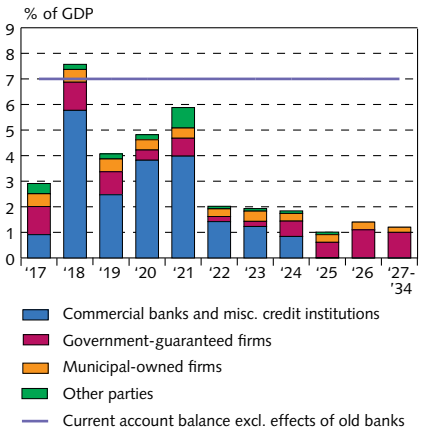


1. Based on underlying position from 2008 through end-2015; i.e., adjusted for the effects of settling the failed banks' estates and assuming equal distribution of assets to general creditors. At the end of 2015, the estates of the failed financial institutions reached composition agreements entailing the write-off of a large portion of their debt. As a result, there was no difference in the NIIP and the underlying NIIP.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-11

Repayment profile of long-term foreign loans, excluding the Treasury[1]

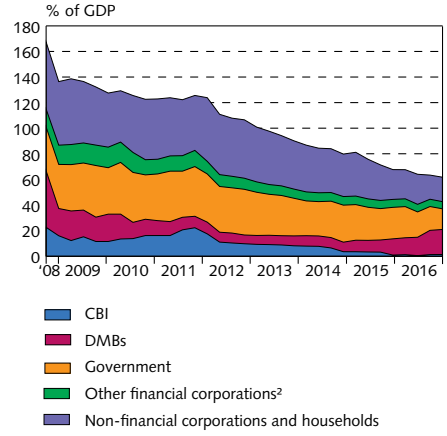


1. Foreign long-term loans and foreign-denominated debt to the holding companies of the failed banks. Based on position at year-end 2016 and exchange rate of 22 February 2017, plus commercial banks' foreign issuance in Q1/2017.

Sources: Financial information from DMBs and old banks' holding companies, Statistics Iceland, Central Bank of Iceland.

Chart I-12

External debt positio[1]

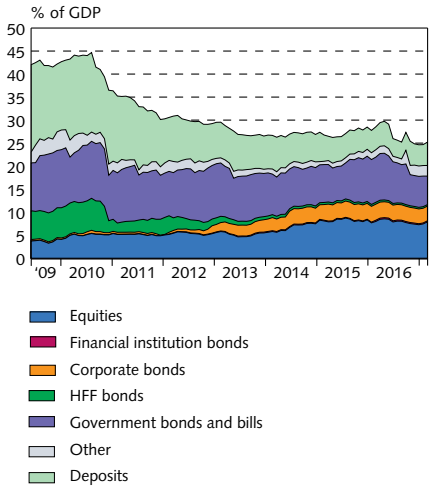


1. Excluding foreign direct investment, equities, investment fund shares, and derivatives. 2. Excluding the old banks' holding companies.

Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-13

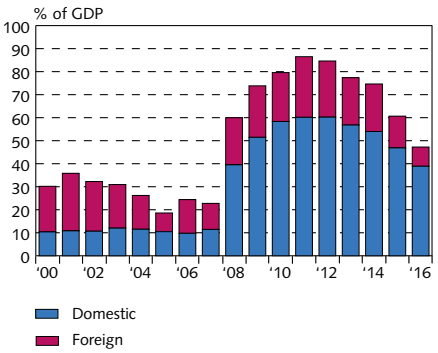
Foreign-owned deposits and electronically registered securities in Iceland



Sources: Statistics Iceland, Nasdaq CSD Iceland, Central Bank of Iceland.

Chart I-14

Treasury debt

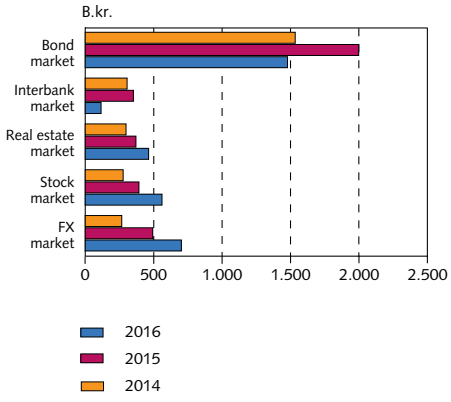


Source: Statistics Iceland.

II Financial markets

Chart II-1

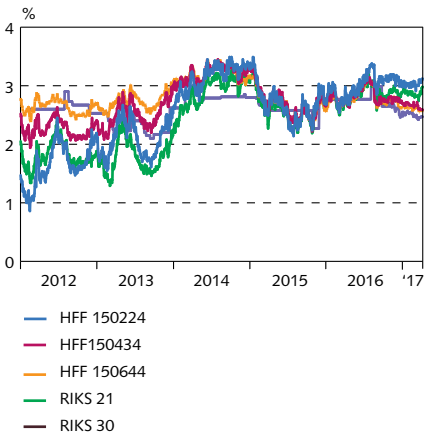
Domestic financial market turnover



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

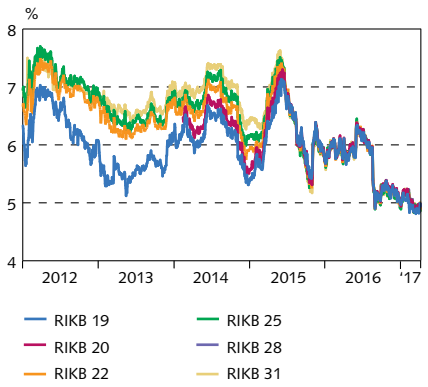
Chart II-2

Indexed bond yields



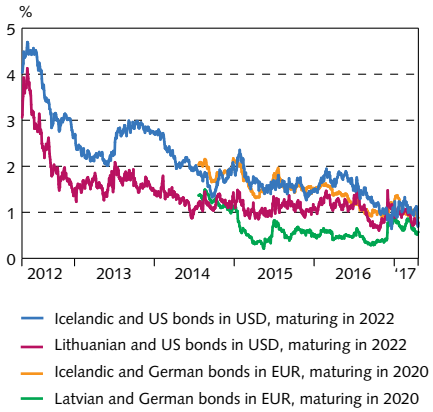
Source: Nasdaq Iceland.

Chart II-3
Nominal Treasury bond yields



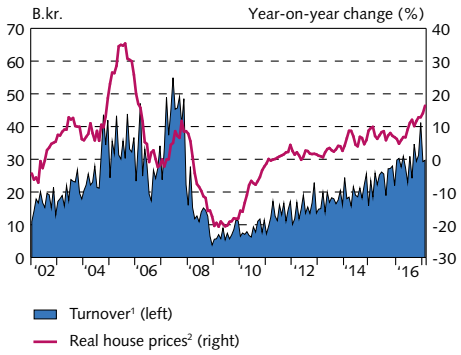
Source: Nasdaq Iceland.

Chart II-4
Government bond spreads



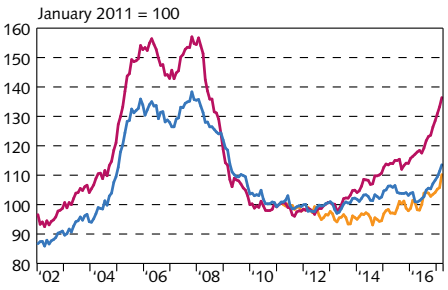
Source: Bloomberg.

Chart II-5
Housing market prices and turnover



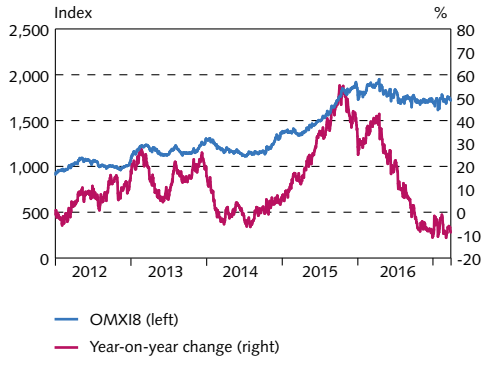
1. February 2017 price level. 2. Deflated with the consumer price index.
Sources: Registers Iceland, Central Bank of Iceland.

Chart II-6
House prices[1]



1. House price index relative to wage index, building cost index and rent price index.

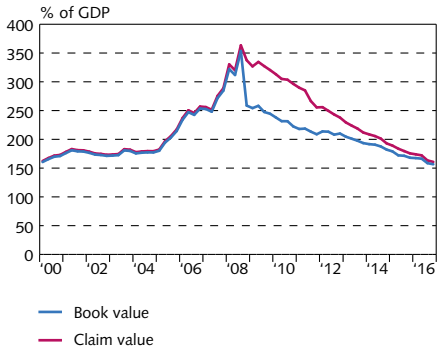
Chart II-7
OMXI8 share price index



Source: Nasdaq Iceland.

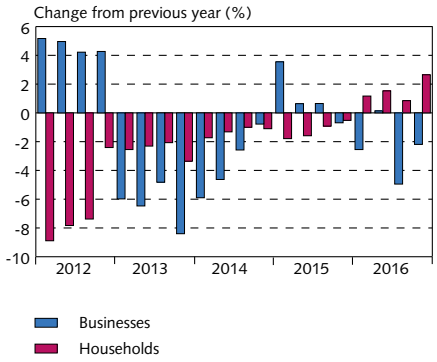
III Households and businesses

Chart III-1
Private sector credit-to-GDP ratio



Sources: Statistics Iceland, Central Bank of Iceland

Chart III-2
Real private sector credit growth[1]

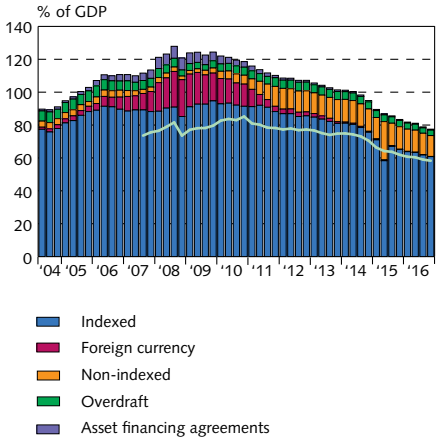


1. Credit on book value deflated with CPI. Excluding Government debt relief measures.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-3

Households: Debt as % of GDP

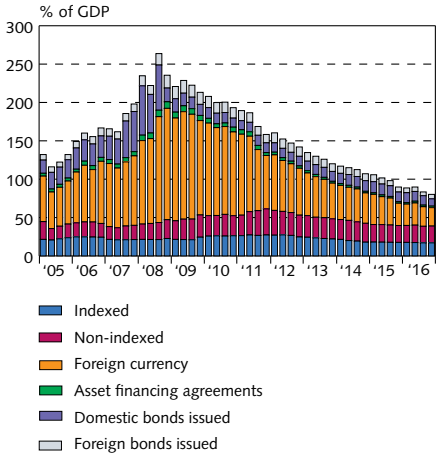
Q2/2004 - Q4/2016



Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-4

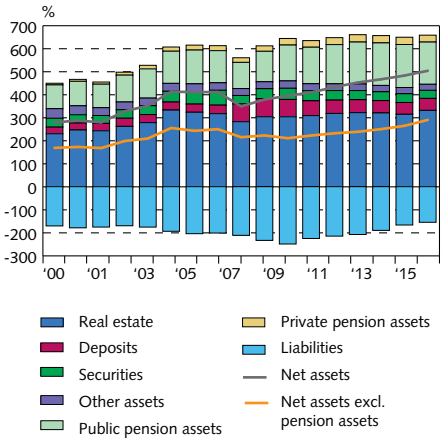
Companies: Debt as % of GDP[1]



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

Chart III-5

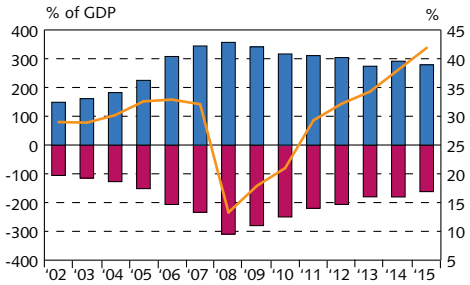
Households: Assets and liabilities as % of disposable income[1]



1. Pension fund assets are based on payouts after deduction of 30% income tax.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-6

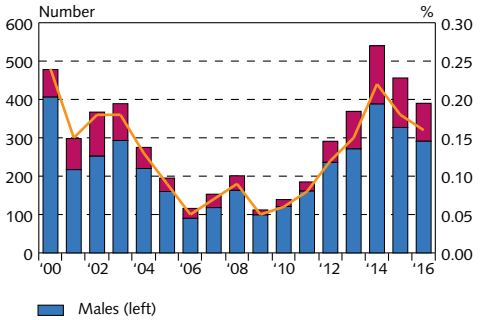
Companies: Assets and liabilities as % of GDP and equity ratio[1]



1. Commercial economy excluding pharmaceuticals, financial, and insurance companies (ÍSAT no. 03-20, 22-63, 68-82, 95-96).
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-7

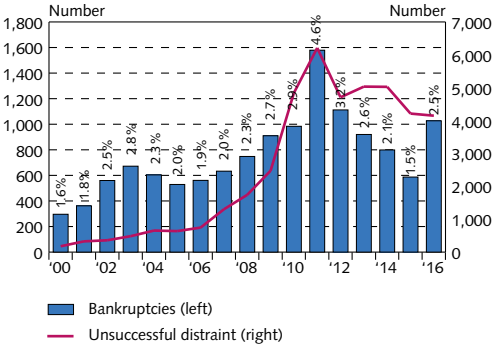
Individuals: Personal bankruptcies[1]



1. Total for entire year.
Sources: Council of District Court Administration, Statistics Iceland.

Chart III-8

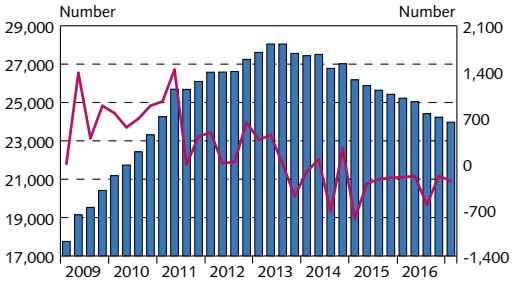
Companies: Bankruptcies and unsuccessful distraint actions[1]



1. The percentages show bankruptcies as a share of the total number of firms.
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Chart III-9

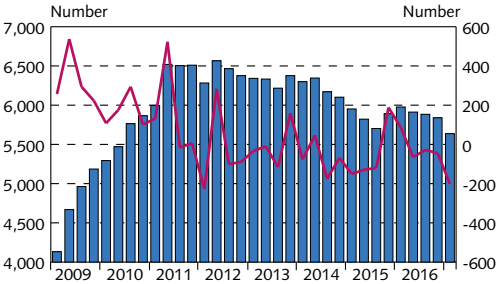
Individuals: Number on default register



Source: CreditInfo.

Chart III-10

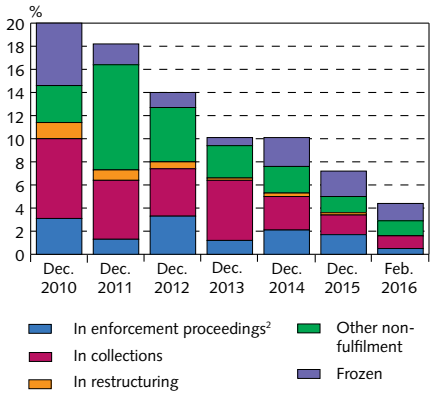
Companies in default



Source: CreditInfo.

Chart III-11

Households: Non-performing loans from D-SIBs and the HFF[1]



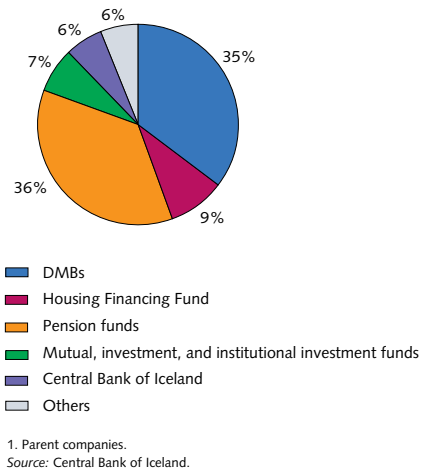
1. Domestic systemically important banks, parent companies, book value. 2. The share of loans in enforcement proceedings and collections declined in December 2011 because the HFF did not send out dunning letters or forced sale requests in the latter half of the month.
Source: Financial Supervisory Authority.

IV The financial system

Chart IV-1

Financial system: Distribution of assets[1]

Year-end 2016

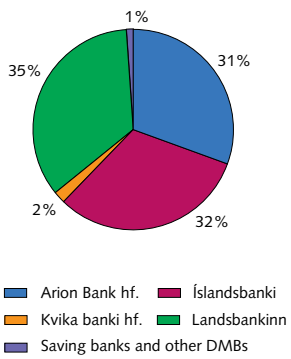


1. Parent companies.
Source: Central Bank of Iceland.

Chart IV-2

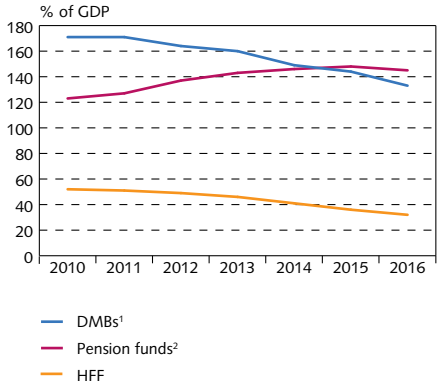
DMBs: Share of total assets[1]

Year-end 2016



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

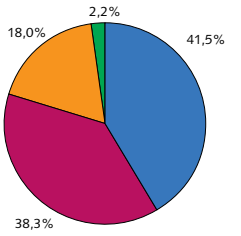
Chart IV-3
Financial system: Assets as % of GDP



1.Parent companies. 2. Preliminary figures for 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

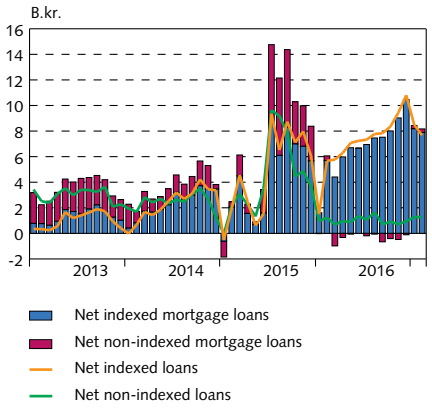
V Systemically important banks and deposit institutions – lending

Chart V-1
DMBs: Distribution of loans by type[1]
Year-end 2016



1. Parent companies. 2. Foreign currency loans include exchange rate-linked loans.
Source: Central Bank of Iceland.

Chart V-2
DMBs: Net new lending to households
January 2013 - February 2017

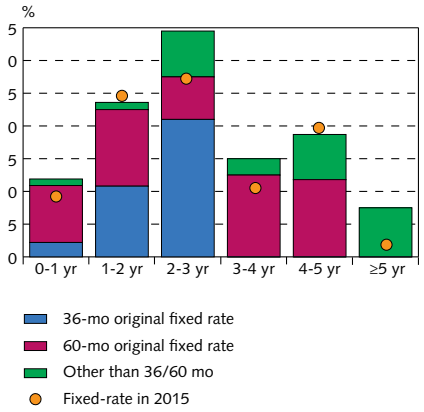


Source: Central Bank of Iceland.

Chart V-3

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

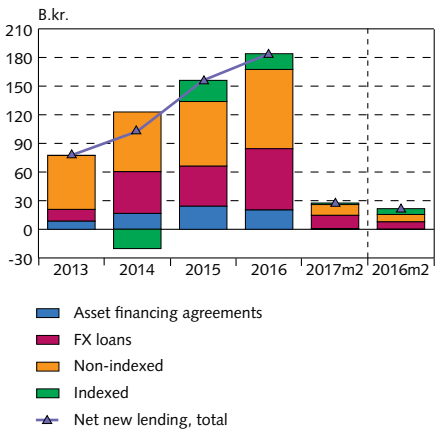
Year-end 2016



1. Amount of fixed-rate mortgage, classified by time to interest rate review. Differentiated by original fixed-rate period. Based on book value of the three largest commercial banks' loans and pension funds.
Source: Central Bank of Iceland.

Chart V-4

D-SIB: Net new corporate lending to firms[1]

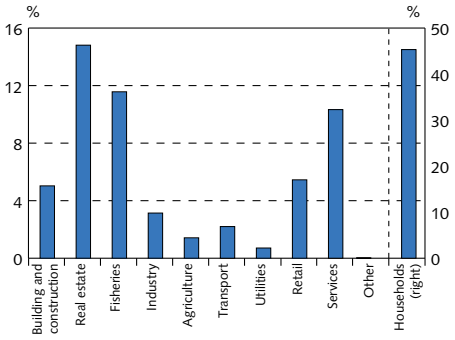


1. New loans net of prepayments. Prepayments are payments in excess of contractual payments. D-SIB: Domestic systemically important banks.
Source: Central Bank of Iceland.

Chart V-5

D-SIB: Classification of lending[1]

Year-end 2016

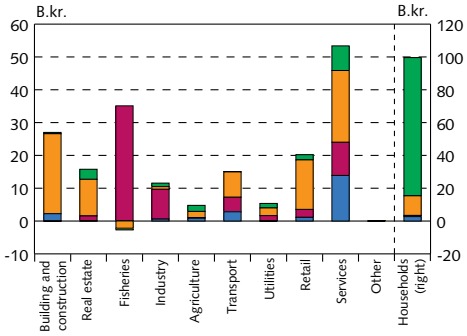


1. Loans to each sector as a share of total lending to households and operating companies. D-SIB: Domestic systemically important banks.
Source: Central Bank of Iceland.

Chart V-6

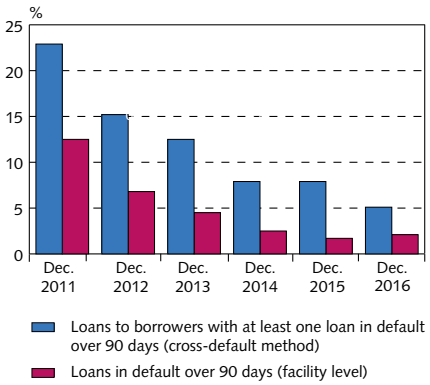
D-SIB: Net new lending[1]

By industry and loan form



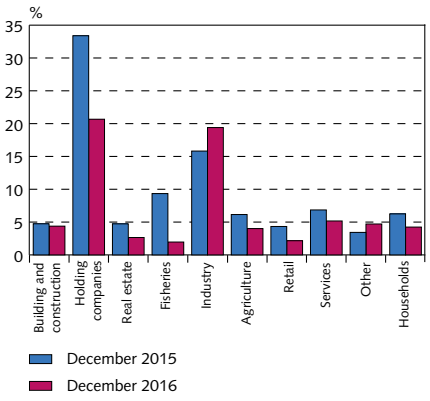
1. New loans net of prepayments. Prepayments are payments in excess of contractual payments. D-SIB: Domestic systemically important banks.
Source: Central Bank of Iceland.

Chart V-7
D-SIB: Default ratios[1]



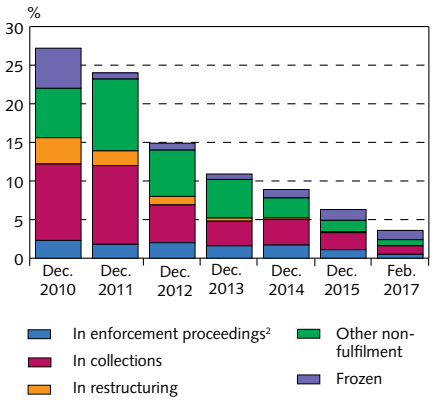
1. Domestic systemically important banks, parent companies. Book value.
Sources: Financial Supervisory Authority, Central Bank of Iceland.

Chart V-8
D-SIB: Non-performing loan ratios[1]



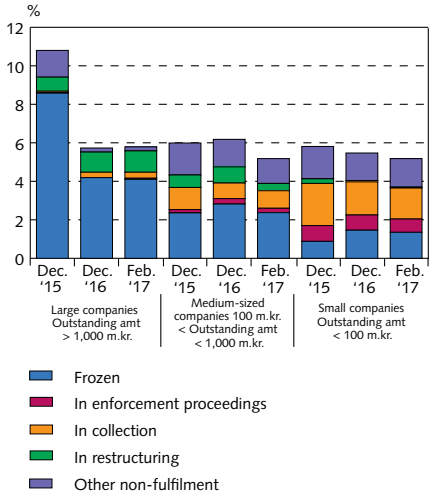
1. Domestic systemically important banks, parent companies. Book value.
Source: Financial Supervisory Authority.

Chart V-9
D-SIBs: Status of household loans[1]



1. Domestic systemically important banks, parent companies. Book value.
Source: Financial Supervisory Authority.

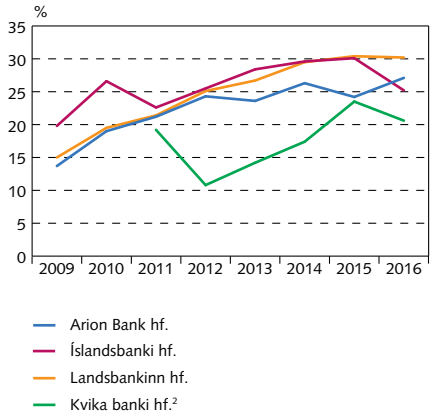
Chart V-10
D-SIB: Status of non-performing corporate loans, by claim amount[1]



1. Percentage of total loans. Domestic systemically important banks, parent companies. Book value.
Source: Financial Supervisory Authority.

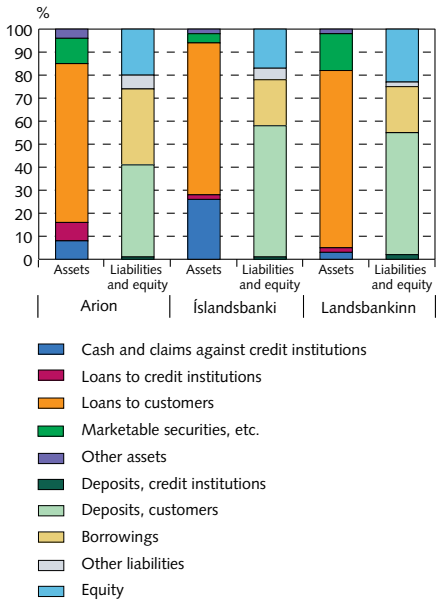
VI Systemically important banks and other deposit intitutions – operations and liquidity

Chart VI-1
Commercial banks: Capital adequacy ratios[1]



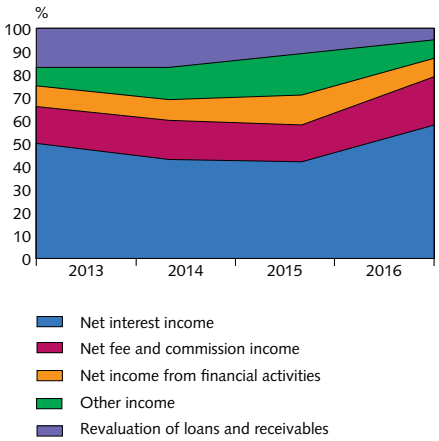
1. Consolidated figures. Capital base as % of risk-weighted base.
2. CAR for MP bank until 2015.
Sources: Commercial banks' annual accounts.

Chart VI-2
D-SIB: Assets and liabilities[1]
Year-end 2016



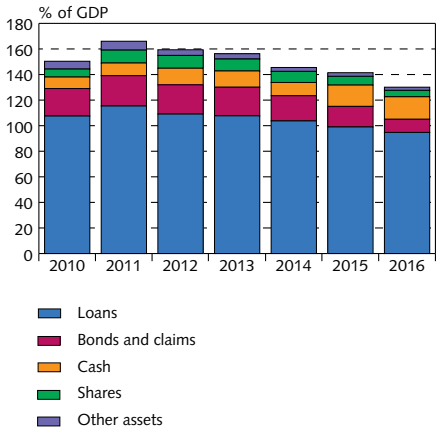
1. Domestic systemically important banks, consolidated accounts.
Sources: Commercial banks' annual accounts, Central Bank of Iceland.

Chart VI-3
D-SIB: Operating income[1]



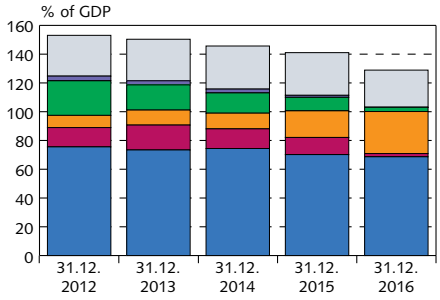
1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' annual accounts, Central Bank of Iceland.

Chart VI-4
D-SIB: Assets as % of GDP[1]



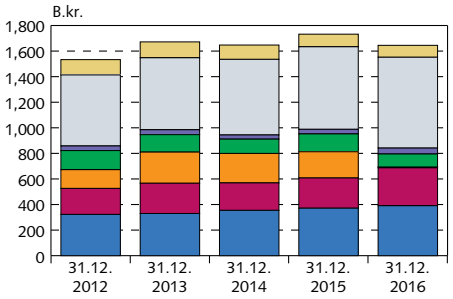
1. Domestic systemically important banks, parent companies.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VI-5
D-SIB: Funding[1]



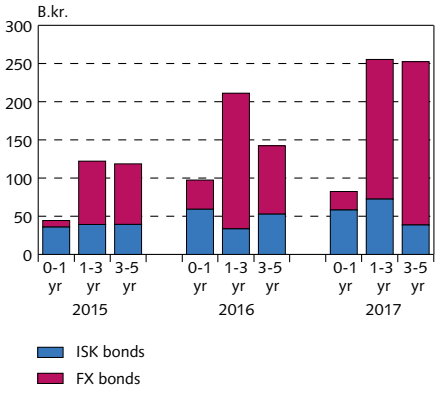
1. Domestic systemically important banks, parent companies. Including pension fund deposits.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VI-6
D-SIB: Depositors[1]



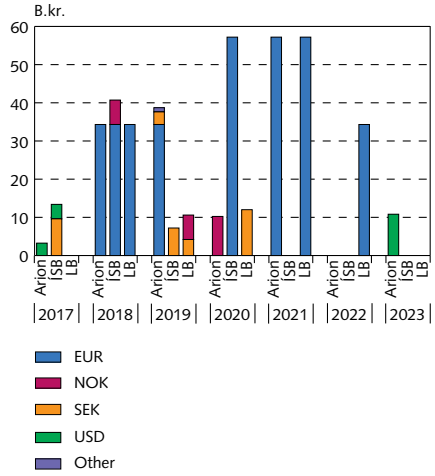
1. Domestic systemically important banks, parent companies.
Source: Central Bank of Iceland.

Chart VI-7
D-SIB: Bond maturities[1]



1. Instalments and interest. Domestic systemically important banks, consolidated figures. As of end-February each year.
Source: Central Bank of Iceland.

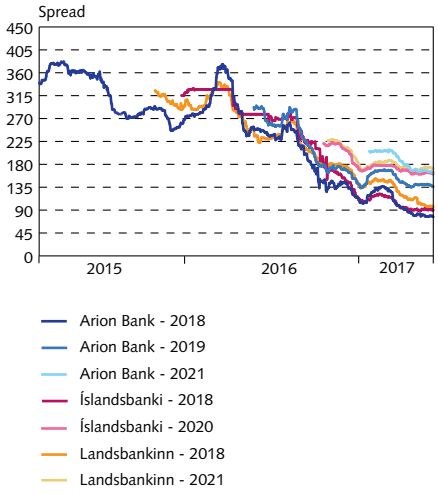
Chart VI-8
D-SIB: Foreign bonds by maturity and currency[1]



1. At 7 March 2017 exchange rate. The total outstanding balance of the Landsbankinn-LBI debt is in USD with 17.9 b.kr. maturing in 2024.
Source: Nasdaq Iceland.

Chart VI-9

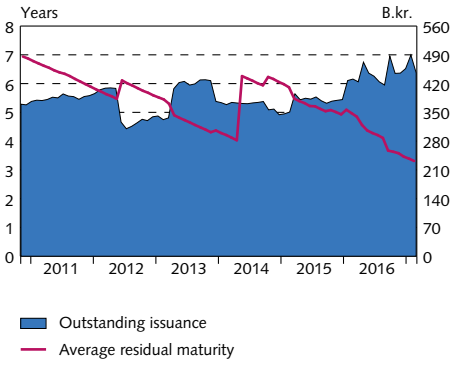
D-SIB: Spread on listed foreign bonds, EUR[1]



1. Spread on Euro benchmark curve.
Source: Bloomberg.

Chart VI-10

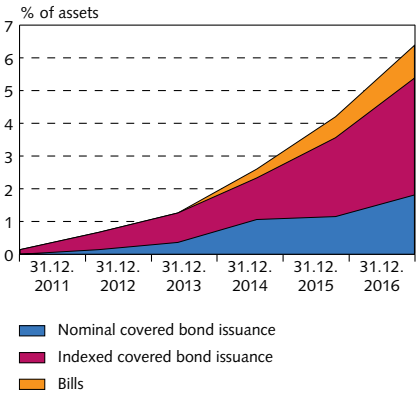
D-SIB: Average residual maturity and issuance of funding in foreign currency[1]



1. D-SIB: Domestic systemically important banks.
Sources: Nasdaq Iceland, Central Bank of Iceland.

Chart VI-11

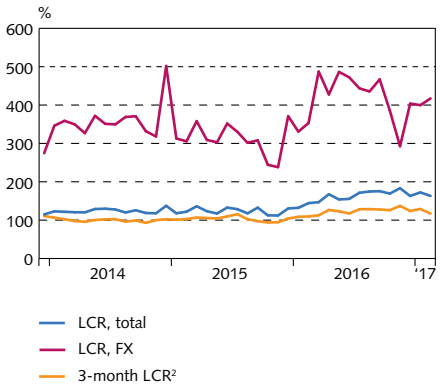
D-SIB: Total outstanding domestic issuance[1]



1. D-SIB: Domestic systemically important banks. Percentage of total assets.
Source: Nasdaq Iceland.

Chart VI-12

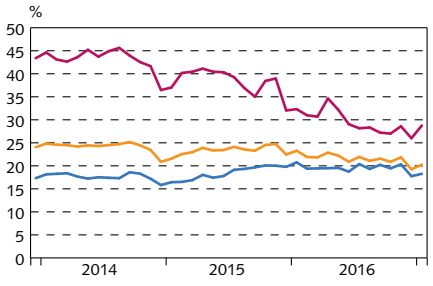
D-SIB: Liquidity coverage ratio[1]



1. Domestic systemically important banks, consolidated figures 2. In accordance with liquidity rules, the Central Bank also monitors three-month liquidity coverage ratios.
Source: Central Bank of Iceland.

Chart VI-13

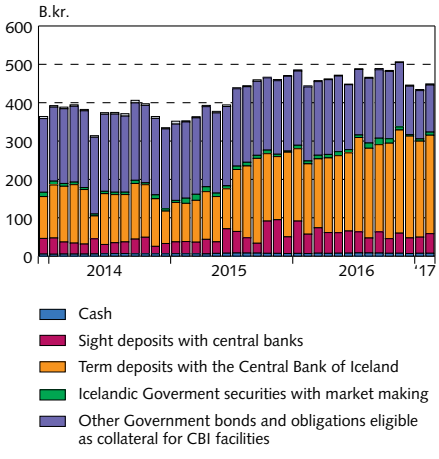
DMBs: Ratio of liquid assets to total assets[1]



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

Chart VI-14

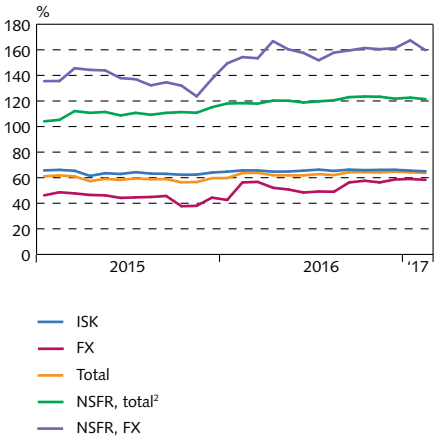
D-SIB: Liquid assets[1]



1. Liquid assets in Icelandic krónur. Domestic systemically important banks, parent companies.
Source: Central Bank of Iceland.

Chart VI-15

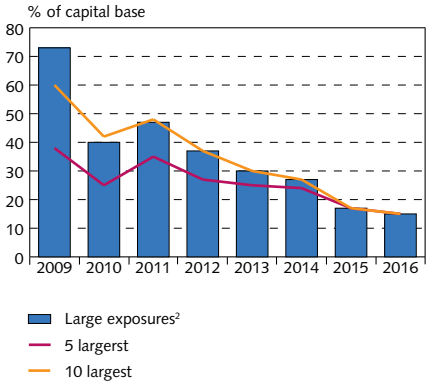
D-SIB: Ratio of core funding to total funding and NSFR ratio[1]



1. D-SIB: Domestic systemically important banks. Core funding is defined here as deposits held by resident individuals and non-financial companies (excluding pension funds), plus capital, subordinated loans, and issued negotiable securities with a residual maturity of more than three years. 2. According to Central Bank rules on stable funding, the Bank also monitors the NSFR for all currencies compbined.
Source: Central Bank of Iceland.

Chart VI-16

D-SIB: Large exposures[1]

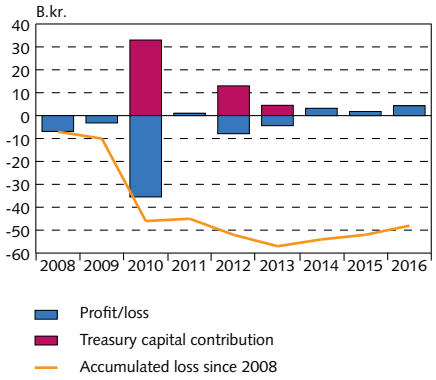


1. Consolidated figures. Large exposures to a client or group of clients may not exceed 25% of a financial undertaking's capital base. D-SIB: Domestic systemically important banks. 2. An exposure incurred by a financial undertaking to a client or a group of connected clients the value of which amounts to 10% or more of the undertaking's capital base.
Source: Financial Supervisory Authority.

VII Other financial market entities

Chart VII-1

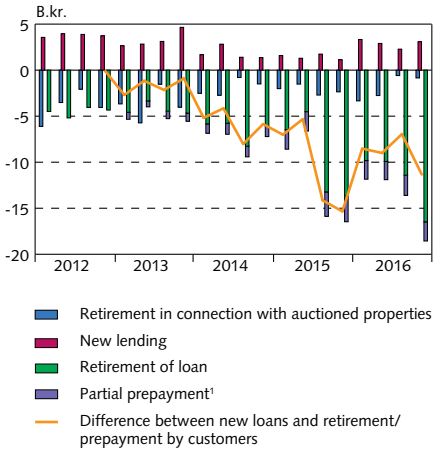
HFF: Profit/loss and Treasury capital contribution



Sources: HFF annual accounts.

Chart VII-2

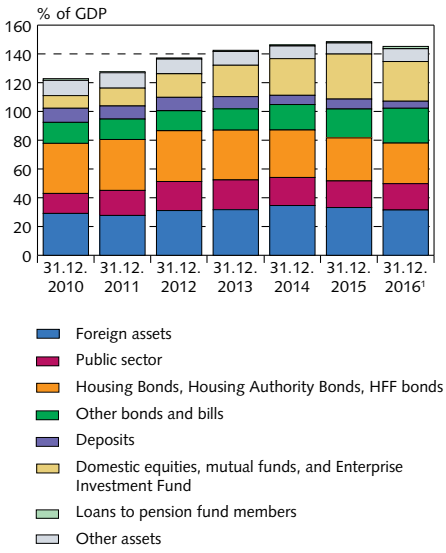
HFF: Retirement/prepayment of customer loans and new lending



1. Data for 2012 not available.
Source: Housing Financing Fund.

Chart VII-3

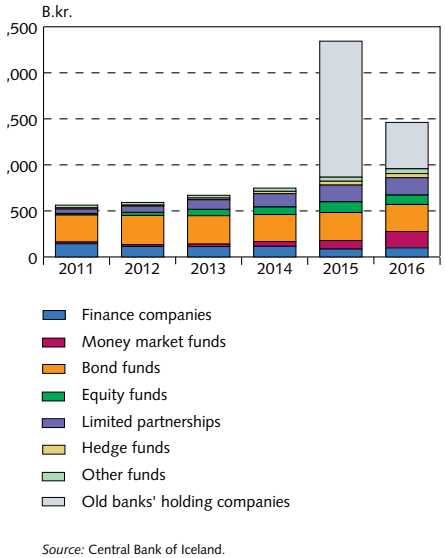
Pension funds: Distribution of assets[1]



1. Based on preliminary figures.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart VII-4

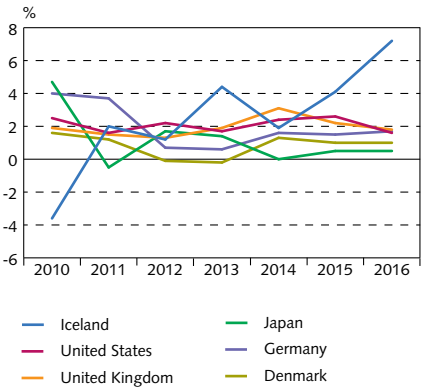
Size of the shadow banking system



Source: Central Bank of Iceland.

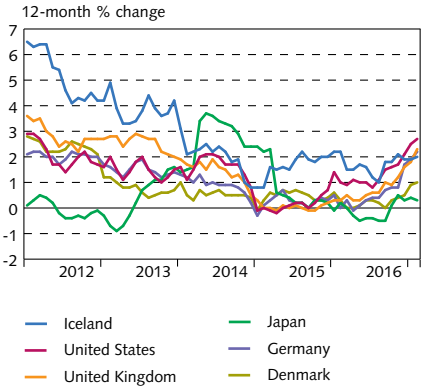
VIII International comparison

Chart VIII-1
Output growth



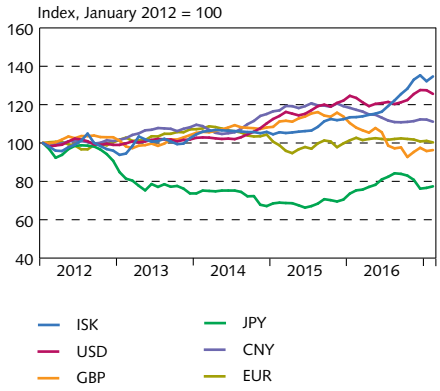
Sources: IMF, Statistics Iceland.

Chart VIII-2
Inflation[1]



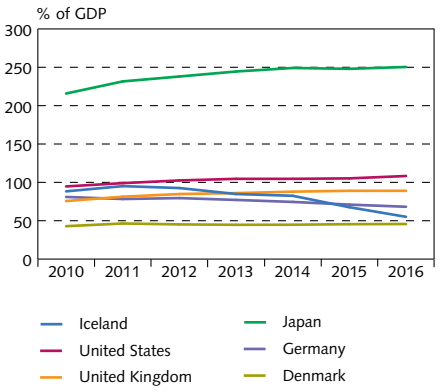
1. Consumer price index.
Source: OECD.

Chart VIII-3
Currency exchange rates[1]



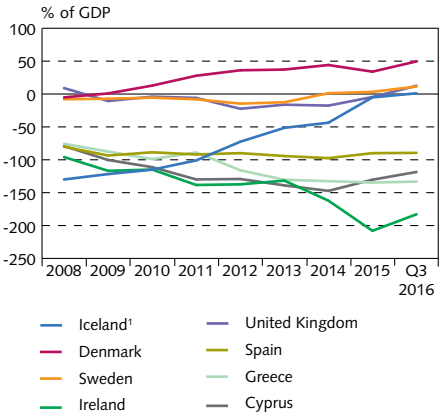
1. BIS nominal indices.
Source: BIS.

Chart VIII-4
Government debt



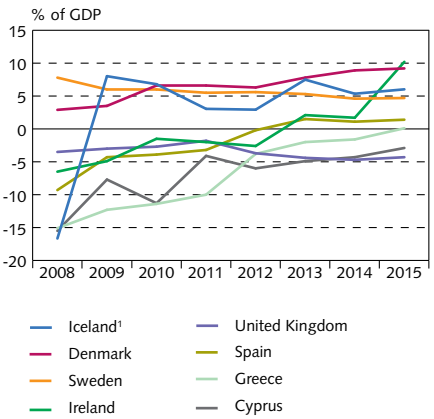
Source: IMF.

Chart VIII-5
International investment position



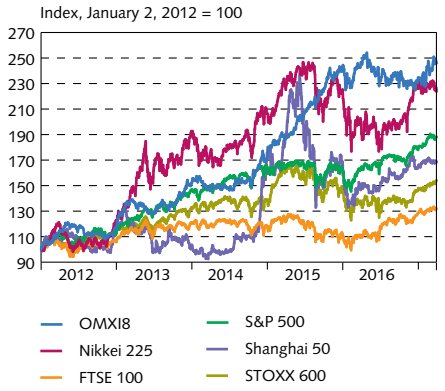
1. Iceland's IIP is adjusted for the effects of the old banks in 2008-2015.
Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart VIII-6
Current account balance



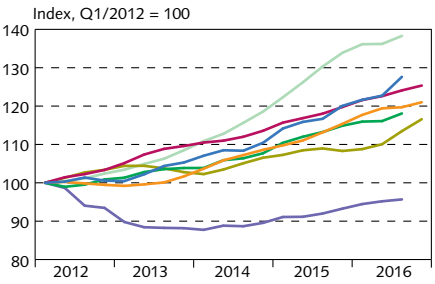
1. The current account is adjusted for the effects of Actavis in 2009-2012 and for the effects of the old banks from Q4/2008 onwards.
Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart VIII-7
Share price indices



Source: Macrobond.

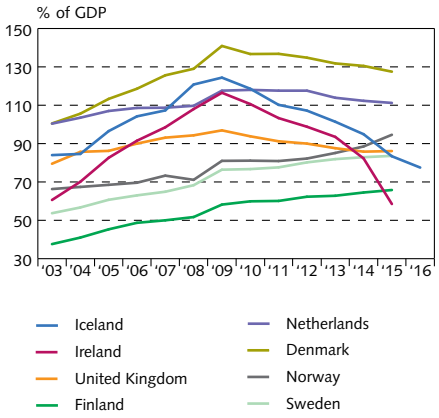
Chart VIII-8
Real estate prices



Source: OECD.

Chart VIII-9

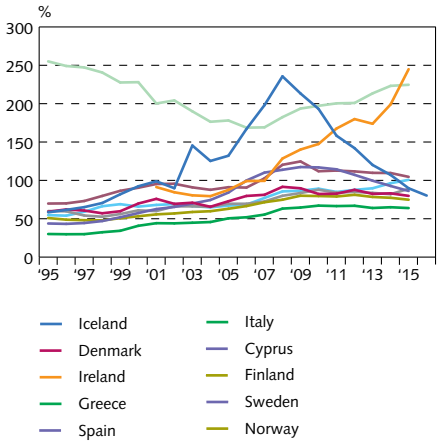
Households: Debt as % of GDP



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

Chart VIII-10

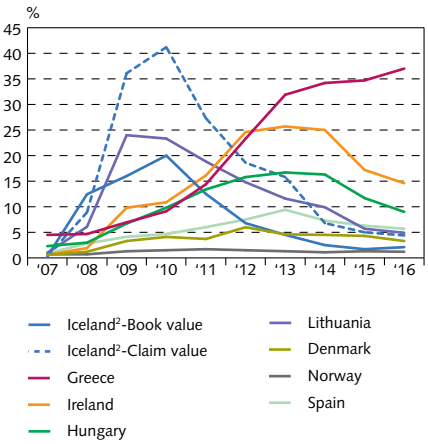
Companies: Debt as % of GDP[1]



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

Chart VIII-11

Default ratios[1]

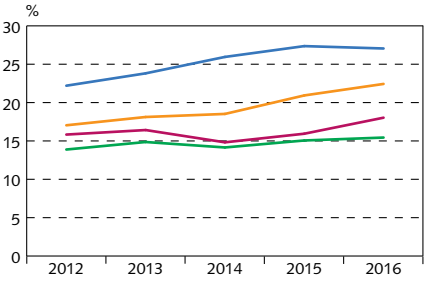


1. Households and businesses. Q3 figures for year 2016 except Iceland. Banks' non-performing loans as a percentage of gross loan portfolio w/o write-downs. 2. 2007: Figures estimated from the annual accounts of the failed banks. 2008: Central Bank estimates.
Sources: International Monetary Fund, World Bank, Financial Supervisory Authority, Central Bank of Iceland.

Chart VIII-12

Tier 1 ratio

Average of ratios

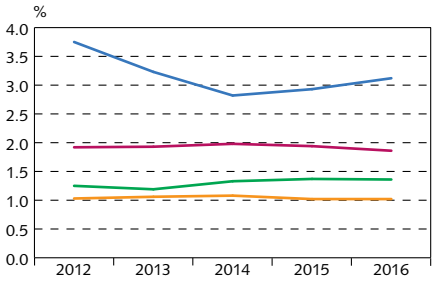


1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-13

Net interest margin

Average of ratios



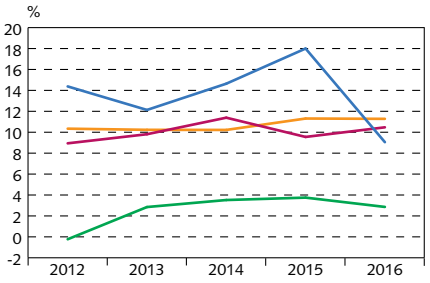
D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-14

Return on equity

Average of ratios



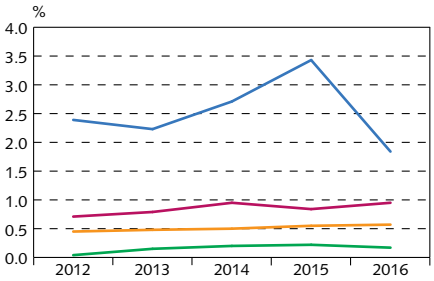
D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-15

Return on total assets

Average of ratios



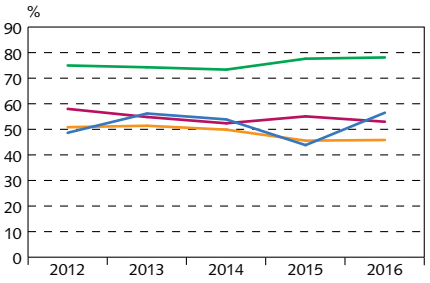
D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-16

Cost-to-income

Average of ratios



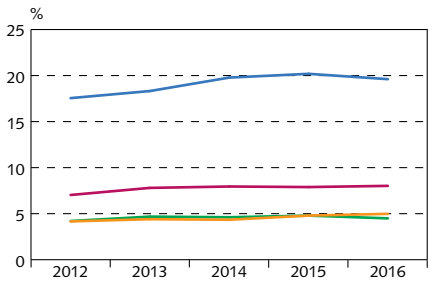
D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-17

Leverage ratio[1]

Average of ratios



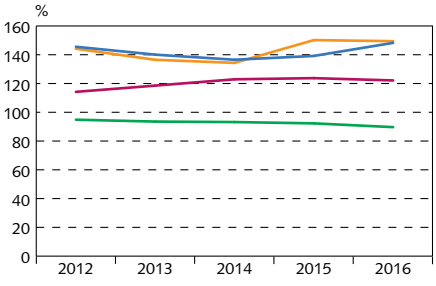
D-SIBs[2]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. IFRS Tier 1 leverage ratio. 2. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-18

Loans/deposits

Average of ratios



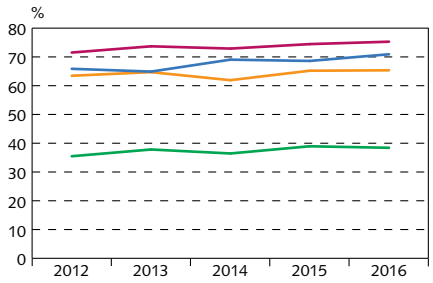
D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Chart VIII-19

Loans/assets

Average of ratios



D-SIBs[1]
Nordic banks similiar in size to the D-SIBs
Large Nordic banks
Large European banks

1. D-SIB: Domestic systemically important banks.
Source: SNL Financial.

Appendix II

Tables

Table 1 Financial system assets[1]

Assets, b.kr	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Central Bank of Iceland	1,075	1,004	957	948	901	-5
Commercial banks	2,850	2,968	2,939	3,175	3,188	0
Savings banks	59	60	59	22	23	4
Other credit institutions[1]	1,234	1,241	1,216	2,653	1,718	-35
– Housing Financing Fund	876	863	824	804	786	-2
Pension funds	2,439	2,696	2,935	3,284	3,514	7
Insurance companies	155	165	169	171	177	4
Mutual investment, and institutional funds	410	452	488	599	670	12
Total assets	8,222	8,586	8,762	10,852	10,192	-6

1. Failed banks' holding companies are included from 31.12.2015.

Source: Central Bank of Iceland

Table 2 DMB assets

Assets, b.kr.	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Cash and cash balance with Central Bank	159,955	184,184	139,069	294,599	385,056	31
Deposits in domestic deposit-taking corporations	4,543	3,993	5,286	2,888	4,237	47
Deposits in foreign deposit-taking corporations	101,666	84,187	91,729	99,074	56,309	-43
Domestic credit	1,815,073	1,901,695	1,980,343	2,072,205	2,191,421	6
Foreign credit	165,879	184,077	162,477	142,601	132,553	-7
Domestic marketable bonds and bills	333,885	266,856	270,133	263,711	206,055	-22
Foreign marketable bonds and bills	83,331	163,054	133,415	99,227	53,590	-46
Domestic equities and investment fund shares	143,017	147,036	144,260	152,631	116,229	-24
Foreign equties and investment fund shares	11,191	2,771	2,786	1,844	2,197	19
Other domestic assets	86,568	86,654	63,576	62,516	58,205	-7
Other foreign assets	4,142	3,909	4,315	5,767	6,703	16
Total	2,909,250	3,028,416	2,997,389	3,197,062	3,212,555	0

Source: Central Bank of Iceland.

Table 3 Other financial coporations' assets

Assets, b.kr.	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Cash and cash balance with Central Bank	19,551	24,472	41,944	38,819	84,291	117
Deposits in domestic deposit-taking corporations	78,679	68,071	61,781	233,420	30,744	-87
Deposits in foreign deposit-taking corporations	3,851	3,532	5,495	616,589	8,907	-99
Domestic credit	1,049,298	1,039,057	1,009,705	944,091	871,247	-8
Foreign credit	0	0	5	163,189	47	-100
Domestic marketable bonds and bills	36,152	44,326	35,418	241,551	137,843	-43
Foreign marketable bonds and bills	0	861	1,076	4,965	1,308	-74
Domestic equities and investment fund shares	3,240	6,636	8,258	221,392	2,832	-99
Foreign equties and investment fund shares	0	0	0	94,476	1,032	-99
Other domestic assets	41,333	50,798	49,460	68,700	31,092	-55
Other foreign assets	2,326	3,529	2,521	25,483	3,258	-87
Total	1,234,429	1,241,281	1,215,662	2,652,674	1,172,601	-56

Source: Central Bank of Iceland.

Table 4 Pension fund assets

Assets, b.kr.	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Deposits in domestic deposit-taking corporations	165,265	161,525	129,275	151,726	118,245	-22
Deposits in foreign deposit-taking corporations	2,622	3,239	6,273	8,605	18,145	111
Domestic credit	175,172	176,127	171,063	175,253	238,277	36
Foreign credit	-	-	-	80	199	149
Domestic marketable bonds and bills	1,234,253	1,325,519	1,408,405	1,509,429	1,706,646	13
Foreign marketable bonds and bills	6,037	4,245	3,269	1,777	1,005	-43
Domestic equities and investment fund shares	290,943	412,588	511,373	692,267	667,815	-4
Foreign equties and investment fund shares	545,034	591,541	685,428	724,540	744,483	3
Domestic insurance and pension entitlements	11,953	13,214	13,291	14,281	15,915	11
Foreign insurance and pension entitlements	-	-	-	35	44	27
Other domestic assets	7,700	7,578	6,695	6,335	3,670	-42
Other foreign assets	-	-	-	3	3	0
Total	2,438,979	2,695,575	2,935,072	3,284,331	3,514,447	7

Source: Central Bank of Iceland.

Table 5 Insurance companies' assets

Assets, b.kr.	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Cash and cash balance with Central Bank	–	–	–	1,753	2,053	17
Deposits in domestic deposit-taking corporations	14,461	13,832	8,394	7,258	4,452	-39
Deposits in foreign deposit-taking corporations	1,032	1,017	68	1,395	208	-85
Domestic credit	3,418	3,070	2,880	1,239	1,487	20
Foreign credit	0	8	1	0	0	0
Domestic marketable bonds and bills	61,282	68,390	70,578	66,092	67,524	2
Foreign marketable bonds and bills	4,361	3,658	4,495	3,999	3,740	-6
Domestic equities and investment fund shares	34,778	37,806	43,745	53,421	60,664	14
Foreign equties and investment fund shares	6,580	6,708	6,932	6,457	5,945	-8
Domestic insurance and pension entitlements	17,616	19,287	19,911	17,024	17,869	5
Foreign insurance and pension entitlements	1,094	1,162	1,521	7,257	7,451	3
Other domestic assets	8,712	8,263	8,771	3,835	4,426	15
Other foreign assets	1,259	1,493	1,269	1,117	1,312	17
Total	154,592	164,694	168,565	170,847	177,131	4

Source: Central Bank of Iceland.

Table 6 D-SIB: Income and expenses[1]

Income and expenses, b.kr	*31.12. 2012*	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*Change from 31.12. 2015, %*
Arion Bank hf.						
Operating income	49,269	44,025	53,649	86,170	53,439	-38
Net interest income	27,142	23,800	24,220	26,992	29,900	11
Net fee and commission income	10,748	11,223	13,309	14,484	13,978	-3
Other operating income	11,379	9,002	16,120	44,694	9,561	-79
Operating expenses	24,435	25,072	26,701	27,811	30,540	10
Change in loan values	4,690	680	-2,135	3,087	-7,236	-334
Income tax expense	4,695	6,015	7,322	5,953	9,282	56
Net gain from discontinued operations, net of tax	1,607	399	6,833	360	886	146
Profit	17,056	12,657	28,594	49,679	21,739	-56
Íslandsbanki hf.						
Operating income	47,649	42,597	42,443	44,673	52,716	18
Net interest income	32,940	28,430	27,105	28,010	31,802	14
Net fee and commission income	9,459	10,433	11,483	13,170	13,723	4
Other operating income	5,250	3,734	3,855	3,493	7,191	106
Operating expenses	25,644	26,567	23,956	24,827	26,484	7
Change in loan values	-5,285	-16,299	-8,810	-8,135	-735	-91
Income tax expense	7,111	10,187	8,683	8,729	9,748	12
Net gain from discontinued operations, net of tax	3,239	927	4,136	1,326	2,939	122
Profit	23,418	23,069	22,750	20,578	20,158	-2
Landsbankinn hf.						
Operating income	55,981	55,240	43,486	54,395	49,018	-10
Net interest income	35,584	34,314	28,073	32,324	34,650	7
Net fee and commission income	4,448	5,291	5,836	6,841	7,809	14
Other operating income	15,949	15,635	9,577	15,230	6,559	-57
Operating expenses	23,815	27,206	24,088	23,732	23,514	-1
Change in loan values	4,391	-13,053	-20,128	-18,216	318	-102
Income tax expense	4,415	12,328	9,789	12,419	8,543	-31
Net gain from discontinued operations, net of tax	2,134	0	0	0	0	-
Profit	25,494	28,759	29,737	36,460	16,643	-54
D-SIBs						
Operating income	152,899	141,862	139,578	185,238	155,173	-16
Net interest income	95,666	86,544	79,398	87,326	96,352	10
Net fee and commission income	24,655	26,947	30,628	34,495	35,510	3
Other operating income	32,578	28,371	29,552	63,417	23,311	-63
Operating expenses	73,894	78,845	74,745	76,370	80,538	5
Change in loan values	3,796	-28,672	-31,073	-23,264	-7,653	-67
Income tax expense	16,221	28,530	25,794	27,101	27,573	2
Net gain from discontinued operations, net of tax	6,980	1,326	10,969	1,686	3,825	127
Profit	65,968	64,485	81,081	106,717	58,540	-45

1. Figures are based on methodology used by SNL Financial. Figures on operating income and expense could differ from those published in the banks' annual accounts.

Source: SNL Financial.

Table 7 D-SIB: Key ratios

%	31.12.2012	31.12.2013	31.12.2014	31.12.2015	31.12.2016
Return on equity	14.0	12.2	14.1	16.8	8.9
Return on assets	2.3	2.2	2.7	3.5	1.8
Expenses as a share of net interest and commission income	62.0	71.0	68.0	63.0	62.0
Expenses as a share of total assets	2.7	2.8	2.5	2.5	2.6
Net interest and commission income as a share of total income	80.0	66.0	64.0	58.0	81.0
Net interest as a share of total assets	3.4	3.0	2.7	2.9	3.0
Capital ratio	25.0	26.2	28.5	28.2	27.7
Foreign exchange balance	7.0	6.4	6.1	2.2	-0.5
Liquidity coverage ratio (LCR) total					
Liquidity coverage ratio (LCR) FX		360.4	501.8	371	403.8
Net stable funding (NSFR) total			104.5	115.4	123.0
Net stable funding (NSFR) FX			136.7	136.9	161.8

Source: Central Bank of Iceland.

Table 8 Commercial banks' foreign bond issues, last 12 months (1.4.2016 - 31.3.2017)

Issuer	Date	Currency	Ammount B.kr.	Years	Premium on interbank rate[1], %
Arion Bank	April 2016	USD	3.7	1.5	1.93
	April 2016	EUR	43.0	3.0	2.5
	Dec. 2016 and Jan. 2017	EUR	60.0	5.0	1.625 fixed
Total			106.7		
Íslandsbanki	May 2016	EUR[2]	10.5	2.2	2.875 fixed
	September 2016	EUR	65.0	4.0	1.75 fixed
Total			75.5		
Landsbankinn	April 2016	SEK[3]	1.5	3.2	2.6
	April 2016	NOK[3]	3.7	3.2	2.6
	September 2016	EUR	65.0	4.5	1.625 fixed
	November 2016	SEK	3.1	4.0	1.5
	November 2016	SEK	9.2	3.5	1.38 fixed
	March 2017	EUR	34.0	5.0	1.375 fixed
Total			116.5		

1. Interest premium on three-month interbank rate in the relevant currency unless otherwise specified. 2. Addition to the issue originally issued in july 2015. 3. Additions to the issues originally issued in December 2015.
Source: NASDAQ OMX Iceland.

Table 9 Capital buffers

Capital buffer	FSC recommendation	FME decision	Value %	Applicable from
Systemic risk buffer, D-SIB	22.1.2016	1.3.2016	3	1.1.2017
Systemic risk buffer, other DMBs	22.1.2016	1.3.2016	1.5	1.1.2017
			2	1.1.2018
			3	1.1.2019
Capital buffer on systemically important institutions	22.1.2016	1.3.2016	2	1.4.2016
Countercyclical capital buffer	22.1.2016	1.3.2016	1	1.3.2017
	30.9.2016	1.11.2016	1.25	1.11.2017
Capital conservation buffer			2.5	1.1.2017

Sources: Financial Supervisory Authority, Ministry of Finance and Economic Affairs.

Appendix III

Glossary

Balance on goods	The difference between the value of exported and imported goods.
Balance on income	The difference between revenues and expenses due to primary income and secondary income.
Balance on services	The difference between the value of exported and imported services.
Bill	A debt instrument with a short maturity, generally less than one year.
Bond	A written instrument acknowledging the issuer's unilateral and unconditional obligation to remit a specified monetary payment.
Book value of a loan	The nominal value or outstanding balance of a loan once haircuts or loan loss provisions have been deducted.
Capital base	The sum of Tier 1 and Tier 2 capital after adjusting for deductions; cf. Articles 84-85 of Act no. 161/2002.
Capital buffer	Additional capital required by the Financial Supervisory Authority upon receiving recommendations from the Financial Stability Council. Capital buffers currently in effect are: capital conservation buffer, countercyclical capital buffer, capital buffer for systemically important institutions, and systemic risk buffer.
Calculated return on equity	The profit for a given period as a percentage of average equity over the same period.
Capital ratio	The ratio of the capital base to risk-weighted assets (risk base).
Claim value of a loan	The nominal value or outstanding balance of a loan before deducting discounts or loan loss provisions.
Commercial bank	A financial institution that has been granted an operating licence pursuant to Article 4, Paragraph 1, (1) of the Act on Financial Undertakings, no. 161/2002.
Credit institution (credit undertaking)	A company whose business is to receive deposits or other repayable funds from the public and to grant credit on its own account.
Cross-default nonperforming loans	Based on the cross-default method, all of a given customer's loans are considered to be in default if one loan is 90 days past due, frozen, or deemed unlikely to be repaid.
Current account balance	The sum of the goods, services, and income account balances.
Deposit institutions	Commercial banks and savings banks licenced to accept deposits.
Disposable income	Income net of taxes.
Domestic systemically important banks (D-SIB)	Banks that, due to their size or the nature of their activities, could have a significant impact on the stability of the financial system and the general economy, in the opinion of the Financial Stability Council. Currently, D-SIBs in Iceland are Arion Bank hf., Íslandsbanki hf., and Landsbankinn hf. In addition, the Housing Financing Fund (HFF) is considered a systemically important supervised entity.
Economic outlook index	Corporate expectations concerning economic developments and prospects, based on the Gallup survey carried out among executives from Iceland's 400 largest firms.
Encumbrance ratio	The proportion of a bank's assets that are hypothecated for funding.
Equity	Assets net of liabilities.
Expense ratio	The ratio of operating expense net of the largest irregular items to operating income, excluding loan valuation changes and discontinued operations.

Facility-level default	Based on the facility method, a given customer's loan is considered to be in default if it is past due by 90 days or more.
Financial system	Deposit institutions; miscellaneous credit institutions (including the Housing Financing Fund, HFF); pension funds; insurance companies; mutual, investment, and institutional investment funds; and State credit funds.
Foreign exchange imbalance	Difference between assets and liabilities in foreign currencies.
Foreign exchange reserves	Foreign assets managed by monetary authorities and considered accessible for direct or indirect funding of an external balance of payments deficit.
Holding company	A company whose sole objective is to acquire stakes in other companies, administer them, and pay dividends from them without participating directly or indirectly in their operations, albeit with reservations concerning their rights as shareholders.
Indexation imbalance	Difference between indexed assets and indexed liabilities.
Interbank market	A market in which deposit institutions lend money to one another for a period ranging from one day to one year.
International investment position (IIP)	The value of residents' foreign assets and their debt to non-residents. The difference between assets and liabilities is the net international investment position (NIIP), also referred to as the net external position.
Interest burden	Interest payments as a percentage of disposable income.
Interest premium	A premium on a base interest rate such as the interbank rate.
Key Central Bank of Iceland interest rate (policy rate)	The interest rate that is used by the Central Bank in its transactions with credit institutions and is the most important determinant of developments in short-term market interest rates. The interest rate that has the strongest effect on short-term market rates and is therefore considered the Central Bank's key rate may change from time to time.
Liquidity coverage ratio (LCR)	The ratio of high-quality liquid assets to potential net outflows over a 30-day period under stressed conditions; cf. the Rules on Liquidity Coverage Requirements for Credit Institutions no. 266/2017.
Loan-to-value (LTV) ratio	A debt as a percentage of the value of the underlying asset (for instance, mortgage debt as a percentage of the value of the underlying real estate).
Net stable funding ratio (NSFR)	The ratio of available stable funding to required stable funding; cf. the Rules on Funding Ratios in Foreign Currencies, no. 1032/2014.
Payment card turnover balance	The difference between foreign nationals' payment card use in Iceland and Icelandic nationals' payment card use abroad.
Real exchange rate	Relative developments in prices or unit labour costs in the home country, on the one hand, and in trading partner countries, on the other, from a specified base year and measured in the same currency. The real exchange rate is generally expressed as an index.
Real wage index	An index showing changes in wages in excess of the price level. It is the ratio of the wage index to the consumer price index (CPI).
Risk-weighted assets	Assets adjusted using risk weights; cf. Article 84(e) of Act no. 161/2002.
Risk-weighted assets (risk base)	The sum of the weighted risks of financial institutions (e.g., credit risk, market risk, operational risk, etc.), cf. Article 84(e) of Act no. 161/2002.
Shadow bank	Definition based on the methodology of the Financial Stability Board (FSB). Activities that entail the transfer of credit with the participation of entities or activities outside the conventional banking system. Entities and activities falling under this definition are referred to as other financial intermediaries. A detailed discussion of the methodology can be found in the Committee on Shadow Banking's March 2015 report to the Ministry of Finance and Economic Affairs.
Terms of trade	The price of goods and services imports as a percentage of the price of goods and services exports.

Tier 1 capital base	Common equity after adjusting for deductions (common equity Tier 1, or CET1), plus additional Tier 1 capital.
Trade-weighted exchange rate index (TWI)	The index measuring the average exchange rate in terms of average imports and exports, based on the narrow trade basket.
VIX implied volatility index	The expected volatility of the S&P 500 index according to the pricing of options related to it. It gives an indication of investors' risk appetite or aversion.
Yield	The annualised return that an investor requires on funds invested.
Yield curve	A curve that plots the interest rates, at a set point in time, of bonds with equal credit quality but differing maturity dates.