FINANCIAL STABILITY

2017 • 2

Contents

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- 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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Foreword by the Deputy Governor

Favourable economic conditions, few signs of systemic risk, and adequate resilience among financial institutions

Financial system risk is not pronounced enough to constitute significant systemic risk, as the financial upswing has begun relatively recently even though economic growth has been positive for a long time. However, there are risks in sight that should be monitored so as to prevent systemic risk from building up in the future.

Iceland has recorded positive GDP growth for seven years running – growth that appears likely to continue for a few years more. The extended upswing has given households, businesses, the general government, and the financial system scope to reduce debt in the wake of the financial crisis and recession. Throughout all sectors of the economy, balance sheets and external positions have strengthened, as deleveraging has contained growth and prolonged the expansion phase and, in particular, delayed the beginning of the new upward financial cycle.

It appears unlikely that debt levels will decline further, as credit growth slightly outpaces nominal GDP growth at present. Credit growth is still within moderate limits, however, and well below the pre-crisis level. Even so, there is reason to monitor it, as it is concentrated in industries that could suffer a setback, such as tourism, tourism-related sectors, and construction. Tourism and construction are interdependent because of the impact of the former on the real estate market. Lending to firms in these sectors has increased since the last *Financial Stability* report was published. The Central Bank is of the opinion, however, that lending for investment in tourism-related sectors and for real estate purchases has not yet reached dangerous levels.

One of two risk factors that could destabilise the financial system in the future, as has been discussed in this and previous issues of Financial Stability, centres on a possible setback in the tourism industry. Tourism has grown phenomenally in recent years and is now among Iceland's largest economic sectors. The share of lending to the tourism sector is roughly equal to lending to the fishing industry. Rapid growth always entails risk, and continued growth – particularly if it is credit-driven – will lead to further concentration of risk in the banks' loan portfolios. The risk that accompanies continued rapid growth in lending to the tourism industry is also linked to the fact that the shocks it could sustain – from natural disasters or from changed market conditions – would also be a shock for the economy as a whole, as such setbacks would affect foreign currency revenues and the exchange rate of the króna. The contagion would therefore extend far beyond the tourism industry itself.

The relationship between tourism and the real estate market could amplify the effects of a setback in tourism. Real estate prices are at a historical high in real terms – a risk factor in and of itself – and this entails increased risk that a slowdown in tourism could cause owners to flood the real estate market with properties currently used for short-term tourist rentals, thereby pushing prices sharply downwards. Although danger signs exist, there are many indications that the real estate market could experience a relatively soft landing, at least in comparison with the adjustment following the financial and currency crisis in autumn 2008. The recent rise in real estate prices has not been driven by credit growth because households', businesses', and financial institutions' balance sheets are much stronger than during the pre-crisis period. Systemically important banks' capital and liquidity are strong. Iceland's external debt position is favourable, and there is still a current account surplus, even though it has shrunk, whereas there was a large deficit during the run-up to the crisis. It is therefore less likely than before that headwinds in the tourism sector and an adjustment of the real estate market will derail the financial system. Early adjustment of the housing market would reduce risk even further. The year-on-year rise in house prices has already begun to lose pace, both because of the impact of high house prices on demand and because these high prices have created a strong incentive to boost supply after a period of inelasticity early in the upward cycle.

Even though systemic risk is still limited, preparations are already being made for more difficult times. The banks' countercyclical capital buffer (which protects against financial cycle-related shocks) was raised to 1.25% in autumn 2016. This decision will be binding as of 1 November 2017. It is appropriate to raise it to 2.5% in coming quarters – in any case, well before the financial cycle is considered to have peaked – as the length and amplitude of the cycle are highly uncertain. In addition, the Financial Supervisory Authority, upon receiving an opinion from the Financial Stability Council, has adopted rules capping the loan-to-value ratio for new mortgage loans at 85% of the market value of the underlying property.[1] Moreover, the Central Bank has been authorised to set rules on exchange rate-linked lending, and a special reserve requirement has been imposed so as to temper and change the composition of capital inflows.

With effective risk management on the part of financial institutions, sensible economic policy, and adequate macroprudential contingency measures, the outlook is good for the preservation of stability in the financial system in the years to come.

1. For first-time purchases, it will be authorised to lend up to 90% of the market value of the property concerned, as Article 25, Paragraph 2 of the Act on Consumer Mortgages authorises additional scope for mortgage lending to households buying their first home.

I Key risks

Assessing financial stability requires identifying risk and the capacity to respond to it. 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 should be monitored. Risk premia in foreign capital markets are at their lowest since measurements began, but if the markets suffer a setback, the effects will be felt in Iceland. Direct risk to the domestic financial system is limited at present, however. Iceland is now more open than it was under the capital controls and therefore more vulnerable to external changes.

During an upward cycle, risk can accumulate in the financial system. There are discernible demand pressures in the domestic economy at present, although as yet there are no signs of rapid credit growth. The chief risks to the domestic financial system stem from the tourism sector and the housing market. Growth in tourism has eased in recent months, but the large commercial banks' loans to the industry have increased somewhat over the same period. It is uncertain how much growth has been assumed in investment plans in the sector. Rapid growth in tourism has played a part in pushing real estate prices upwards. As a result, the market could become more vulnerable to volatility in tourism. Real house prices have continued to rise in the past few months and are now at their highest since measurements began. Mismatches have developed between house prices and their economic determinants. Households' increased scope to take on debt, particularly as a result of higher property prices, could lead to credit growth, exacerbating risk. Since the publication of the last Financial Stability report, the number of risk factors has been reduced by one, however, as it is now permissible to set rules on exchange rate-lined lending to unhedged borrowers, thus reducing the risk attached to such loans.

As yet, no risks have grown prominent enough to jeopardise financial stability. The banks are strong and therefore well prepared to withstand shocks, their capital ratios are high, liquidity position strong, and borrowers' position is generally strong.

Table 1 Key risks[1]

Risk factor	*Current situation and changes from 2017·1*[2]
Tourism	→
Real estate market	→

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.

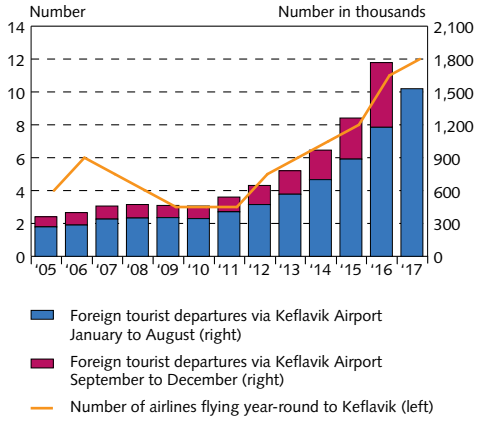
Tourism

Increase in number of year-round airlines

Iceland's tourism industry has grown by leaps and bounds in recent years. This year, a total of 12 airlines plan to fly to and from Keflavík Airport year-round, a substantial increase in only a few years' time. In 2011, for instance, only three airlines offered year-round service.

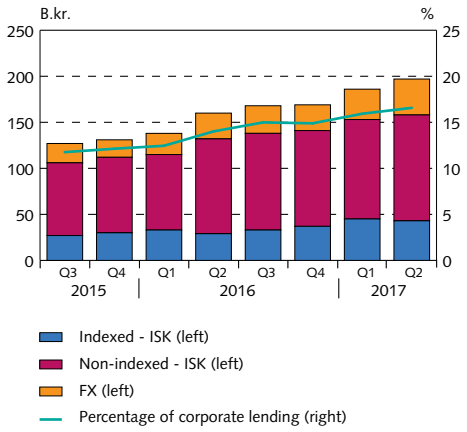
In recent months, the increase in foreign nationals' departures via Keflavík Airport has lost pace slightly. Each month since May 2017, the growth rate has been below 20% year-on-year – the slowest since autumn 2013. This could be due in part to capacity constraints during the peak season, owing to a lack of appropriate infrastructure. The next few months will show whether the pace is easing during the off-peak season as well.

Chart I-1
Number of airlines flying year-round to Keflavik and foreign nationals' departures



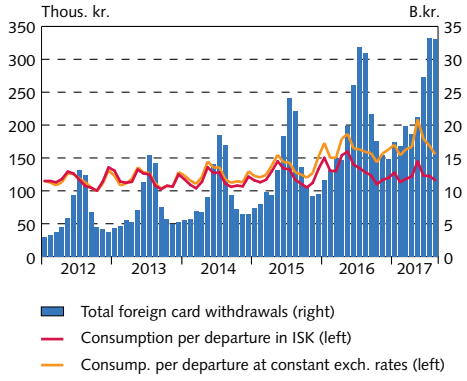
Sources: Icelandic Tourist Board, ISAVIA.

Chart I-2
D-SIB lending to tourism industry



Source: Central Bank of Iceland.

Chart I-3
Foreign payment card turnover in Iceland



Sources: Icelandic Tourist Board, Central Bank of Iceland.

Growing financial system risk due to tourism

Lending to the tourism industry accounts for just under 17% of debt issued by the large commercial banks to non-holding companies, about the same as lending to fisheries. From July 2016 through June 2017, growth in lending to the tourism sector measured 23%. To some extent, the increase could be due to greater accuracy in record-keeping. Lending to the sector currently accounts for 9% of total lending to the banks' customers. Tourism therefore weighs rather heavily in the commercial banks' loan books, and the associated credit risk could outweigh their share in total lending. 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 stress test indicates.

In recent years, the growth of tourism and the surge in development in the sector have to a significant degree been spread over a large number of small entities. In recent months, however, mergers have taken place as growth in the sector has eased. The number of companies could decline, and the remaining ones could become larger. Such mergers often require increased credit. Until now, the growth of the tourism industry has been financed in part outside the banking system: by institutional investment funds or with the establishment of partnerships around individual investments. A smaller number of larger entities in the sector could give rise to increased counterparty risk.

Tourist spending at constant exchange rates has increased

In krónur terms, foreign credit card use in Iceland has declined markedly in recent months. Year-on-year growth has measured in the single digits for four months in a row – for the first time since 2010. But this does not tell the whole story, as consumption per foreign national departing from Iceland has increased year-on-year over the same period when measured at constant exchange rates, and the average length of stay in the country has grown shorter.[1] The appreciation of the króna has therefore mitigated the tourism industry's crowding-out effect on other export sectors. There are still discernible growing pains in the tourism sector, however, and the impact on the real estate market is obvious.

Tourism is establishing itself as one of Iceland's key economic sectors. It has grown rapidly in recent years, but recent signs indicate that the growth rate has eased. There has been a strong crowding-out effect, but the economy is rebalancing at present. Wide fluctuations in tourism – radical changes in air traffic to and from the country, for instance – could disturb this rebalancing process. The financial system must be prepared for such developments.

Real estate market

Rapid rise in house prices could indicate mounting systemic risk …

House prices have risen steeply in the recent term. In real terms, capital area house prices are at their highest since measurements began,

1. A portion of foreign payment card turnover in Iceland is due to non-residents' bookings with domestic airlines. Some of them are through passengers who are not considered foreign tourists in Iceland, as they do not actually enter the country when landing at Keflavík Airport.

and now they have deviated from developments in underlying determinants, which indicates a possible lack of sustainability. In the capital area, the year-on-year rise in prices peaked in May at 21.5% and had settled back to 16.8% by August. In regional Iceland, it measured 21.2% in August. The ratio of nominal house prices to wages in greater Reykjavík was up 11% year-on-year in August. If this trend continues, risk could accumulate quickly.

Inelasticity of supply has been a major factor in house price developments in recent years, and the shortage of flats has grown more pronounced. Since this spring, however, there have been signs of an increase in supply. For years, the average number of flats listed on the mbl.is real estate website has been declining, but in the last half-year it has jumped by 81%. Even so, it is far from its previous highs. Over the same period, the average time-to-sale has nearly doubled, although it is still short in historical terms. Based on new housing counts, housing plans in capital area municipalities, and population projections from Statistics Iceland, the outlook is for a continued housing shortage for a while yet, although it could subside in the next two years.

Increased supply has probably contained price hikes in recent months, although prices are still rising steeply. The surge in short-term private rentals is a major factor here. According to data from Airbnb, nearly 5,000 entire flats were listed for rent nationwide in August, an increase of almost 65% year-on-year. The vast majority of them are in the greater Reykjavík area. Occupancy rates for such flats are on the rise as well, at 77% of nights available in August, when each flat was booked for an average of 19 nights. The number of rented nights has also increased steadily in the past two years, to over 13 per month in 2017 to date. It can therefore be assumed that a share of these flats are used for no other purpose than short-term rental. In comparison, 3,255 flats were under construction in greater Reykjavík in February, according to the Federation of Icelandic Industries. The wedge that short-term rentals drive between supply and demand in the capital area real estate market therefore appears to be a large one.

Most signs indicate that demand will continue to grow, which will contribute to further price increases, other things being equal. Households' economic situation is improving. Immigration of workers, all of whom need a roof over their head, was greater in H1/2017 than in the same period in 2016, and it comes on top of natural population growth. Furthermore, mortgage lending rates have declined this year, supporting demand. Moreover, the Central Bank projected in Monetary Bulletin 2017/3 that disposable income would surge this year. In spite of this, however, the ratio of prices to disposable income has risen sharply.

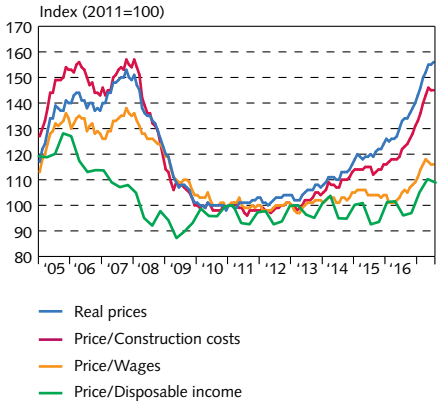
Commercial and industrial real estate prices in the greater Reykjavík area are still rising rapidly, after a steep and continuous rise over the past three years. Turnover has risen only slightly, however, and is broadly at the level seen in 2012.

...growth in household debt is still modest ...

Even though prices are high, turnover in the real estate market is growing and, in real terms, is broadly as it was in 2007. If prices remain high,

Chart I-4

Real house prices and ratio of prices to underlying factors[1]

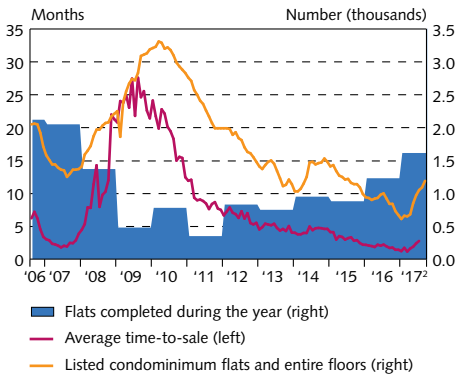


1. Capital area house price index, deflated by the CPI. House prices relative to the wage index, the building cost index, and disposable income, from the Central Bank's QMM. The last ratio is based on forecasted disposable income figures for 2016 onwards.

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

Chart I-5

Residential property construction and supply in greater Reykjavík[1]



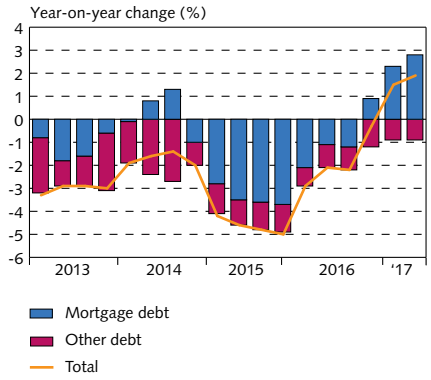
1. Monthly average of advertisements on Morgunblaðið real estate website (mbl.is). The count is carried out by property code so as to avoid a repeat count of the same property. The average time to sale is the length of time (in months) that it takes to sell advertised property based on the number of sales during the month in question. 2. Flats completed in 2017 estimated from Federation of Icelandic Industries February count of construction projects.

Sources: Federation of Icelandic Industries, mbl.is real estate website, Statistics Iceland.

Chart I-6
Number and occupancy rate of Airbnb flats[1]

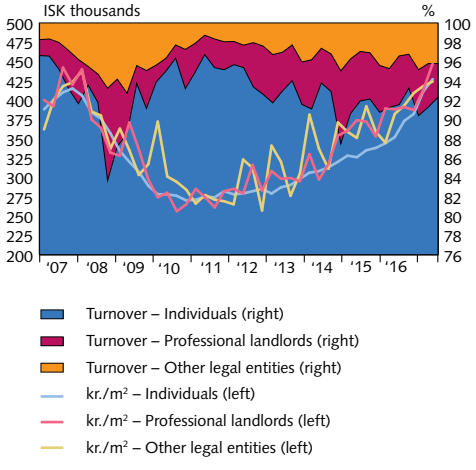
1. Listed entire apartments nationwide. The occupancy rate is calcuated as the total number of booked nights in entire apartments nationwide divided by the total number of nights the apartments concerned are offered for rent.
Source: AirDNA.

Chart I-7
Real growth in household debt[1]
Contribution from mortgage debt



1. Claim value. Percentages represent relative growth in household debt due to growth in each debt category and as a whole.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-8
Capital area real estate market
Price and turnover, by purchaser type[1]



1. Professional landlords are legal entities engaged in renting out domestic housing. The distinction between them and other legal entities is based on the ÍSAT industry classification. Turnover figures represent each category's share of total turnover in each quarter.
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

it could signal a potential accumulation of systemic risk as more and more buyers invest in larger homes and more first-time buyers enter the market. First-time buyers have not benefited from the past few years' price hikes and could therefore be forced to take on more debt than those already in the market. On the other hand, LTV ratios on mortgage loans are generally low, and growth in household debt has been modest after a long period of deleveraging. Household debt now equals 77% of GDP and has declined by 51 percentage points since autumn 2008. Households' mortgage debt has increased in real terms for three consecutive quarters, but other household debt is contracting.

…but the channel for systemic risk could be changing

The financial system is also exposed to risk from the housing market through the balance sheets of companies that own and rent out flats. As the rental market grows, a larger number of residential real estate transactions are carried out by firms. Such transactions represent only about 8% of registered purchase agreements; however, that percentage has doubled since 2011. Yet even this is an underestimation, as real estate transactions often entail the acquisition of a company that owns real estate rather than a change in the registered owner of a given property. The share of corporate-owned real estate is larger near the Reykjavík city centrum and has undergone greater changes since 2011.

According to registered purchase contracts, companies that rent out property in the greater Reykjavík area have paid a higher price per square metre than individuals have in every quarter since autumn 2014. The difference between the two averages 25,000 kr. per square metre at June 2017 prices. The same is true of other legal entities, many of which rent out property even though their industry classification does not indicate it. The aforementioned price difference is concentrated in the central part of the capital area: postal codes 101, 105, and 107. This supports the suspicion that the increased share of landlords in the residential property market have played a role in pushing house prices up in recent years. The difference in the average price per square metre for rental flats versus owner-occupied flats could be more than 25,000 kr., as many individuals rent out property as well.

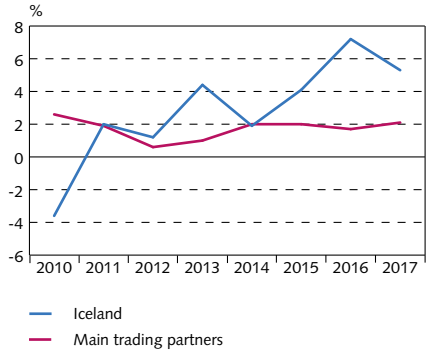
This change in the housing market should be monitored closely. It can be more complicated to identify systemic risk deriving from corporate-owned flats than from flats owned by individuals, as collateral is often handled differently and contracts are less likely to be standardised. Total corporate debt is growing fairly rapidly at present, as is discussed in Chapter II. Focusing on moderate growth in household debt could therefore lead to an underestimation of the systemic risk stemming from the housing market.

Construction firms' debt to the D-SIBs grew by nearly 14% year-on-year in June. On the other hand, loans from D-SIBs to rental companies have increased only slightly in recent years. Rental companies and other real estate companies increasingly use financing avenues other than the conventional banking system and, in the past six years, have obtained some 200 b.kr. through bond issues. Risk associated with real estate companies is therefore spread more widely across the financial system than before.

II Financial institutions' operating environment

Economic developments have been favourable for the financial system in the recent term. GDP growth has been robust, and inflation and unemployment have been low. Iceland's net IIP is in balance, and external trade has persistently generated a surplus. Strong inflows of foreign currency strengthened the króna until mid-2017, when the exchange rate began to slide, but the real exchange rate is high in historical terms and is now in a rebalancing phase. Overall, households' and businesses' resilience has continued to increase as the economy strengthens. Private sector indebtedness has tapered off, according to key metrics, although the most recent data suggest that a turnaround is ahead. GDP growth seems to be firming up in trading partner countries. Volatility is at a historical low in foreign asset markets at a time of significant uncertainty about large economies' economic policy. The risk is that financial conditions in global markets will deteriorate if the geopolitical situation sours.

Chart II-1
GDP growth in Iceland and trading partners[1]



1. Central Bank baseline forecast 2017, *Monetary Bulletin* 2017-3.
Sources: Macrobond, Statistics Iceland, Central Bank of Iceland.

Macroeconomic environment and financial markets

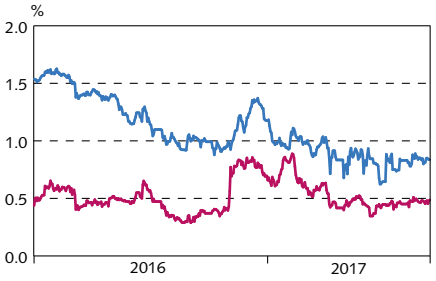
Icelandic economy growing rapidly

Iceland has experienced robust GDP growth in the past few years, although the pace has eased in the recent term. It measured 7.4% in 2016, and in August the Central Bank forecast this year's growth rate at 5.2%. The GDP growth forecast was revised downwards from 6.3% this summer, when information on residential investment and services exports in the first half became available. Services exports and private consumption are still expected to be the main drivers of output growth. There are signs, however, that services export growth has subsided, doubtless due in part to the strength of the króna.

Inflation is still below target, owing mainly to falling import prices, and the cost of owner-occupied housing has been the main driver of the rise in the CPI. The Central Bank expects inflation to realign with the target in mid-2018.

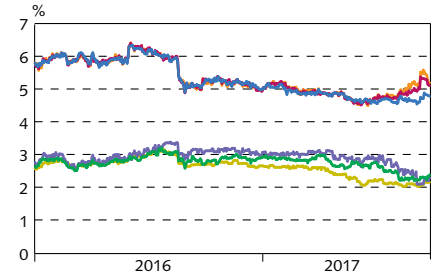
Treasury debt has continued to fall relative to GDP, from 67% at the end of 2015 to 55% at the end of 2016. In the first nine months of this year, external Treasury debt declined by 95 b.kr. and domestic debt by 118 b.kr. The spread between interest rates on Icelandic Treasury bonds and comparable German bonds continued to narrow in the first half of the year, in line with improvements in Iceland's sovereign credit ratings. In September 2016, Moody's upgraded the rating for long-term foreign obligations to A3, with a stable outlook. After steps were taken towards the removal of the capital controls this spring, Standard & Poor's affirmed Iceland's A rating with a positive outlook, after having issued two upgrades earlier in the year. In July, Fitch upgraded the sovereign to A-, with a positive outlook. In recent weeks, however, the spread on the Treasury's foreign issues has widened slightly once again.

Chart II-2
Government bond spreads



Sources: Bloomberg, Central Bank of Iceland.

Chart II-3
Bond yields

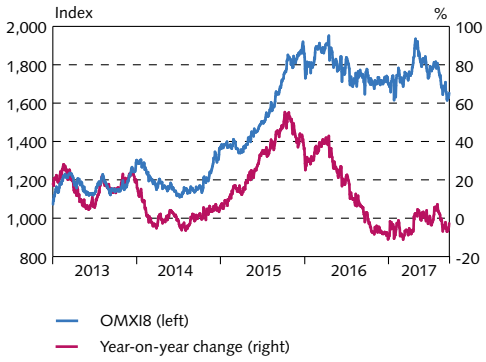


Source: Nasdaq Iceland.

Volatility in the domestic financial markets

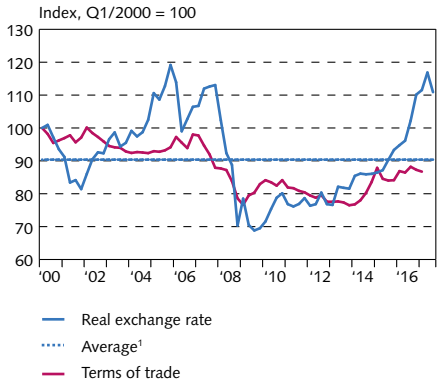
Treasury bond yields fell in the first half of the year. The capital controls were eased still further this March, Iceland's sovereign credit

Chart II-4
OMXI8 share price index



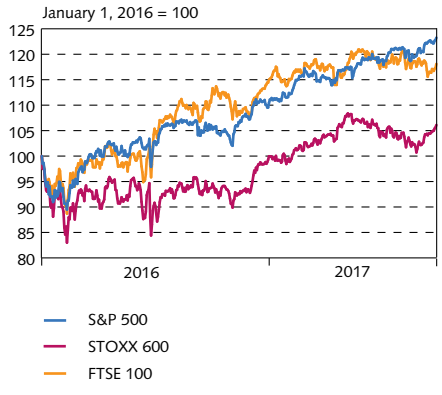
Source: Nasdaq Iceland.

Chart II-5
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 II-6
Share price indices



Source: Macrobond.

ratings improved, and the Central Bank lowered the policy rate three times so far this year. Following a slide in the exchange rate of the króna just after mid-year, nominal bond yields rose, mostly at the short end of the yield curve, while indexed yields continued to fall. A shortage of indexed securities could tend to exaggerate this trend. The five-year breakeven inflation rate is broadly in line with the results of the August survey of market agents' expectations, however. It spiked when the Government collapsed in September but appears to have reversed again.

The OMXI8 share price index has fluctuated somewhat this year but was back to its end-2016 value by early October. It rose steeply early in the year, peaking in the spring at 13% above the year-end value. Share prices are volatile at present. The index fell by nearly 3% on 15 September, when the Government coalition collapsed, and then rose by 2.4% with the unexpected policy rate cut on 4 October. None of the planned stock market listings have materialised thus far in 2017. In September, Klappir was listed on the Nasdaq First North market. The market capitalisation of companies listed on the Nasdaq Iceland exchange and the Nasdaq First North market was 1,010 b.kr. at the end of September, an increase of 1.7% since the beginning of the year. Share price indices in the Nordic countries have risen by more than 8% this year, led by the Danish index, which is up 16% year-to-date.

Exchange rate volatility has been greater in 2017 than in recent years, as most of the restrictions on cross-border capital movements have been lifted and the Central Bank has reduced its intervention in the foreign exchange market. The Bank maintains a policy of intervening to limit short-term volatility as needed, however. The real exchange rate is very high in historical terms and is now close to its pre-crisis peak. The rise in the real exchange rate is due in large part to growth in tourism, which is now Iceland's largest export sector. Furthermore, terms of trade have been favourable, the balance on primary income has improved with a reduction in external debt, and national saving is stronger than in previous upward cycles. There is still a surplus on the current account in spite of rapid growth in domestic demand, which, together with the above-mentioned factors, has caused the equilibrium real exchange rate to rise. Although the real exchange rate is high in historical context, the appropriate metrics indicate that it is reasonably consistent with underlying economic conditions. Those conditions could change over time, however.

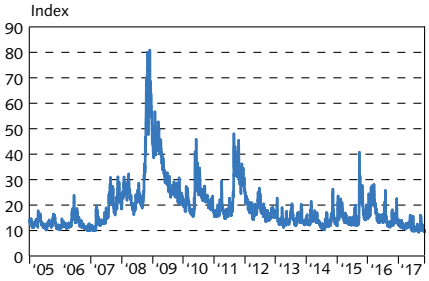
Brighter outlook for the global economy, but underlying uncertainty in the financial markets

GDP growth has slightly exceeded expectations in Iceland's main trading partner countries, measuring 2.1% in H1/2017, mainly due to growing domestic demand. The UK has stood apart from the others, however, with weaker-than-expected output growth stemming primarily from lackluster private consumption. Trading partner imports are expected to grow somewhat faster this year than previously estimated.

Increased GDP growth, an improved financial regulatory framework, and support from central banks have strengthened the global financial system and reduced the likelihood of shocks. The protracted period of low policy rates and liquidity support gives rise to risks that must be monitored, however. Asset prices have risen in many economies and debt levels likewise, and risk in the financial system is shifting from the conventional banking system to the shadow banking system. The International Monetary Fund (IMF) points out the importance of expanding the use of macroprudential tools to contain credit growth and safeguard financial stability.

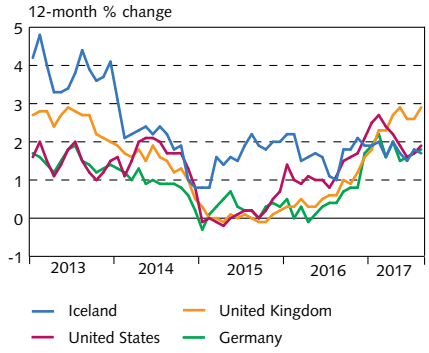
The VIX implied volatility index, which measures market expectations concerning share price volatility in the US, is at an all-time low. The VIX index, which is sometimes considered as an indicator of general financial market risk, suggests that conditions are similar to or perhaps even more favourable than those in 2006 and 2007, before the emergence of the dysfunction that led to the Great Recession. The likelihood of interest rate increases in major economies has increased somewhat, however. Inflation has been inching upwards in many economies, measuring over 1.9% in the US and 2.9% in the UK, whereas it is somewhat lower in Europe, at 1.5%. In the US, the policy rate was raised in December 2016 and then twice this year. The European Central Bank is keeping interest rates close to the zero lower bound, but it is challenging for financial institutions to achieve acceptable operating results in a low-interest environment and thereby strengthen their capital ratios. On the other hand, there are risks associated with possible rate hikes, particularly in the European countries with the most heavily leveraged private sectors. Rate hikes would also affect public sector balance sheets, as many sovereigns are heavily in debt as well.

Chart II-7
VIX[1]



1. CBOE Volatility Index.
Source: Macrobond.

Chart II-8
Inflation[1]



1. Consumer price index.
Source: OECD.

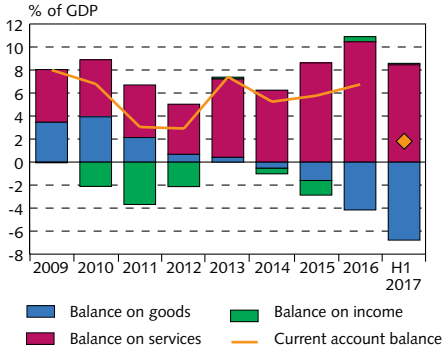
International investment position (IIP)

Improvement in IIP and surplus on external trade

Iceland's net IIP was negative by 2.5% of GDP at the end of June 2017. The position deteriorated by 5.7 percentage points between quarters, owing almost entirely to exchange rate and price movements. External liabilities (excluding those of the old banks) totalled 94% of GDP at the end of June. They had contracted by 17 percentage points year-on-year and have not been less than one GDP since the turn of the century. The external debt of the general government now totals 9% of GDP, mainly because of non-residents' holdings in króna-denominated Treasury bonds and the Treasury's foreign market bond issues. The composition of Iceland's external debt has improved, with short-term liabilities contracting to only 7% of the total (excluding the old banks). Foreign debt service is now quite manageable. A large share of foreign debt is owed by the commercial banks, which have ready access to foreign credit markets at present (see Chapter III).

Iceland's current account balance was positive by 2.1% of GDP in H1/2017. After adjusting for the effects of the old banks' holding companies, the surplus was 0.25 percentage points smaller. The balance on goods and services trade was positive by 1.7% of GDP, 0.6

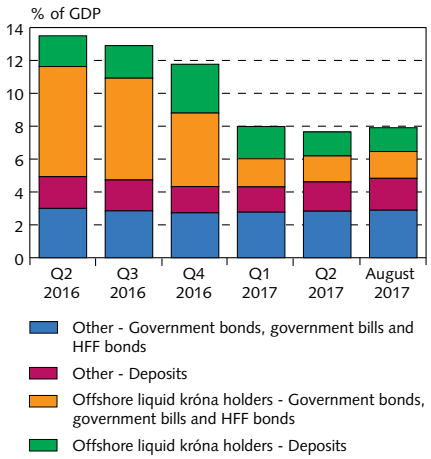
Chart II-9
Current account balance[1]



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

Chart II-10

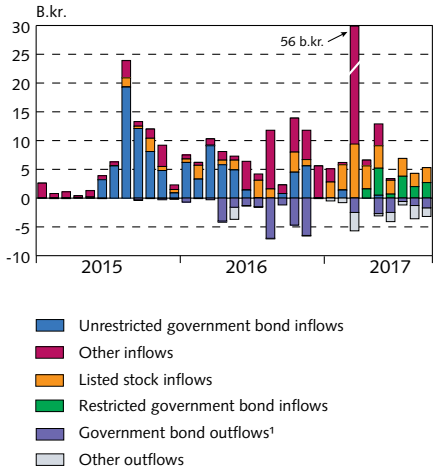
Deposits and liquid króna assets owned by non-residents



Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-11

New investment for foreign capital[1]

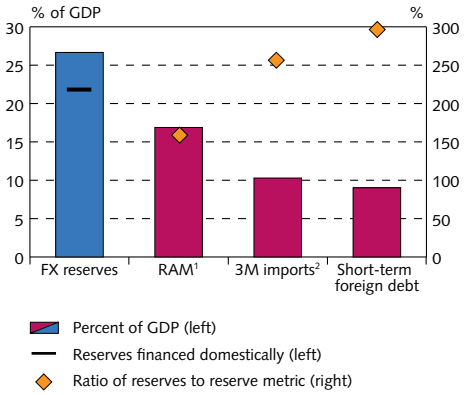


1. Outflows from Government bonds before September 2015 are unknown. Total outflows before that time are therefore classified as other outflows.
Source: Central Bank of Iceland.

Chart II-12

Central Bank reserve adequacy

Position in Q2 2017



1. IMF Reserve Adequacy Metric. 2. Average of three months of imports in the last four quarters.
Sources: Statistics Iceland, Central Bank of Iceland.

percentage points less than last year, but the goods trade deficit grew somewhat between years, to nearly 7% of GDP during the period. Goods imports have increased alongside rapid growth in domestic demand.[1]

Stock of offshore krónur shrinks and new investment broadly unchanged between years

In the first half of the year, the Central Bank negotiated the purchase of offshore krónur in the amount of 112 b.kr.[2] The outstanding stock of offshore krónur has therefore shrunk markedly – foreign ownership of Treasury bonds in particular – to a total of 88 b.kr. as of end-September. New investment in Treasury bonds stemming from inflows of foreign capital has resumed, however, after tapering off to a very low level during the months just after the adoption of the Rules on Special Reserve Requirements for New Foreign Currency Inflows in June 2016. The special reserve requirement cuts into the returns on the investments – the shorter the investment, the greater the impact – thereby reducing the incentive for short-term speculation. If investors are importing foreign currency so as to invest in Treasury bonds in spite of the special reserve requirement, it could be an indication that their investments are intended for the long term. In 2017 to date, capital inflows subject to the requirement have totalled just over 26 b.kr., with 40% of that amount held in one-year term deposits referred to as capital flow accounts. In recent months, net new foreign investment has largely been channelled towards listed equities, which are not subject to the special reserve requirement.

Earlier this year, virtually all of the capital controls on households and businesses were lifted. Certain restrictions on capital flows remain, however, including restrictions on derivatives transactions not undertaken for hedging purposes. When the capital controls are lifted entirely, the possibility will open up for investors to engage in carry trade by issuing króna-denominated bonds abroad and entering into related derivatives transactions with domestic commercial banks. Such transactions played a considerable part in creating the balance of payments problem stemming from offshore króna assets during the post-crisis period. In order to prevent history from repeating itself, it is desirable to reduce incentives to conduct carry trade – for instance, by imposing further conditions on derivatives trading – as special reserve requirements on capital inflows of the type used to date do not solve that problem, even though they have clearly reduced incentives for other types of speculation.

Foreign reserves strong and regular FX market intervention suspended

In May 2017, the Central Bank announced that the foreign exchange reserves were strong enough to obviate the need for regular foreign currency purchases, and the regular purchase programme was there-

1. A more detailed discussion of developments in the current account balance can be found in *Monetary Bulletin* 2017/3.
2. See the press release on the Central Bank of Iceland website: https://www.cb.is/publications/news/news/2017/06/23/Central-Bank-purchase-of-offshore-krona-assets/

fore suspended. As a result, the Bank now intervenes less than before, and solely for the purpose of mitigating short-term volatility. In the first nine months of the year, the Bank's net purchases equalled 70 b.kr., as opposed to 290 b.kr. over the same period in 2016. At the end of September, the reserves totalled 688 b.kr. At the end of June, the ratio of the reserves to RAM criteria was 158%, and the reserves amounted to three times Iceland's short-term external liabilities. About 80% of the foreign exchange reserves are financed in Icelandic krónur.

Private sector debt and current position

Private sector leverage moderate, but signs indicate increased demand for credit

Iceland's private sector credit-to-GDP ratio has declined rapidly in recent years but has held stable in the past four quarters. Exchange rate developments have affected developments in debt in the past year – particularly corporate debt, 34% of which is linked to foreign currencies.

Year-on-year growth in price- and exchange rate-adjusted debt measured 4.7% at the end of Q2: 2.2% for household debt and 7.2% for corporate debt. Clearer signs of an uptick in private sector credit growth are now visible, and in the first two quarters of 2017 credit growth outpaced GDP for the first time since the financial crisis. Private sector demand for credit therefore appears to be on the rise.

Households' financial position continues to improve despite increased debt

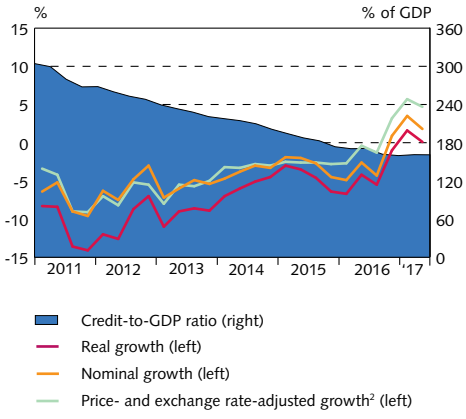
Household debt totalled 77% of GDP at the end of June 2017, after increasing by half a percentage point in the first half of the year. The increase in debt is due to growth in new residential mortgages, as other types of consumer loans have contracted steadily in recent years. This is the first time since 2010 that debt levels have grown faster than GDP over a six-month period, and that increase was due to a contraction in GDP and not to a rise in debt, as is the case now. In spite of the increase in debt, disposable income is still growing more rapidly and households' net wealth is rising. As a result, households' resilience is still increasing.

The reduction in household debt over the last decade is due in part to the fact that a growing number of individuals live in rented housing. Tax data show that, as of year-end 2016, 118,000 individuals carried residential mortgage debt – the same as at the end of 2007.[3] At the same time, however, the number of individuals in the rental market or living with their parents rose by 26,000, or 30%.

The financial position of individuals with mortgage debt and negative equity has improved vastly in recent years. In terms of both the number of individuals and the debt ratio, this group is in a better position now than at any time in the 20-year period over which tax data have been prepared for the Central Bank.

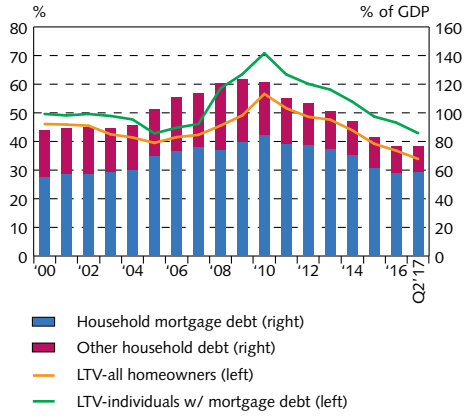
3. The information is based on tax return data from the Directorate of Internal Revenue, processed by Statistics Iceland for the Central Bank.

Chart II-13
Private sector credit growth[1]



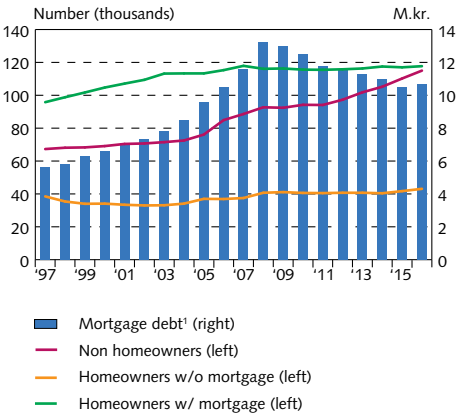
1. Lines show year on year growth rates. 2. CPI-indexed credit at end-june 2017 prices and foreign-denominated credit at end-june 2017 exchange rate.
Sources: Statistics Iceland, Central Bank of Iceland

Chart II-14
Household debt relative to real estate value and GDP



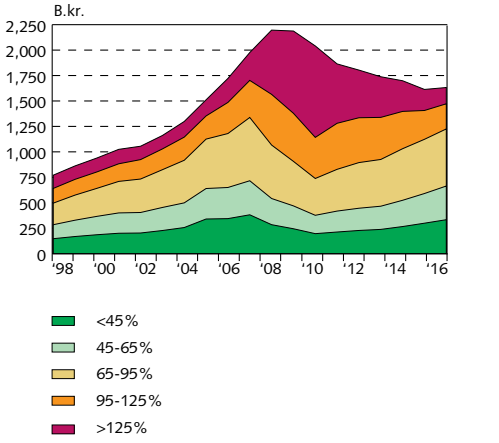
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-15
Housing status and household mortgage debt



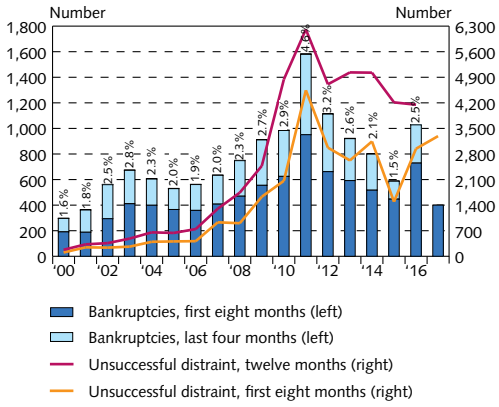
1. Mortgage debt per individual w/ mortgage. At 2016 prices.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-16
Debt/assets ratio of individuals with mortgage[1]



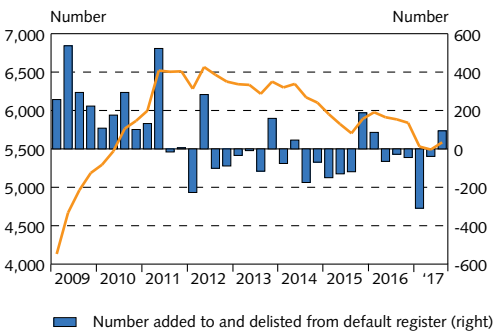
1. Total debt of individuals with mortgage, by total debt/total assets ratio. At 2016 prices.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart II-17
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 II-18
Companies in default[1]



Source: CreditInfo.

At the end of June 2017, nearly 110 b.kr. had been allocated to individuals' mortgage loans through the Government's debt relief measures, and in the first half of the year a total of 7 b.kr. in third-pillar pension savings had been channelled towards mortgages. The authorisation to use third-pillar pension savings to reduce mortgage debt extends until mid-2019, and for first-time purchasers the authorisation may be used for a total of 10 years.

Loan-to-value (LTV) ratios for residential housing have continued to fall in spite of an uptick in mortgage lending, as house prices have risen faster than mortgage debt. The aggregate LTV ratio is estimated at 34% as of end-June, a decline of three percentage points in the first half of the year. The ratio for individuals with mortgage debt was 43% at the end of June.

The swift rise in house prices has increased borrowers' collateral capacity and given them scope to take on additional debt. Data from the Financial Supervisory Authority (FME) also show that some credit institutions have eased their lending requirements in the recent term, in response to increased competition in the mortgage lending market.[4] In order to preserve financial stability and bolster lenders' and borrowers' resilience to a potential drop in house prices, the FME has, upon receiving an opinion from the Financial Stability Council, issued rules capping LTV ratios for new mortgage loans at 85% of the market value of the property concerned. For first-time purchases, the LTV cap is set at 90%.

Households' position continues to improve

Private consumption growth is estimated at 7.4% in 2016 and is expected to be similar this year.[5] This is the strongest private consumption growth rate in over a decade. Households' improved equity position, increased purchasing power, low unemployment, low inflation, and a strong króna are the main drivers of this development.

Even though private consumption has grown, household saving has continued to increase because disposable income has grown even faster than consumption. For example, household deposits had grown by nearly 10% year-on-year as of end-August. The number of individuals on the default register has continued to fall, to 23,541 at the end of September, a decline of 4 percentage points in twelve months.

Changed operating environment for firms

In the past few years, the buoyancy of the domestic economy has created favourable conditions for businesses in Iceland, but there have also been a number of changes that cast doubt on the future. Rising purchasing power, population growth, and the tourism boom have boosted demand for goods and services in the domestic market at a time when the appreciation of the króna has lowered imported goods prices. On the other hand, wage hikes have raised firms' operating expenses, and increased competition – including with the entry of foreign firms into the local market – have affected both prices and

4. https://www.fme.is/utgefid-efni/frettir-og-tilkynningar/frettir/fjarmalaeftirlitid-setur-reglur-um-hamark-vedsetningarhlutfalls-fasteignalana-til-neytenda
5. See *Monetary Bulletin* 2017/3.

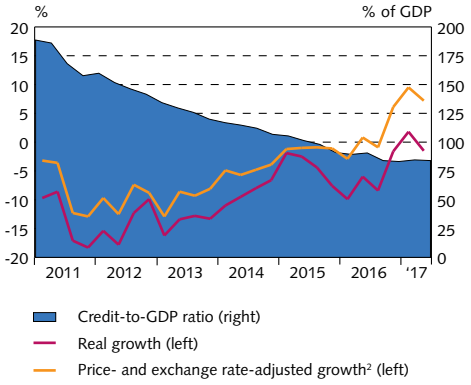
Icelandic firms' market position. Furthermore, the strong króna has a negative impact on the competitive position of Icelandic firms doing business internationally, and exporters' revenues have contracted in krónur terms while other cost items – such as wages paid in krónur – have been on the rise.

The tourism sector continues to grow and, according to preliminary figures from Statistics Iceland, its share in GDP measured 8.4% in 2016,[6] an increase of almost 3 percentage points in two years. The sector's share in GDP is expected to rise still further this year, although a number of indicators imply that the growth rate has eased.

Share prices have slid year-to-date, owing to poor earnings reports from a few firms, an increase in foreign competition, changes in investors' expectations, and political uncertainty. There is also uncertainty about wage developments, as contracts could be subjected to a review next year. Until now, it has appeared that recent pay hikes have not made a discernible impact on the price level or caused insurmountable operational difficulties for firms.

Just how adaptable Icelandic companies are will come more clearly to light in the next few years, but on the whole, there are no sights of risks that could jeopardise financial stability. The number of companies on the default register had declined year-to-date, both in raw numbers and in relative terms. The number of firms engaged in actual commercial activities – i.e., non-holding companies – rose by 4% in 2016. The increase was most pronounced in tourism-related sectors. There are no visible danger signals concerning developments in corporate arrears vis-à-vis the banks (this topic is explored further in Chapter III). In the first half of 2017, the number of corporate bankruptcies was down in comparison with recent years. The number of unsuccessful distraint measures rose, however, although the increase was due to a targeted effort on the part of the capital area Commissioner's Office in July to process a heavy backlog of pending cases.[7] Excluding the spike resulting from this effort, the figures indicate a reduction during the year.

Chart II-19
Companies credit growth[1]



1. Lines show year on year growth rates. 2. CPI-indexed credit at end-june 2017 prices and foreign-denominated credit at end-june 2017 exchange rate.
Sources: Statistics Iceland, Central Bank of Iceland.

Rise in corporate debt in 2017

Corporate debt is still historically low and firms' equity generally sound. This low debt position enhances firms' resilience. However, debt levels appear to be on the rise, with the real growth rate in H1 measuring 1.8%.[8] Real growth is still negative on an annualised basis, as the appreciation of the króna in H2/2016 caused debt to decline in krónur terms. This can be seen clearly in the price- and exchange rate-adjusted credit stock. According to the investment survey carried out by the Central Bank earlier this year, credit-financed business investment in 2016 accounted for some 40% of total business investment, and firms expect a similar ratio this year.[9] This is a slight increase from recent years.

6. https://hagstofa.is/utgafur/frettasafn/ferdathjonusta/hlutur-ferdathjonustu-i-landsframleidslu-2016/
7. A total of 1,101 unsuccessful distraint measures were attempted on legal entities in July, as opposed to 200-400 in other months.
8. Debt to domestic and foreign financial institutions and issued marketable bonds.
9. *Monetary Bulletin* 2017/2.

As has been stated previously, the housing market has changed and the proportion of renters has increased. A larger number of flats are now owned by real estate firms, and it can be assumed that a portion of residential mortgage debt has shifted from individuals to real estate companies. This explains in part the rise in corporate debt in excess of household debt.

III Financial market entities

The structure of the financial system has changed in recent years. The pension funds have expanded their share, and with the increase in employer contributions, this trend is likely to continue. At the same time, deposit money banks' assets have contracted relative to GDP, to 133%. They account for just under a third of total financial system assets, with some 97% of them held by systemically important banks (D-SIB). Pension fund assets amount to just over a third, the Housing Financing Fund (HFF) accounts for about 8%, and other financial market entities hold the remainder.

III-a Systemically important banks[1]

In recent years, D-SIB loans and other interest-bearing assets have increased as a share of total assets, while equity securities and other appropriated assets have declined. On the funding side, the weight of customer deposits has remained virtually unchanged, while borrowings have increased and their composition changed. Covered bond issuance has increased, and funding from the old commercial banks' holding companies has been paid off and replaced with foreign market funding. The weight of the banks' equity increased until 2015 but has declined marginally since then because of dividend payments.

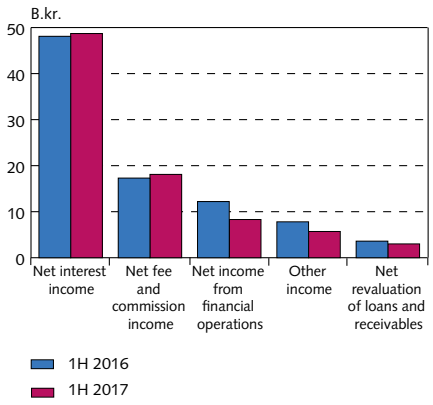
In H1/2017, the D-SIBs' operations were characterised by a reduction in irregular and estimated income items, while interest income and fee and commission income grew between periods. The D-SIBs' capital position is strong, and both capital and leverage ratios are high. Possible reductions in capital and changes in the composition of the capital base must take place in accordance with requirements for the capital base, with full capital buffers, and the liquidity position.

Operations and equity[2]

Interest income and fee and commission income have increased

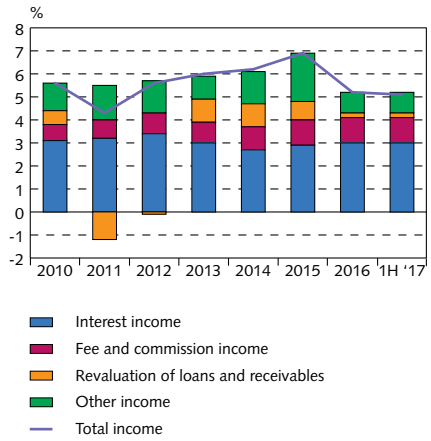
The D-SIBs' combined returns and profits fell marginally between H1/2016 and H1/2017. In the first half of 2017, net interest income and fee and commission income grew year-on-year. The rise in net interest income is due mainly to an increase in interest-bearing assets, which offset lower interest rates. Developments in net fee and commission income differed across income-generating units, with the increase concentrated mainly in asset management and investment banking activities. Because interest income and fee and commission income have increased and, no less important, because other income has declined, the former now constitutes a larger share of total income. Income from financial activities declined by about a third

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



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

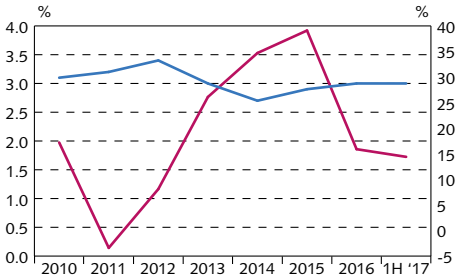
Chart III-2
D-SIB: Ratio of income to total assets[1]



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

1. 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.
2. The discussion in this chapter is based on the H1/2017 consolidated accounts of D-SIB and comparison figures for H1/2016. Figures are consolidated unless otherwise stated. The aggregate operation and position may diverge from that of individual financial companies.

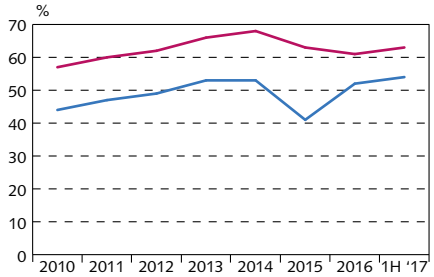
Chart III-3
D-SIB: Interest rate differential and irregular income[1]



Interest rate differential (left)
Income from equity securities, discontinued operations, and valuation adjustments as a share of total income (right)

1. Domestic systemically important banks, consolidated figures. Income from equity securities in 2014 to 1H 2017 includes income from sale and valuation adjustments of the largest affiliates.
Sources: Commercial banks' financial statements.

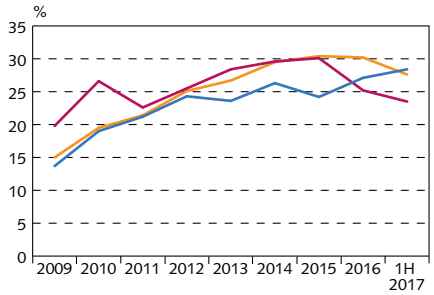
Chart III-4
D-SIB: Cost-to-income ratios[1]



Cost-to-income ratio[2]
Ratio of costs to interest and fee and commission income[3]

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.

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



Arion Bank hf.
Íslandsbanki hf.
Landsbankinn hf.

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

between halves, as income in H1/2016 derived for the most part from the sale of the banks' subsidiaries in Visa Europe Ltd. to Visa Inc. The banks' other income also declined markedly, including miscellaneous income from associated companies. Irregular and estimated income items combined amounted to just over 14% in H1/2017, down from nearly 20% during the same period in 2016.[3]

Loan valuation changes remain positive

D-SIBs' combined net loan valuation increase was substantial in H1/2017 but nevertheless declined between years. A favourable economic environment and favourable outcomes from financial restructuring of loans led to an increase in loan valuations. 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. IFRS 9 is to take effect at the beginning of 2018. Among the changes to be implemented with the new standard are the 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 predict the initial impact of IFRS 9 on the banks' loan valuations, but it is likely that impairment will increase, as it will be recognised earlier in their accounts. Other things being equal, this will contribute to financial stability.

Developments in operating expenses

The D-SIBs' combined operating expenses rose marginally between periods, 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 slightly, but the number of employees continued to fall. Various one-off items or costs were recognised during the year, including costs relating to branch mergers, housing, and electronic solutions. Furthermore, Arion Bank reversed a debt of 2.7 b.kr. owed to the Depositors' and Investors' Guarantee Fund, which the Fund had confirmed would not be collected. As before, cost control is one of the key challenges in the banks' operations.

D-SIBs' equity position is strong

The D-SIBs' end-June capital position was strong, and both capital and leverage ratios were high. The banks' combined capital ratio was 26.6%, after declining slightly since the beginning of the year as a result of dividend payments and an increase in the risk base of loans. The capital base consisted almost entirely of common equity Tier 1 capital (CET1). The ratio of risk-weighted assets to total assets is high in comparison with many foreign banks that use the internal ratings-based approach. The banks' leverage ratios lay in the 16-18% range,

3. Included with irregular and estimated income items are income from equity securities holdings, income from discontinued operations (sold companies and real estate, etc.), and income from write-ups of loans. Furthermore, Arion Bank reversed a debt of nearly 2.7 b.kr. owed to the Depositors' and Investors' Guarantee Fund, which the Fund had confirmed would not be collected. This accounted for about one-fourth of the bank's profit for the period.
4. Operating expenses net of bank tax and the largest irregular items.

well above that of most foreign banks. The minimum is 3%.[5] Credit risk is the largest risk facing the banks, and its share of the risk base has grown as market risk has diminished.

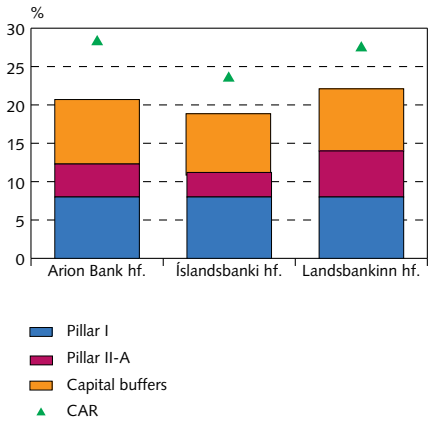
The Financial Supervisory Authority's SREP capital requirement for D-SIBs, based on full implementation of capital buffers, is between 19% and 22%, but the banks themselves have internal capital criteria that are higher. Credit rating agencies determine their own capital criteria when they assign credit ratings.

In H1/2017, the banks paid out dividends corresponding to just under 40% of the previous year's profit, and in addition, Landsbankinn paid an extraordinary dividend in September. The banks' combined dividend payments through end-September totalled roughly 35 b.kr. The banks' strong capital position gives the some latitude for further dividend payments or other disposal of capital. There is also some scope for issuance of subordinated loans, which would be facilitated by credit rating upgrades. Possible reductions in capital and changes in the composition of the capital base must take place in accordance with capital base requirements, with full capital buffers, and the liquidity position.

At present, the Icelandic Government owns a 13% stake in Arion Bank, while Kaupthing owns 58% and foreign hedge funds and asset managements firms hold the other 29%. It has been reported that preparations are underway for the sale of an additional portion of Kaupthing's stake in the bank. Among the options under scrutiny are a public share capital offering and securities exchange listing in Iceland and abroad. There are many things that must be considered in connection with the sale of the bank, including the arrangements for the sale, the price of the holdings, the eligibility of potential owners of qualifying holdings, dividend payments, the impact on the foreign exchange market, and so forth.

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 end of June 2017.
Sources: Commercial banks' financial statements and other published materials.

Funding and liquidity

The banks' liquidity is strong

The banks' liquidity position strengthened markedly in 2016 and has remained ample this year. Their liquidity ratios are well above the regulatory minimum. The domestic systemically important banks' (D-SIB) combined liquidity ratio was 183% as of end-August, whereas the regulatory minimum is 100%. Ample liquidity gives the banks scope for growth or dividend payments, although capital requirements and internal criteria always put limits on potential dividends.

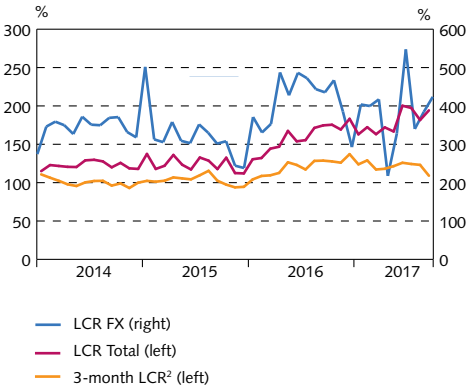
Deposit growth

Deposits held with the D-SIBs have increased year-to-date. The largest rise is in deposits owned by individuals and pension funds, with the bulk of the increase in foreign-denominated deposits. Deposits now account for 63% of the banks' total liabilities.

The ratio of private sector deposits to private sector loans rose last year but has remained relatively stable since mid-2016, at 54%,

Chart III-7

D-SIB: Liquidity coverage ratio[1]

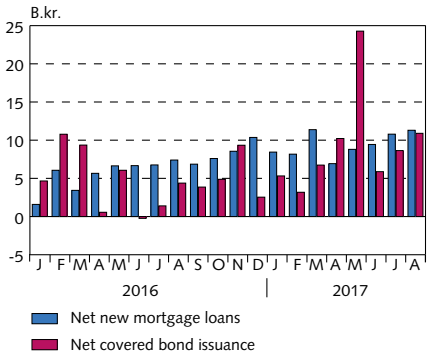


1. Domestic systemically important banks, consolidated figures 2. In accordance with older liquidity rules. New LCR rules were implemented in March 2017.
Source: Central Bank of Iceland.

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

Chart III-8

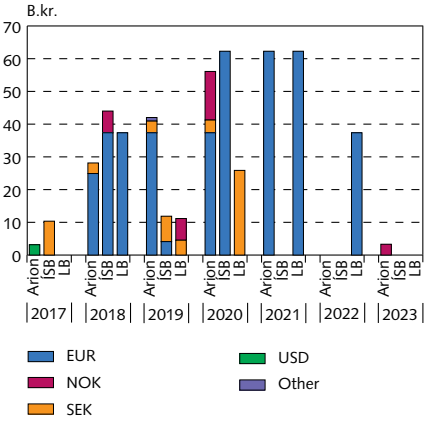
D-SIB: Net covered bond issuance and net new mortgage lending



Source: Central Bank of Iceland.

Chart III-9

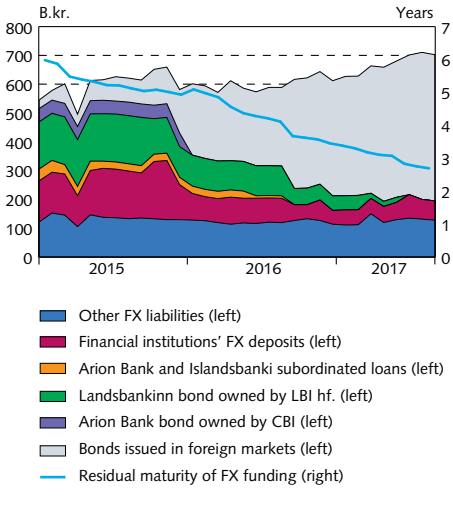
D-SIB: Foreign bonds by maturity and currency[1]



1. At 30 September 2017 exchange rate. Not included in the chart is Arion Bank's NOK issue maturing in 2027, in the total amount of 3.1 b.kr.
Source: Nasdaq Iceland.

Chart III-10

D-SIB: Funding in foreign currency[1] and average residual maturity[2]



1. D-SIB: Domestic systemically important banks. Fixed rate.
2. Residual maturity of listed foreign bonds, Arion Bank and Íslandsbanki's subordinated loans, Arion Bank bond, and LBI bond.
Source: Central Bank of Iceland.

indicating that relative credit growth and deposit growth among households and businesses were broadly at par over the period.

The banks' covered bond issues have been successful

The banks' abundant liquidity is due in some part to successful domestic market funding efforts during the year. Outstanding covered bonds and bills accounted for 11% of the banks' total liabilities at the end of September. At the end of September, the banks' combined covered bond issuance year-to-date totalled just over 84 b.kr., or about a third of their outstanding issuance, including 73 b.kr. in indexed instruments. The banks' net new mortgage loans exceed their covered bond issuance, but the ratio of covered bonds to their mortgage loan portfolios has risen by six percentage points since the beginning of the year, to 42% at the end of September.

Yields on covered bonds declined in tandem with the reductions in the Central Bank's key rate in August and December 2016. The terms on the banks' bond issues have continued to improve this year, particularly on indexed bonds. Yields have developed broadly in line with in Treasury bond yields, and since June, indexed yields have continued to fall while nominal yields have been on the rise, partly due to the depreciation of the króna and the deterioration of the inflation outlook, as is discussed in the chapter on the macroeconomic environment and financial markets.

Foreign market terms favourable, average residual maturity grows shorter

In 2016 and the first half of 2017, the banks completed their refinancing of the bonds owned by the old banks' holding companies. In June, Landsbankinn finished paying off the LBI bond, and Arion Bank paid off the remainder of the bond owned by Kaupthing. All of the banks' foreign bond issues are therefore in the form of marketable instruments. The banks' obligations to the old banks' holding companies are solely in the form of deposits.

In the past half-year, two relatively large bonds have been issued within the banks' medium-term note (MTN) programme. In March, Landsbankinn issued a five-year 300 million euro bond at terms equivalent to 130 basis points above the interbank rate, and in June, Arion Bank issued a three-year 300 million euro bond at 88 basis points above the interbank rate. The D-SIBs' combined foreign funding ratio was 166% at the end of August and has risen since March. The increase in the ratio reflects, among other things, the above-mentioned bank bond issues, even though the next year's maturities lowered the ratio and the average residual maturity of foreign funding has grown shorter. In 2018, the equivalent of 110 b.kr. in euros will mature. This represents 28% of the banks' foreign market funding and 3% of their combined balance sheet. The banks are still well above the 100% regulatory minimum, and terms on their foreign issues remain favourable.

With increased foreign debt, the banks are now more dependent on conditions in foreign credit markets than they were before. Foreign funding terms have been steadily improving, but the situation could

suddenly reverse. A set-back in the global markets, with rising risk premia or reduced access to credit would affect the three largest commercial banks. Their foreign refinancing risk has been addressed with ample foreign liquidity. Terms on foreign issues have improved significantly in the past two years. The bonds maturing next year therefore bear much higher interest rates than the banks have been offered in recent months. Terms could therefore deteriorate once again without substantially affecting the banks' cost of capital.

D-SIB lending: developments and loan quality

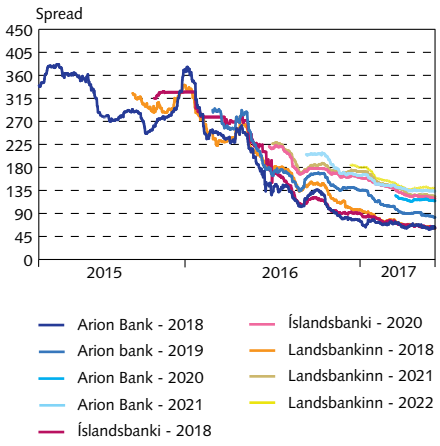
Lending increases year-on-year

At the end of August, D-SIB lending had increased by 4.5% year-on-year at constant prices. The D-SIBs' lending constituted 72% of their total assets at the end of August, after increasing by just under a percentage point over the same period.[6] It rose more strongly relative to GDP during the first eight months of the year. Some 50% of the D-SIBs' lending is to companies and 41% is to individuals. The share of corporate loans rose slightly in the first half of the year, while the share of loans to individuals declined marginally. At the end of August, the year-on-year change in the D-SIBs' household loans measured 5% in real terms, while the change in corporate loans was just over 6.2%. The D-SIBs' credit growth has been relatively stable in the recent term, while the pace of lending to households has increased in the past year. Figures on new D-SIB lending indicate a contraction in new foreign currency corporate loans. The largest increase in corporate lending has been in loan categories related to the tourism and real estate sectors, which are discussed in Chapter I on key risk factors. In a very short period of time, tourism has become an important part of the banks' loan portfolios. The sector is still young, however, and it can therefore be said that there is limited experience of it and the risks attached to it. Real estate companies are the largest sector in the banks' loan portfolios, and the share of loans to construction firms has increased markedly in recent years. The two combined currently account for more than 20% of loans to the private sector entities.

Residential mortgages constitute 79% of D-SIB lending to individuals, after a two percentage point increase in the first eight months of the year, and about four-fifths of net new lending to individuals during the same period. New non-indexed D-SIB mortgage lending slightly exceeded prepayments in the first half of the year, but after adjustments have been made for instalment payments, the amount of such loans is virtually unchanged during the period. This indicates that growth in D-SIB mortgages lending stems from indexed loans. Because residential mortgages are generally considered the least risky loans granted to households, the increase in mortgage lending at the expense of other types of household lending has been favourable for the assessment of loan quality. Furthermore, figures show that the position of individuals with mortgage debt has grown stronger – particularly that of highly leveraged individuals.

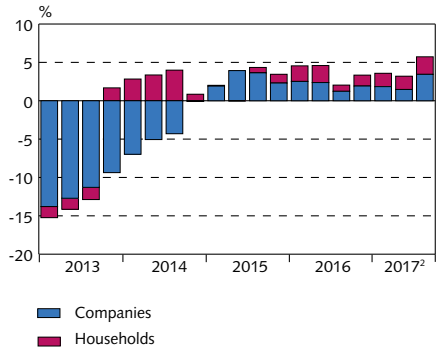
6. Parent company figures.

Chart III-11
D-SIB: Spread on listed foreign bonds, EUR[1]



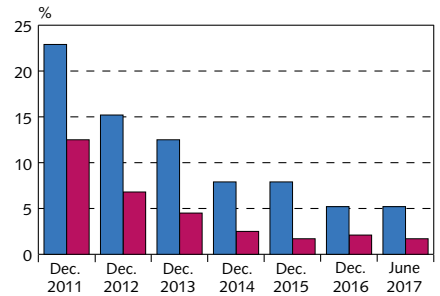
1. Spread on euro benchmark curve.
Source: Bloomberg.

Chart III-12
D-SIB: Real credit growth[1]



1. Domestic systemically important banks. Parent companies. Credit to households and operating companies. Year on year growth. Adjusted for Government debt relief measures. Credit growth from Q4 2013 - Q3 2014 is explained by Arion bank's aquisition of Drómi. 2. Q1 and Q2 2017, August 2017.
Sources: Statistics Iceland, Central Bank of Iceland.

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

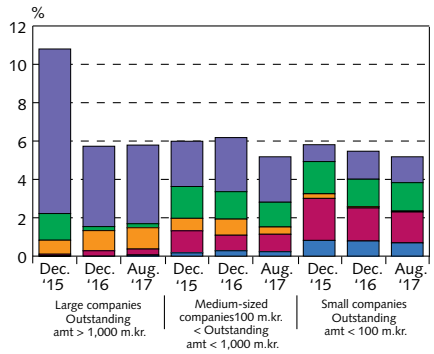


Non-performing loans; i.e. loans past due over 90 days, frozen or deemed unlikely to be paid (cross-default method).

Loans in default; i.e. loans in past due over 90 days (facility level).

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

Chart III-14
D-SIB: Status of non-performing corporate loans, by claim amount[1]



In enforcement proceedings
In collection
In restructuring
Other non-fulfilment
Frozen

1. Percentage of total loans in each size category. Domestic systemically important banks, parent companies, book value.
Source: Financial Supervisory Authority.

Default on the decline again

The D-SIBs' loans default ratio declined by 0.4 percentage points in the first half of the year, to 1.7% by the end of the period. It rose in 2016; therefore, the reduction has taken place this year. In terms of claim value, the default ratio was 3.6% at the end of June and had declined by nearly a percentage point since end-2016.

The non-performing loan (NPL) ratio[7] was unchanged in H1/2017, with household NPL declining by just under a percentage point during the period, while corporate NPL rose by nearly a percentage point, to 6.8% by the end of August. The rise in NPLs was greatest for loans to large companies, but NPLs to medium-sized firms rose as well. Few companies fall into the large firm category, and changes in a few companies' NPLs will have a significant impact on the overall situation.

III-b Other financial market entities

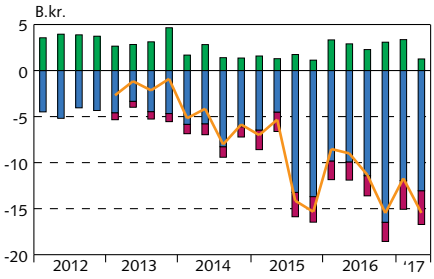
The Housing Financing Fund (HFF) attempts to mitigate the negative impact of prepayments on its interest rate differential by stepping up its investments in asset-backed bonds. Pension fund assets with underlying risk in domestic real estate continue to increase.

HFF's problems still related to substantial prepayments

Even though the HFF recorded a profit on its operations in the first six months of the year, its net operating income was negative. The profit on the sale of appropriated assets and the upward loan valuation adjustment exceeded its other income. The HFF's long-term goal is to maintain a capital ratio of at least 5.0%, and at the end of June its ratio was 7.8%, the highest since the Fund's establishment in 1999.

Assets outside the HFF loan portfolio, including liquid assets, continued to grow in the first half of the year, mainly because of gains on the sale of appropriated assets and prepayments of loans. In the first six months of the year, the Fund sold just under a fourth of its appropriated assets, which are about six times as much as it took over at the same time. Appropriated assets are therefore declining. The HFF loan portfolio continued to contract due to limited lending, prepayments, write-offs, and allocation of third-pillar pension savings. In the first six months of the year, early retirement of HFF loans (excluding partial prepayments) totalled nearly 25 b.kr., or 4.3% of the loan portfolio as of the year-end. In addition, partial prepayments made directly or indirectly (through allocation of third-pillar pension savings) totalled just under 8.5 b.kr., or 1.5% of the year-end portfolio. This increase in prepayments exacerbates the mismatch between assets and liabilities, which the Fund has attempted to mitigate. Since 2015, the HFF has invested nearly 109 b.kr. in indexed asset-backed bonds with a repayment profile similar to that of its funding, in accordance with its risk management policy. The Fund has not issued bonds in the market since 2012.

Chart III-15
HFF: Customer prepayments and new loans



Full prepayment
Partial prepayment[1]
New lending
Difference between new loans and customers prepayments

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

7. NPL figures are based on the cross-default method; i.e., 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. This method is considered conservative.

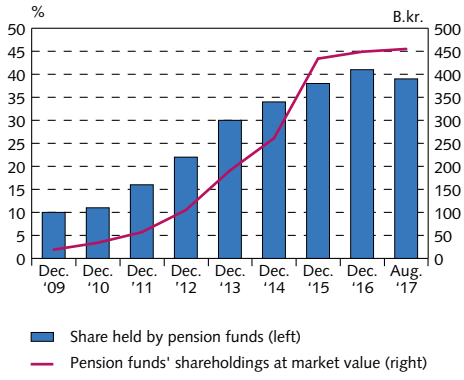
Pension funds have few domestic investment options

The pension funds' assets grew by just over 3% in real terms in the first six months of the year, to about one-and-a-half times GDP by end-June. Just under half of pension funds' assets are in marketable bonds and bills, and about a fifth are marketable bonds other than those issued by the HFF. That percentage has increased markedly in recent years. As was the case at the end of 2016, the rise is due to the commercial banks' covered bond issues and specialised investments in commercial real estate and real estate companies. Other real estate-related assets held by the pension funds – such as assets backed by domestic real estate via direct lending and specialised investment – have also increased. The pension funds' new loans to fund members have increased both in number and in average amount loaned. In the first eight months of 2017, new loans amounted to a total 76% higher than in the same period in 2016. Residential real estate-backed loans to fund members accounted for 8% of the pension funds' total assets at the end of August, an increase of a 1.3 percentage points since the turn of the year.

Just under one-fifth of the pension funds' assets are domestic equity securities and unit shares. The funds now hold 39% of listed domestic equities. As a result, the pension funds are more dependent on individual firms' performance than they were a few years ago, and it could prove more difficult for them to shift between asset classes. A dearth of investment options is one of the reasons the funds' proportional holdings in listed domestic securities has increased by 30 percentage points since the beginning of 2009. Since the beginning of July, when the employer contribution to private sector workers' pension funds was increased by 1.5 percentage points, the funds have an even greater need for new investment alternatives. Foreign investments currently account for about 22% of the pension funds' total assets. Even though the funds' foreign holdings increased by nearly 1 billion US dollars in the first half of the year, that ratio has changed little since the turn of the year, mainly because the króna appreciated over the same period. The pension funds can be expected to step up their foreign investments in coming years so as to achieve better risk diversification.

Chart III-16

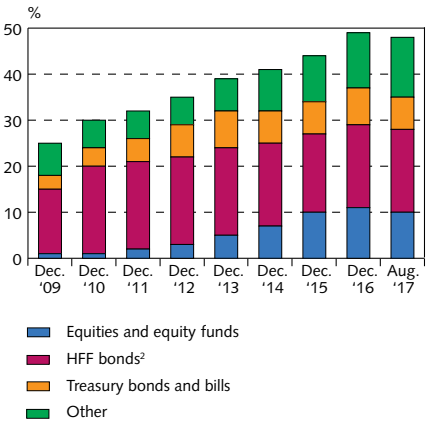
Pension funds: Listed domestic equity securities holdings



Source: Nasdaq Iceland.

Chart III-17

Pension funds: Listed domestic securities holdings[1]



1. Share of listed market securities. 2. Including Housing Bonds and Housing Authority Bonds.
Source: Nasdaq Iceland.

IV Central Bank stress test 2017

The Central Bank of Iceland's 2017 stress test extends to the country's three largest commercial banks. For this year's test, the stress scenario involves a recession among Iceland's trading partners, a decline in the price of Iceland's main exports, a steep drop in the number of tourists visiting the country, and a depreciation of the króna. The stress test covers a three-year period from 2017-2019. The period is defined by the starting of the annual stress test process. The purpose is to explore the resilience of the banks with unfavourable economic conditions and not to predict the upcoming economic developments. According to the stress scenario, exports contract and terms of trade deteriorate. Inflation and unemployment rise, and investment contracts. In addition, GDP contracts by just over 5.5% for the first two years. The results of the stress test indicate that the banks' combined capital ratio could fall by some 3.4 percentage points from the initial position under this stress scenario.[1]

Scenario analysis used for stress testing

The Central Bank of Iceland, in consultation with the Financial Supervisory Authority, conducts an annual stress test in which it examines the impact of macroeconomic scenarios on the commercial banks' resilience. The 2017 stress test extends to the country's three largest commercial banks, which are defined as systemically important domestic banks (D-SIB) and own a combined 97% of assets held by deposit institutions. Two scenarios are presented: the baseline and the stress scenario. The impact of the scenarios on developments in balance sheets and profit and loss accounts, on the one hand, and the capital base and risk-weighted assets, on the other, is then assessed. The Central Bank's results are based on statistical models, discussions with the banks concerning the impact of the scenarios, and Bank staff assessments. The banks themselves also assess the impact of the scenarios using their own methodology, albeit within a framework provided by the Central Bank. A more detailed description of the Central Bank stress test and the methodology used can be found in the report entitled *The Central Bank of Iceland's approach to stress testing the Icelandic banking system*.[2]

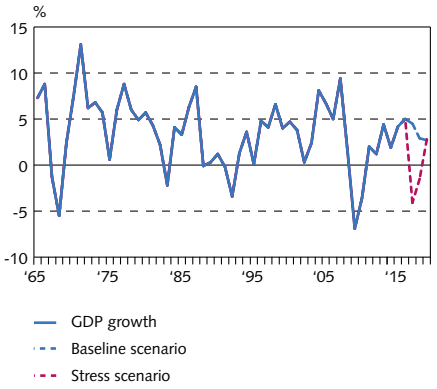
Scenarios 2017

Baseline scenario based on the Bank's macroeconomic forecast

The baseline scenario is based on the assumptions concerning medium-term economic developments as set forth in the baseline forecast in *Monetary Bulletin* 2016/4, with one important difference: it assumes that the Bank's policy rate will remain unchanged from year-end 2016 onwards.

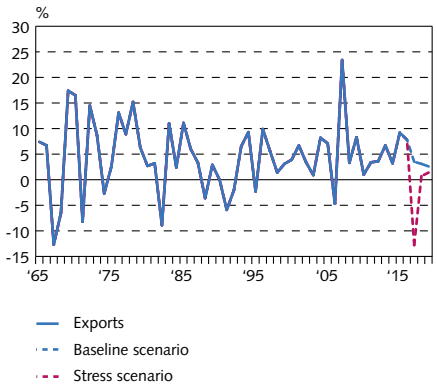
1. Tier 1 capital ratio.
2. Central Bank of Iceland (2017), *Working Paper* no. 75. https://www.cb.is/library/Skraarsafn/ymsar-skrar/WP75.

Chart IV-1
Developments in GDP



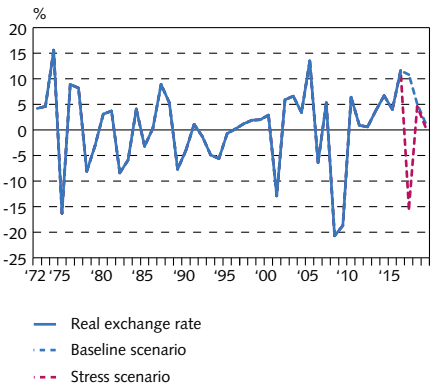
Source: Central Bank of Iceland (QMM results Nov 2016).

Chart IV-2
Developments in exports[1]



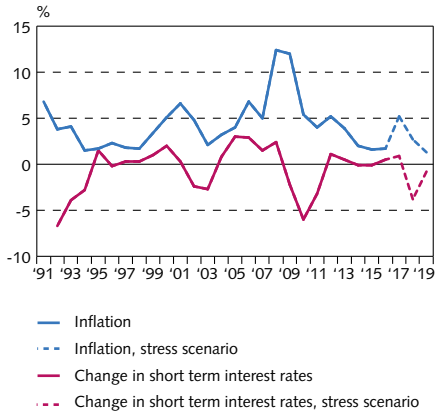
1. Real change.
Source: Central Bank of Iceland (QMM results Nov 2016).

Chart IV-3
Developments in real exchange rate[1]



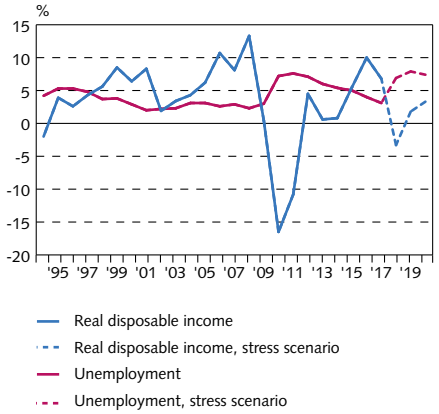
1. Change from previous year.
Source: Central Bank of Iceland (QMM results Nov 2016).

Chart IV-4
Developments in inflation and interest rates[1]



1. Annual average inflation and percentage point change in short term interest rates.
Source: Central Bank of Iceland (QMM results from Nov 2016).

Chart IV-5
Developments in real disposable income and unemployment[1]



1. Real change from previous year, except for annual average unemployment.
Source: Central Bank of Iceland (QMM results Nov 2016).

Stress scenario focuses on exports and exchange rate

The stress scenario is based on the Central Bank's analysis and assessment of risks to financial stability in Iceland.[3] It also takes account of the assumed financial cycle position, so that when the economy is buoyant and asset prices are high, the stress scenario is correspondingly more severe. Consideration is also given to the business cycle position – particularly the output gap – in designing the stress scenario.

The stress scenario assumes that the outlook for the economy will change for the worse, with an economic contraction in trading partner countries and a reduction in Iceland's popularity as a tourism destination. Tourist arrivals decline by 40% year-on-year in the first year of the stress scenario, to about the level in the period from June 2014 through June 2015. It is not assumed that tourist numbers will rise again during the horizon of the stress test. Global aluminium prices fall by 10% and marine product prices by 20%, and fish catches are assumed to decline by 10%. The reduction in tourist arrivals, the contraction in fish catches, and the decline in export prices cause a combined 13% drop in exports in the first year of the scenario.

Iceland's sovereign credit ratings fall as a result of a deteriorating economic situation. Investors move funds out of the country. The stress scenario therefore assumes some capital flight, which – in combination with the drop in export revenues – will cause the króna to depreciate. The real exchange rate declines by 15% in the first year of the stress scenario. Inflation rises in the wake of the falling exchange rate, peaking in the first year of the stress scenario and then tapering off gradually. Short-term interest rates also rise during the first year of the stress scenario but then fall rapidly, in response to declining inflation and a slack in output. Unemployment rises, peaking in the second year of the stress scenario. Real disposable income shrinks during the first year, and GDP contracts by 4.1% in the first year and 1.5% in

Table IV-1 Key variables in the stress test[1,2,3]

	Baseline scenario			*Stress scenario*		
	2017	*2018*	*2019*	*2017*	*2018*	*2019*
Private consumption	6.6	4.2	3.5	-1.3	-2.2	2.0
Public consumption	1.8	1.5	1.6	1.8	1.5	1.6
Gross capital formation	5.4	1.3	5.5	-3.1	-9.8	5.0
Exports of goods and services	3.5	3.1	2.6	-12.8	0.7	1.4
Imports of goods and services	4.8	3.0	4.3	-6.8	-2.3	0.8
GDP (output growth)	4.5	2.9	2.7	-4.1	-1.5	2.8
Terms of trade for goods and services	1.2	-0.6	-0.4	-6.2	-0.4	-0.6
Unemployment, Statistics Iceland labour force survey (annual average, %)	3.0	3.7	3.8	6.9	7.9	7.4
Real disposable income	5.8	3.8	4.3	-3.3	1.8	3.3
Trade-weighted exchange rate index	-9.4	-4.2	-0.3	24.5	-3.5	-1.2
Inflation (consumer price index, CPI)	2.3	2.6	2.9	5.2	2.8	1.3
Real exchange rate in terms of CPI	10.8	5.1	1.4	-15.4	4.6	0.6
Change in Icelandic short term interest rates (percentage points)[2]	0.0	0.0	0.0	0.9	-3.8	-0.8

1. Change from previous year (%) unless otherwise specified. 2. Change in interest rates in the baseline scenario is based on unchanged interest rates from year end 2016, not the yield curve in the forecast from *Monetary Bulleting* 2016/4. In the stress scenario, the development of interest rates is based on the Taylor rule. 3. Figures for the stress scenario are obtained with QMM simulation.

3. Because the process of designing and executing the stress test on the banks is time-consuming, the 2017 stress testing process began in November 2016 with scenario design. Risk factors for financial stability may have changed in the interim.

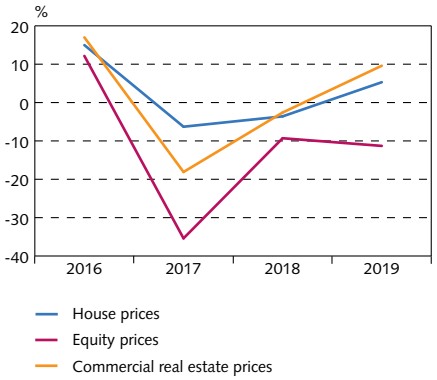
the second year. Developments in key economic variables according to the baseline and stress scenarios can be seen in Table IV-1.

Risk premia in the financial markets will rise in response to the contraction and the reduction in confidence. The increase equates to 450 basis points on foreign funding available to the private sector and the banks and 350 points on domestic funding in the first year of the stress scenario. Risk premia will then decline gradually in the latter part of the horizon. The spread on Icelandic Treasury bonds will rise by about 300 basis points in the first year and then begin to taper off.[4] Asset prices in Iceland will fall in the stress scenario, share prices by a large margin and commercial and residential housing less markedly (see Chart IV-6). It is also assumed that various bond prices will fall during the first year.

The 2017 stress scenario is partly similar to the one used for the Bank's last stress test (see *Financial Stability* 2016/2). Both are driven by a contraction in exports that triggers an uptick in unemployment and a contraction in the real economy. The main difference between the two scenarios lies in the currency depreciation in the 2017 stress scenario, which causes much higher inflation and a commensurably larger reduction in real disposable income. Furthermore, house prices fall more and GDP contracts more in the 2017 stress scenario.

Chart IV-6

Developments in asset prices in 2016 and in stress scenario 2017-2019[1]



1. Change from previous year.
Source: Central Bank of Iceland.

Conclusions

The results show the Central Bank's assessment of the effects of the scenarios on the banks' capital ratio, capital, and risk-weighted assets, including loan losses and developments in their income and expenses. As is mentioned above, the Central Bank's results are based on statistical models, discussions with the banks concerning the impact of the scenarios, and Bank staff assessments. There was a large difference in the three banks' assessments of the impact of the stress scenario. This is due in part to differing methodologies and differences in the position of the banks' borrowers at the beginning of the stress test, but in addition to this, the banks have divergent views of the impact of the shocks in the stress scenario after an upward cycle of many years' duration. The Financial Supervisory Authority takes into account, among other things, the execution of the stress tests in its annual determination of the banks' Pillar 2 capital requirements.

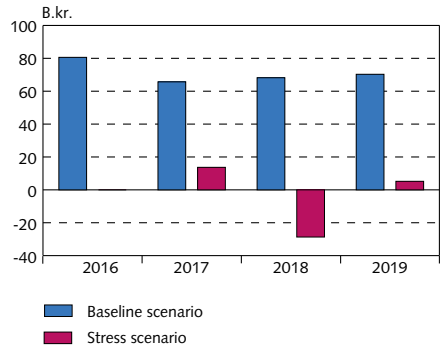
Main assumptions

The starting position of the stress test is based on the banks' consolidated annual accounts as of end-2016. Abundant capital and high capital ratios are the main characteristics of the banks' position at the beginning of the stress test. All of the banks plan to pay dividends, however, and they have already paid a combined 35 b.kr. year-to-date. In the interest of isolating the effects of selected scenarios on the banks' operations, the stress test results do not assume any dividend payments. It is also assumed that there will be no change in the banks' current policies. The effects of dividend payments and possible policy changes would therefore come in addition to those described here.

4. In addition to the premium provided for in the baseline scenario.

It is important to note that the results are sensitive to changes in assumptions and methodologies. The composition of each bank's balance sheet is another important factor, as is the position of its borrowers. It should be borne in mind that the stress scenario is one specific combination of events. If developments diverge from it, the impact on the banks' performance and capital ratio would presumably differ from that indicated here.

Chart IV-7
CBI estimate: EBT



Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

Results for baseline scenario in line with the banks' business plans

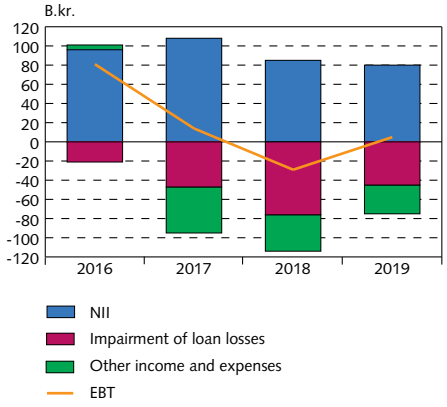
The results for the baseline scenario were in line with the banks' business plans. It is assumed that net interest income and commission and fee income will continue to increase as they did between 2015 and 2016. Irregular income, which has been prominent in recent years, contracted sharply year-on-year in 2016. The forecast assumes that it will contract still further, as no asset sales or upward loan value adjustments are assumed. The forecasted earnings before taxes (EBT) according to the baseline scenario can be seen in Chart IV-7.

Stress scenario: banks' losses peak in second year

The banks' profit contracts in the stress scenario, and in the latter two years they record an operating loss. Net interest income (NII) increases during the first year of the scenario, however, owing to rising inflation and interest rates, but it declines when inflation and interest rates start to taper off. Other income, such as net commission and fee income and net income from financial activities, will contract because of weaker economic activity and falling asset prices. The loss due to falling securities prices would have limited impact, however, as the importance of marketable securities in the banks' balance sheets has diminished.[5]

Loan losses will increase during the stress scenario, in the wake of the economic contraction. Reduced demand affects income, thereby affecting companies' debt service capacity, and elevated unemployment and reduced purchasing power affect individuals similarly. Furthermore, asset prices will fall, causing a rise in loss given default. Loan losses relative to total lending will average about 2.3% per year in the stress scenario, or a total of 7% over the three-year period. Chart II-8 illustrates developments in the banks' profit in the stress scenario.

Chart IV-8
CBI estimate: EBT and contribution of various factors, stress scenario 2017-2019



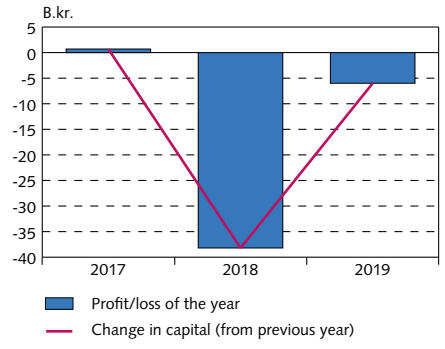
Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

Capital base contracts, while risk-weighted assets rises

In the stress scenario, Tier 1 capital declines by 44 b.kr. from the starting position for the three banks combined. The contraction in capital is due to operating losses, particularly in the second year (see Charts IV-8 and IV-9).

Based on the standardised approach, risk-weighted assets rise by 6.4% in the first year. The increase stems primarily from an increase in the book value of the banks' loans, which in turn is attributable to inflation and a rise in the exchange rate index during the first year of the stress scenario, although reduced demand will cut into lending.

Chart IV-9
CBI estimate: Development of Tier 1 capital



Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

5. Marketable securities in the D-SIBs' balance sheets contracted by 26% between 2015 and 2016.

The book value of corporate loans rises proportionally more than that of loans to individuals, as more than 30% of the D-SIBs' corporate loans were denominated in foreign currencies at the end of 2016. Corporate loans generally have a higher risk weight than loans to individuals, and when they increase as a proportion of the loan portfolio, the average risk weight rises as well. It should be noted that the banks' own assessment of developments in their risk-weighted assets differed greatly, particularly as regards developments in various classes of exposures. The Central Bank's assessment of developments in the banks' risk-weighted assets and assets can be seen in Chart IV-10.

Banks' combined capital ratio falls by 3.4 percentage points

According to the stress test results, the Tier 1 capital ratio declines by 3.4 percentage points from the starting position. Based on the banks' annual accounts, the end-2016 ratio was 27%. As Chart IV-11 indicates, the decline is attributable to a contraction in capital and a rise in the risk-weighted assets (RWA). The decline in the banks' capital ratio due to the impact of the stress scenario lay in the 3.3-3.5 percentage point range.

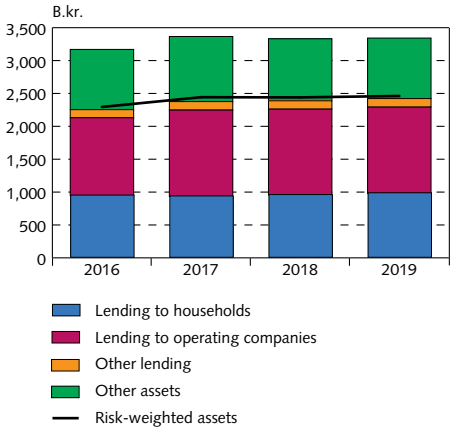
The banks' leverage ratio declines by an average of 1.8 percentage points from the starting position due to the impact of the stress scenario (see Chart IV-12). The decline stems from a contraction in capital and an increase in the exposure measure, which is attributable for the most part to developments in the balance sheet. At the end of 2016, the D-SIBs' leverage ratios were in the 16-20% range.

Foreign comparison

The US Federal Reserve Bank published stress test results earlier this year, and the Bank of England did so at the end of 2016. The Federal Reserve's stress test led to a 3.3 percentage point average reduction in the CET 1 capital ratio at the worst point. The stress test covered 34 banks with total assets of 50 billion US dollars or more.[6] In the Bank of England's 2016 stress test, the capital ratio declined by 5.3 percentage points, assuming that no mitigating measures were taken by the banks, and by 3.8 percentage points after accounting for mitigating measures, such as cuts in dividend payments. The stress test covered the UK's seven largest banks.[7] The decline in the capital ratio in the US and UK stress tests was due mainly to a reduction in capital and also to an increase in risk-weighted assets. It should be noted that the stress scenarios differ from one central bank to the next, although they all include a worldwide recession. Furthermore, the balance sheets and policies of the various banks differ.

Chart IV-10

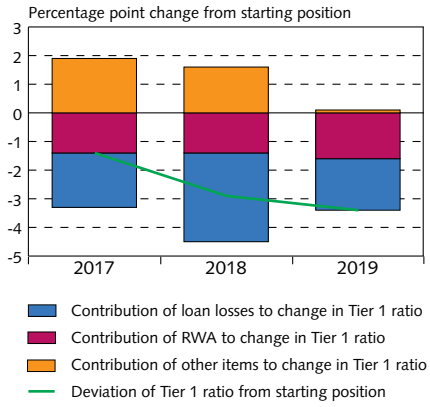
CBI estimate: Development of loans, other assets and RWA in the stress scenario



Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

Chart IV-11

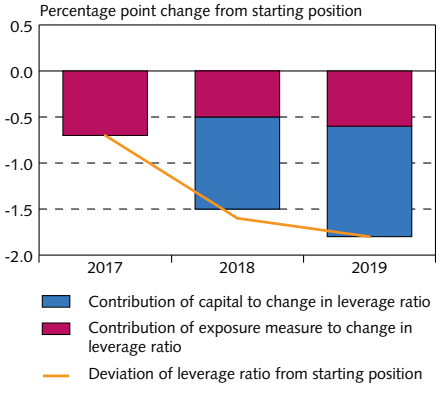
CBI estimate: Deviation of Tier 1 capital ratio from starting position in the stress senario



Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

Chart IV-12

CBI estimate: Deviation of leverage ratio from starting position in the stress senario



Sources: Arion Bank, Íslandsbanki, Landsbankinn, Central Bank of Iceland.

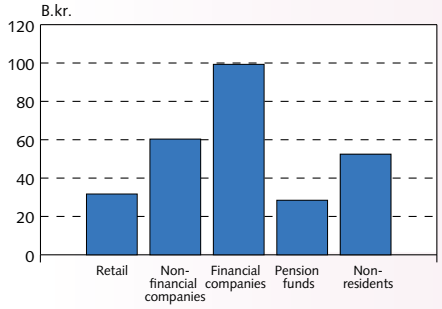
6. Dodd-Frank Act Stress Test 2017: Supervisory Stress Test Methodology and Results, Board of Governors of the Federal Reserve System, June 2017.
7. Stress testing the UK banking system: 2016 results, Bank of England, November 2016.

Box IV-1

Additional scenario

Chart 1

Deposit outflow in additional stress scenario



Source: Central Bank of Iceland.

An additional scenario was run alongside the stress scenario. It is the same as the stress scenario, but in addition there is outflow of deposits from the banks. It is assumed that the pension funds and large firms withdraw 25% of deposits, individuals and SMEs withdraw 25% of deposits in excess of 50 m.kr., domestic financial institutions withdraw 50% of deposits, and non-residents withdraw 50% of ISK deposits and all of the FX deposits.

The scenario tested the banks' liquidity position and the impact on their capital ratios. According to the scenario, outflows of deposits totaled 16% of all deposits held in the banks. According to the liquidity rules set by the Central Bank, the banks must retain reserves of liquid assets, in part so as to withstand unexpected outflows of deposits. The banks all have abundant liquidity, and their liquidity ratios were high initially. The impact of the additional scenario is that the liquidity ratios decline in the first year (in comparison with the baseline) but then rise again and, by the end of the horizon of the additional scenario, are higher than in the baseline scenario. This is due in part to reduced liquidity requirements, as deposits with large liquidity requirements have declined markedly, and no dividend payments are assumed during the period. In comparison with the main stress scenario, the liquidity ratios fall by 15-44 percentage points but remain above the regulatory minimum. Because of the composition of the banks' liquid assets, which consist in large part of term deposits with the Central Bank, the outflows, albeit substantial, do not have a direct impact on asset prices because the banks do not have to engage in large-scale asset sales to cover the withdrawals.

The impact of the additional scenario on the banks' capital ratios is similar to the impact of the stress scenario. The difference lies in the effect on the banks' leverage ratios. In the additional scenario, the combined leverage ratio declines by 0.8 percentage points, as opposed to a decline of 1.8 percentage points in the main stress scenario. The reduction is due to lower exposure measure because of the decline in liquid assets against outflows of deposits.

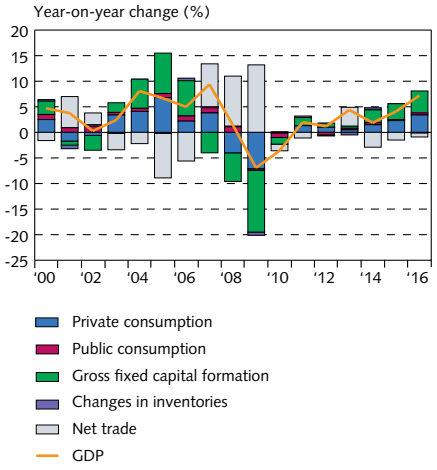
Appendix I

Charts

I Macroeconomic environment

Chart I-1

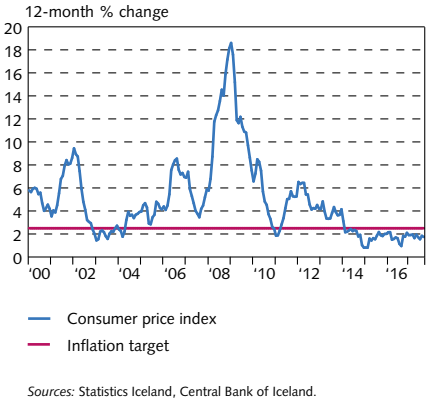
Output growth[1]



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

Chart I-2

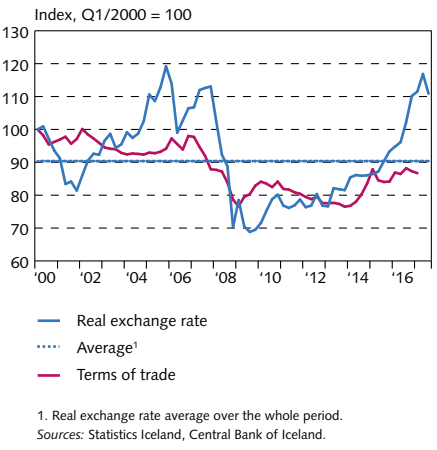
Consumer price inflation



Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-3

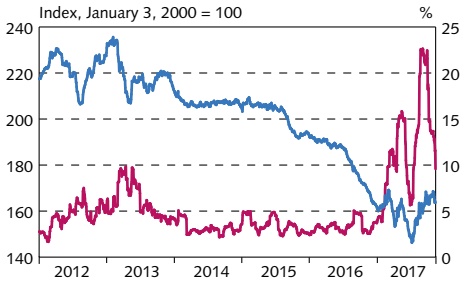
Real exchange rate of the króna and terms of trade



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

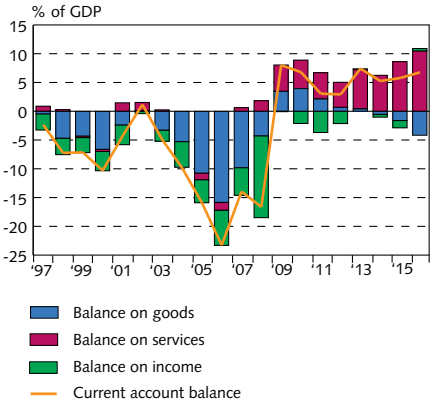
Chart I-4

Trade-weighted exchange rate index[1]



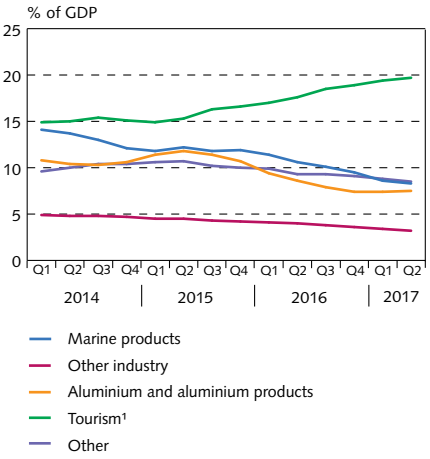
1. Exchange rate index based on average imports and exports, narrow trade basket (1%).
Source: Central Bank of Iceland.

Chart I-5
Current account balance[1]



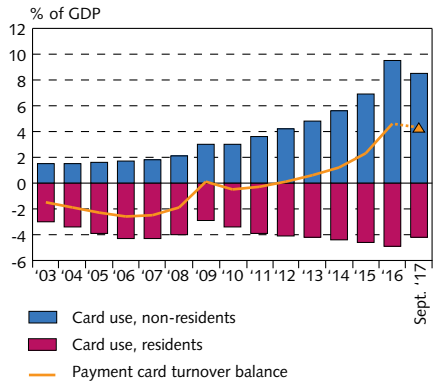
1. Adjusted for the effects of the old banks on factor income and the balance on services from Q4/2008. From 2009 through 2012, the balance on income was also adjusted for the effects of Actavis, owing to inaccurate data during the period. Secondary income is included in factor income.
Sources: Statistics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

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



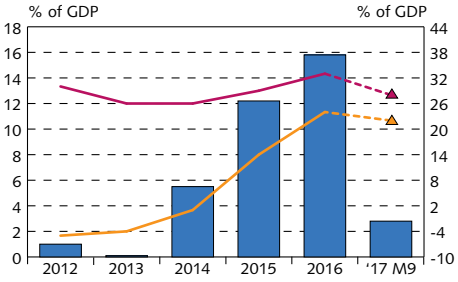
1. Revenues from foreign tourists in Iceland and Icelandic airlines' revenues from transporting foreign passengers to and from Iceland and other destinations.
Sources: Statistics Iceland, Central Bank of Iceland.

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.

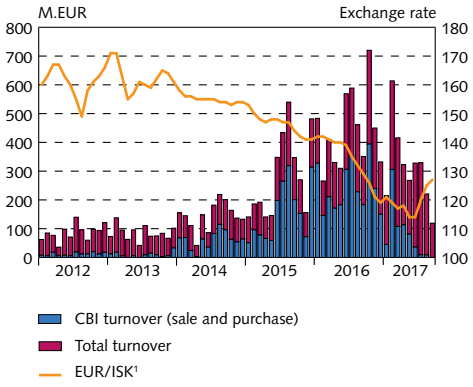
Chart I-8
Central Bank FX market transactions and developments in foreign exchange reserves



Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-9

Foreign exchange market turnover

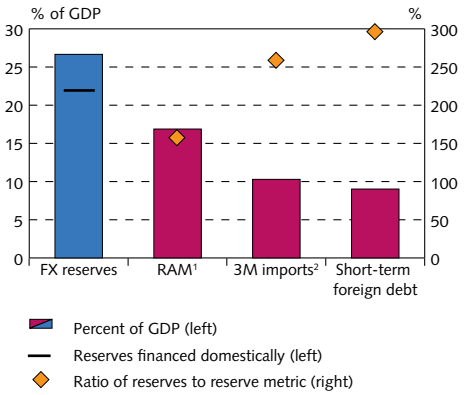


1. Monthly average.
Source: Central Bank of Iceland.

Chart I-10

Central Bank reserve adequacy

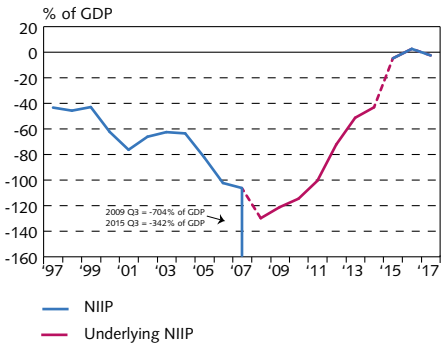
Position in Q2/2017



1. IMF Reserve Adequacy Metric. 2. Average of three months of imports in the last four quarters.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-11

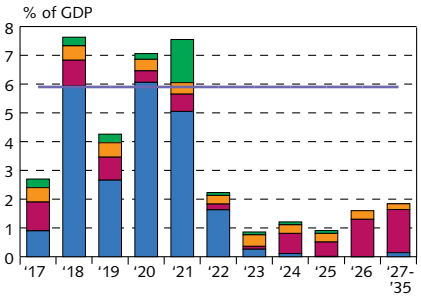
Net international investment position[1]



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-12

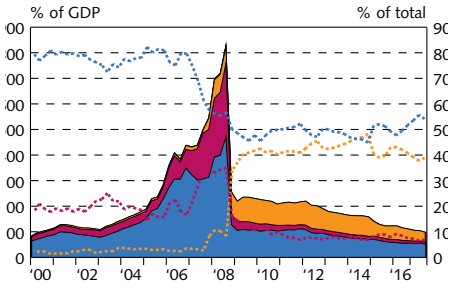
Repayment profile of long-term foreign loans, excluding the Treasury[1]



1. Foreign long-term loans and foreign-denominated debt to the holding companies of the failed banks. Based on position at Q2/2017 and exchange rate of 1 September 2017, plus commercial banks' foreign issuance in Q3/2017.
Sources: Financial information from DMBs and old banks' holding companies, Statistics Iceland, Central Bank of Iceland.

Chart I-13

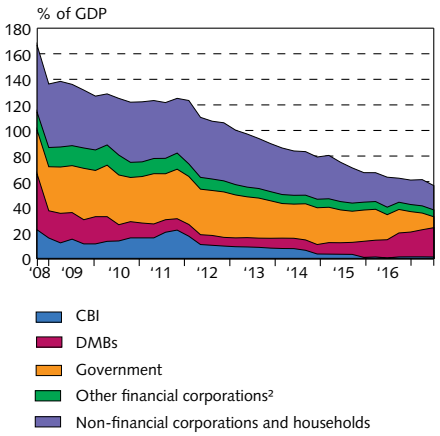
External debt[1]



1. Excluding debt of old banks. Debt securities, loans, trade credit, advances, insurance, pension and standardized guarantee schemes, currency and deposits. Classified according to national accounts standards. Dotted lines represent percentage of total debt.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-14

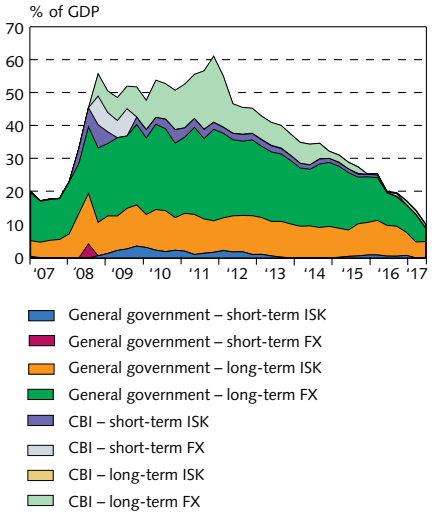
External debt position[1]



1. Excluding foreign direct investment, equities, investment fund shares, and derivatives. 2. Excluding old banks.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart I-15

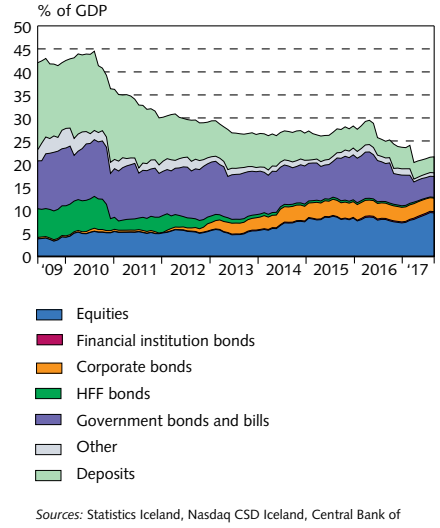
General government and Central Bank of Iceland debt to non-residents[1]



1. Debt securities, loans, deposits and other debt.
Sources: Statistics Iceland, Central Bank of Iceland.

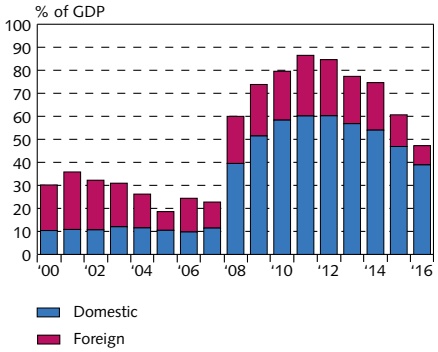
Chart I-16

Foreign-owned deposits and electronically registered securities in Iceland



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

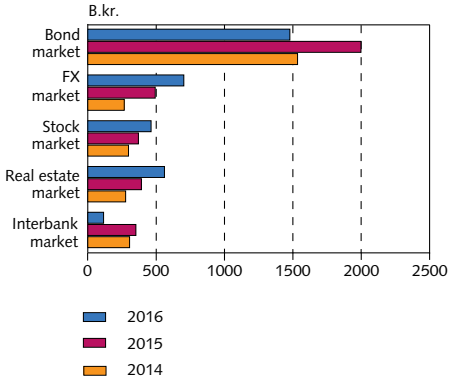
Chart I-17
Treasury debt



Source: Statistics Iceland.

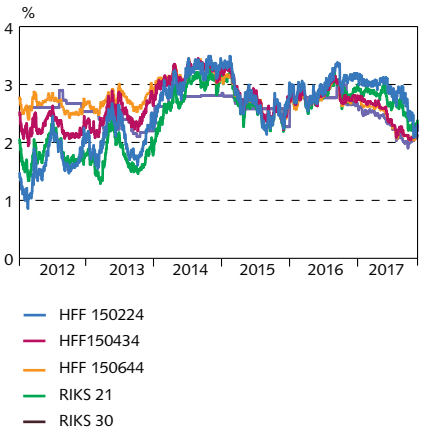
II Financial markets

Chart II-1
Domestic financial market turnover



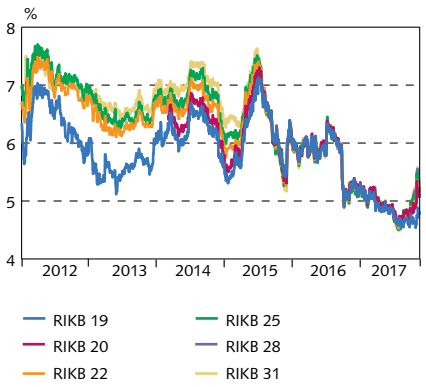
Sources: Nasdaq Iceland, Registers Iceland, Central Bank of Iceland.

Chart II-2
Indexed bond yields



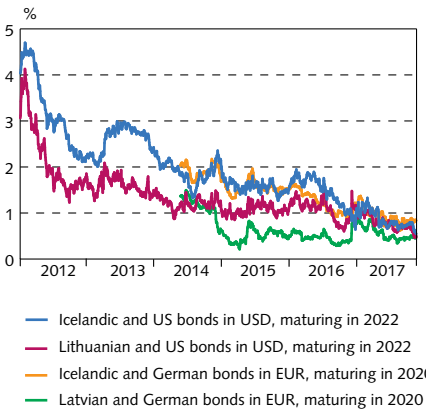
Source: Nasdaq Iceland.

Chart II-3
Nominal Treasury bond yields



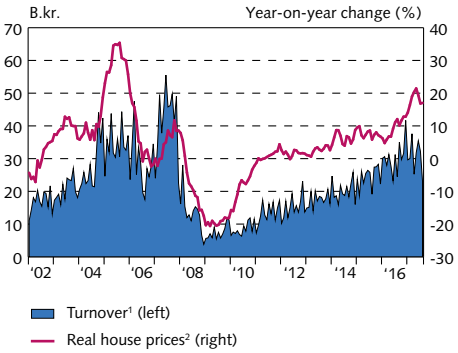
Source: Nasdaq Iceland.

Chart II-4
Government bond spreads



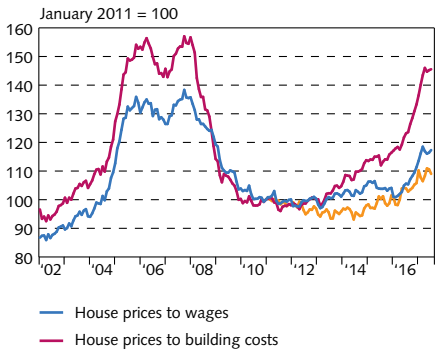
Sources: Bloomberg, Central Bank of Iceland.

Chart II-5
Housing market prices and turnover



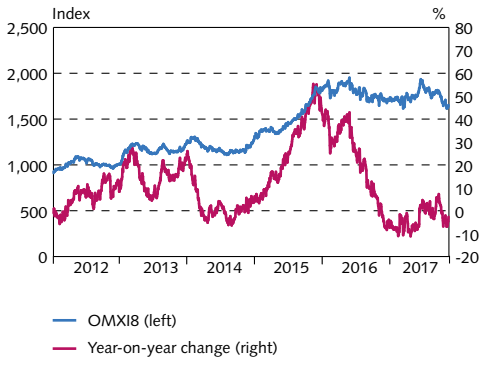
1. August 2017 price level. 2. Deflated with the consumer price index.
Sources: Registers Iceland, Central Bank of Iceland.

Chart II-6
House prices[1]



1. House price index in relation to wage index, building cost index and rent price index.
Sources: Statistics Iceland, Registers Iceland, Central Bank of Iceland.

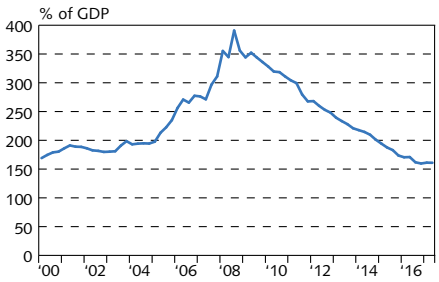
Chart II-7
OMXI8 share price index



Source: Nasdaq Iceland.

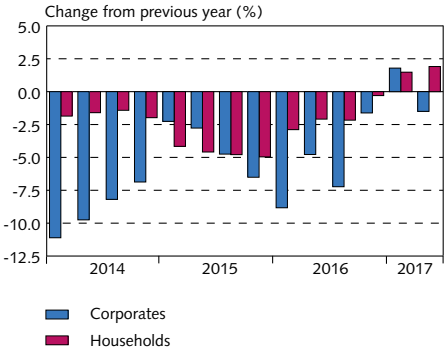
III Households and businesses

Chart III-1
Private sector credit-to-GDP



Sources: Statistics Iceland, Central Bank of Iceland

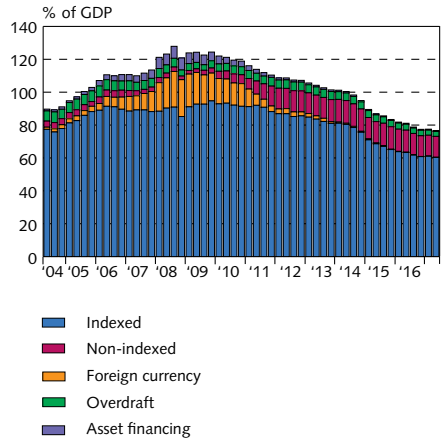
Chart III-2
Real private sector credit growth[1]



1. Year-on-year change of total credit to households and corporates, deflated with CPI.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-3

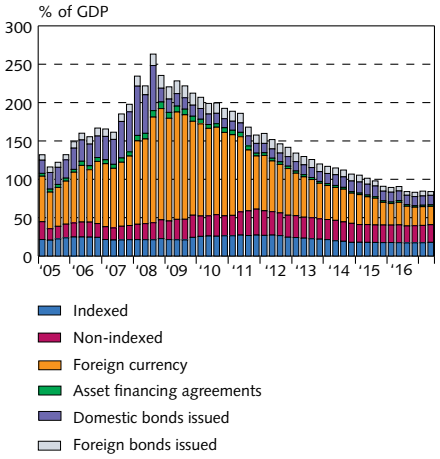
Households: Debt relative to GDP



Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-4

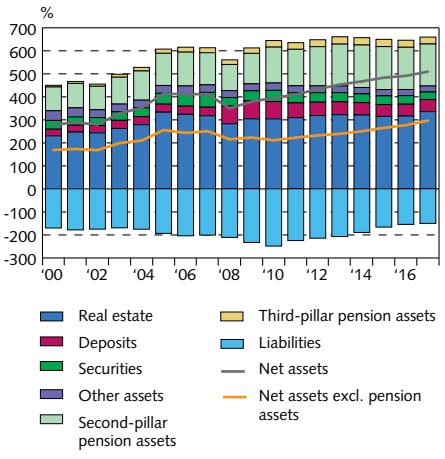
Companies: Debt as % of GDP[1]



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

Chart III-5

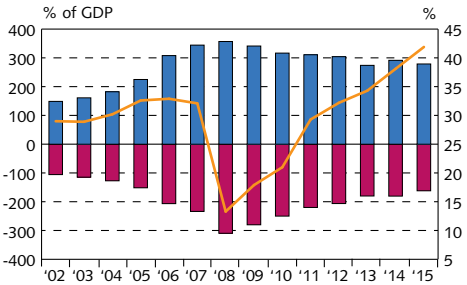
Households: Assets and liabilities relative to disposable income[1]



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

Chart III-6

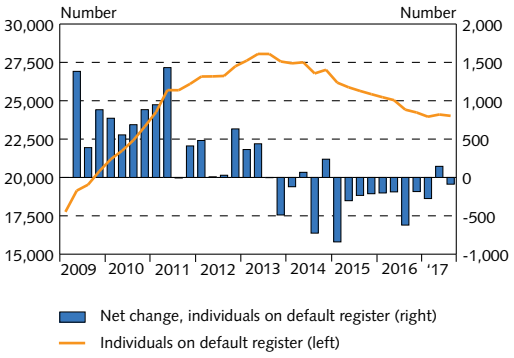
Companies: Assets and liabilities as % of GDP and equity ratio[1]



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

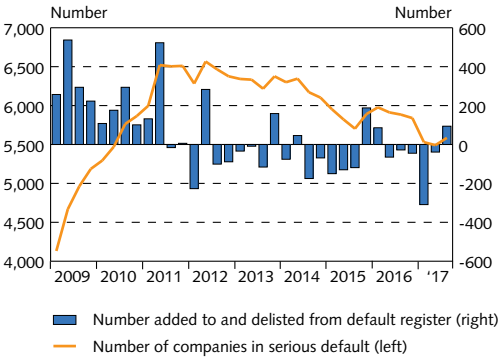
Individuals: Number on default register



Source: CreditInfo.

Chart III-8

Companies in default

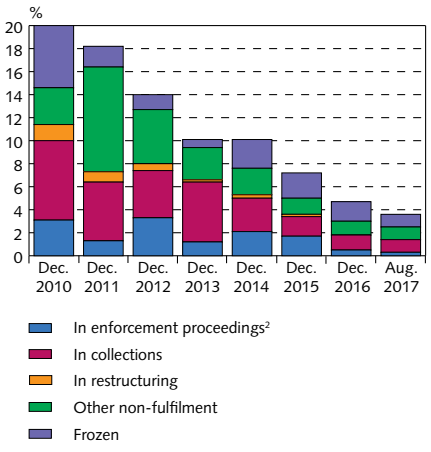


Source: CreditInfo.

Chart III-9

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

Cross-default method

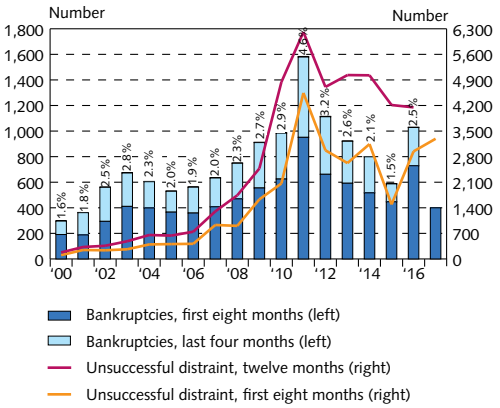


1. Domestic systemically important banks and HHF, parent companies, book value. 2. The share of loans in enforcement proceedings and collections declined in December 2011 because the HFF did not send out dunning letters or forced sale requests in the latter half of the month.

Source: Financial Supervisory Authority.

Chart III-10

Companies: Bankruptcies and unsuccessful distraint actions[1]



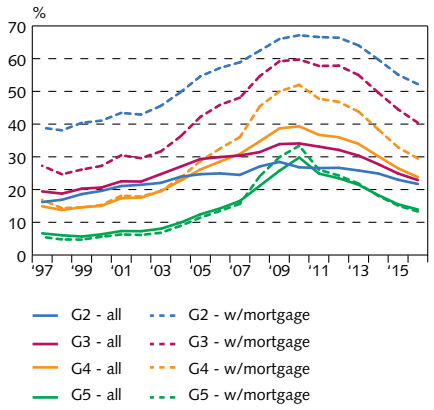
1. The percentages show bankruptcies as a share of the total number of firms.

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

Chart III-11

Share of taxpayers owing more than 300% of disposable income[1]

By income group and debtor type

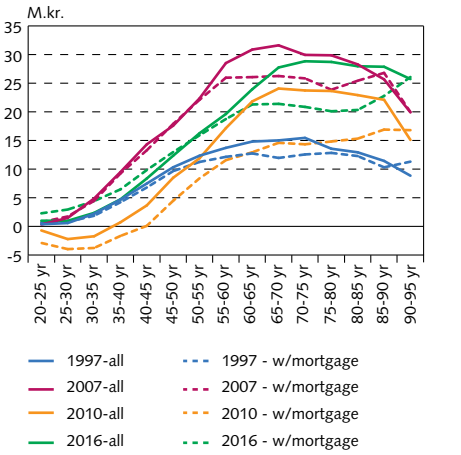


1. The broken lines show the share of taxpayers with mortgage debt whose total debt exceeds 300% of their disposable income. The lowest-income group, G1, is not shown.
Sources: Statistics Iceland, Central Bank of Iceland

Chart III-12

Net asset position by age group, 2016 price levels[1]

By age group and debtor type

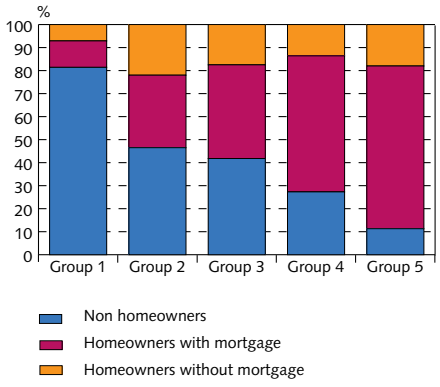


1. The broken lines show the net assets of individuals with mortgages.
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-13

Housing status by income group

Year 2016

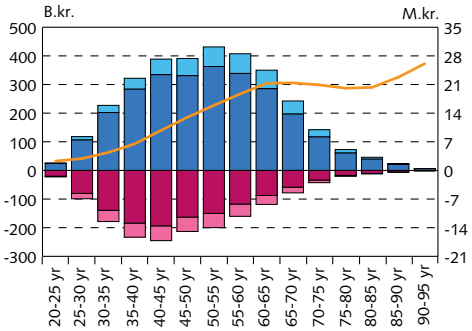


Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-14

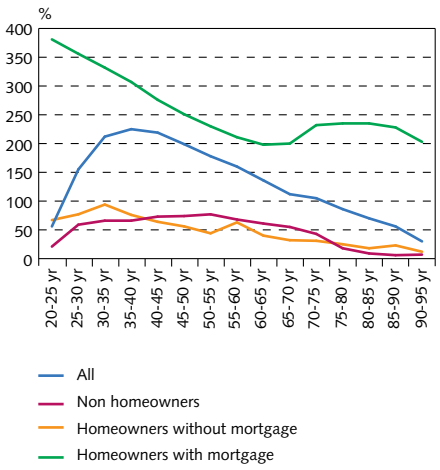
Assets, debt, and net assets of individuals with mortgage debt[1]

Year 2016



1. Only individuals with mortgages are included. Left axis shows total assets and debt and right axis shows net assets in year 2016.
Sources: Statistics Iceland, Central Bank of Iceland.

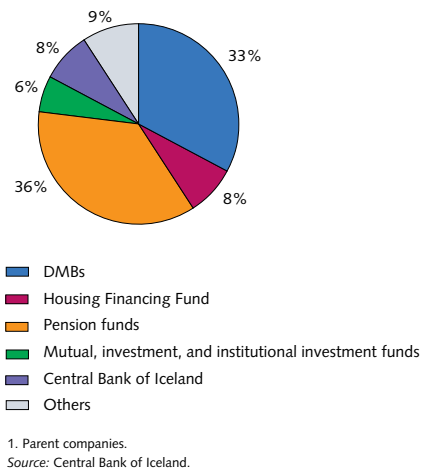
Chart III-15
Debt as a share of disposable income
By housing position



Sources: Statistics Iceland, Central Bank of Iceland.

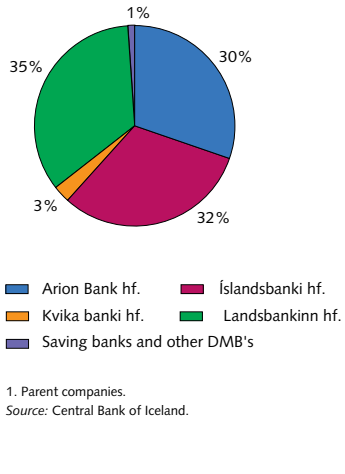
IV The financial system

Chart IV-1
Financial system: Distribution of assets
June 2017



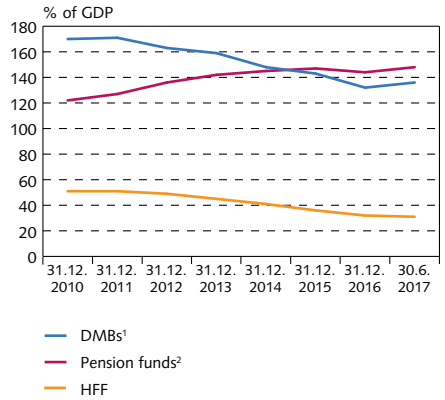
1. Parent companies.
Source: Central Bank of Iceland.

Chart IV-2
DMBs: Share of total assets[1]
June 2017



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

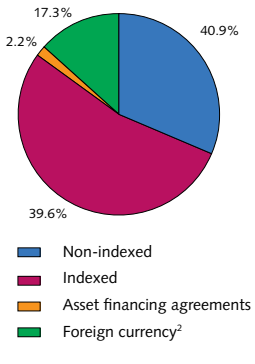
Chart IV-3
Financial system: Assets as % of GDP



1. Parent companies. 2. Preliminary figures for June 2017.
Sources: Statistics Iceland, Central Bank of Iceland

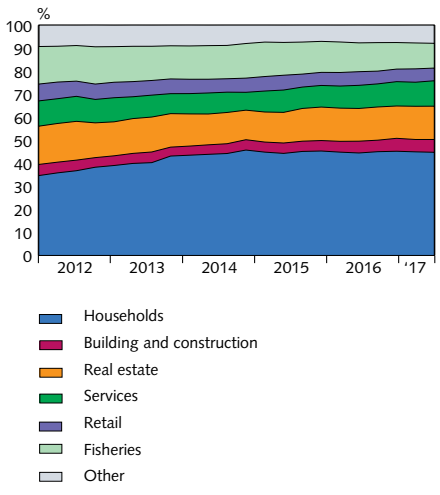
V Systemically important banks and deposit institutions – lending

Chart V-1
DMBs: Distribution of loans by type[1]
At the end of June 2017



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

Chart V-2
D-SIB: Classification of lending[1]

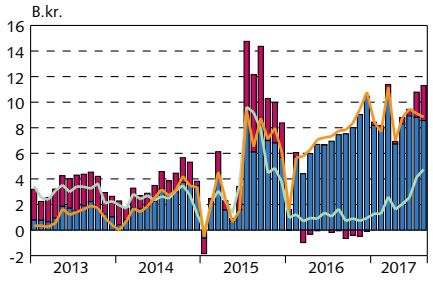


1. Loans to each sector as a share of total lending to households and operating companies.
Source: Central Bank of Iceland.

Chart V-3

DMBs: Net new lending to households

January 2013 - August 2017

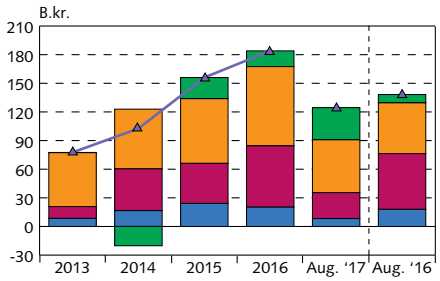


Net indexed mortgage loans
Net non-indexed mortgage loans
Net indexed loans
Net non-indexed loans

Source: Central Bank of Iceland.

Chart V-4

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



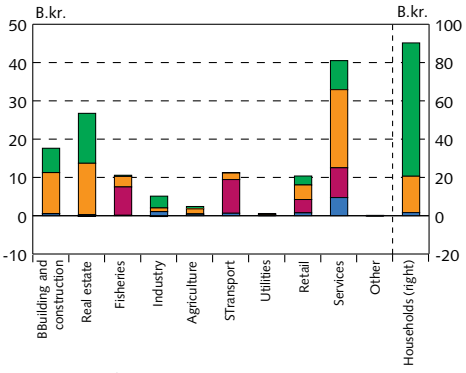
Asset financing agreements
FX loans
Non-indexed
Indexed
Net new lending, total

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: Net new lending[1]

Year end 2016 - August 2017

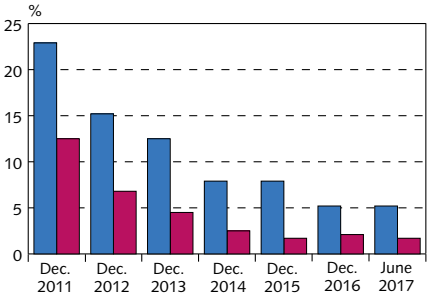


Asset financing agreements
FX loans
Non-indexed
Indexed

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-6

D-SIB: Default ratios[1]

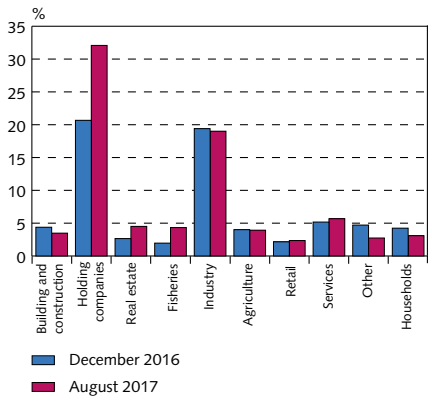


Non-performing loans; i.e. loans past due over 90 days, frozen or deemed unlikely to be paid (cross-default method)
Loans in default; i.e. loans in past due over 90 days (facility level)

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

Chart V-7

D-SIB: Non-performing loan ratios[1]



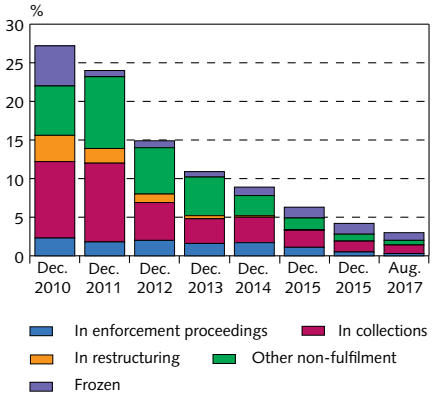
1. Domestic systemically important banks, parent companies, book value.

Source: Financial Supervisory Authority.

Chart V-8

D-SIB: Status of non-performing loans to households[1]

Cross-default method



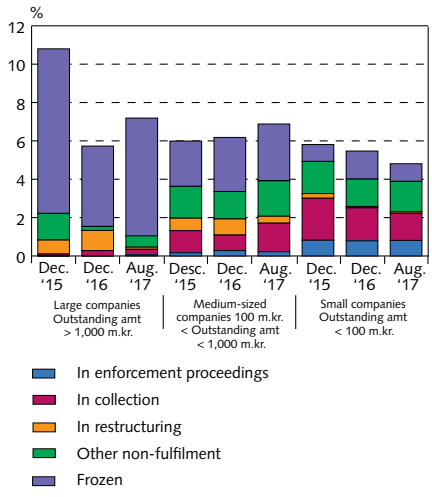
1. Domestic systemically important banks, parent companies, book value.

Source: Financial Supervisory Authority.

Chart V-9

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

Cross-default method

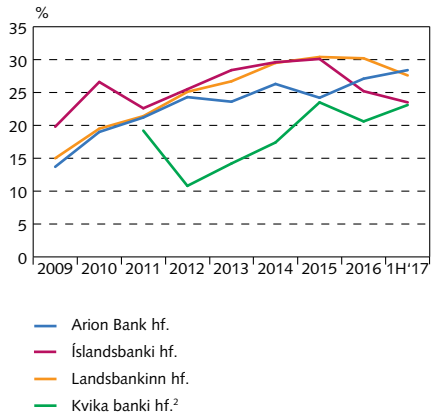


1. Percentage of total loans. Domestic systemically important banks, parent companies, book value.

Source: Financial Supervisory Authority.

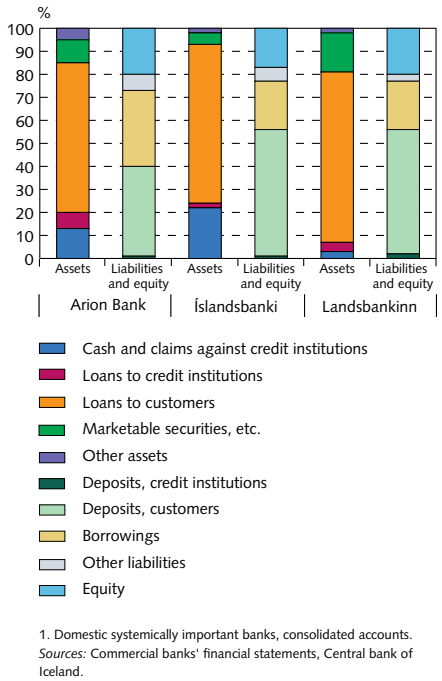
VI Systemically important banks and other deposit intitutions – operations and liquidity

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



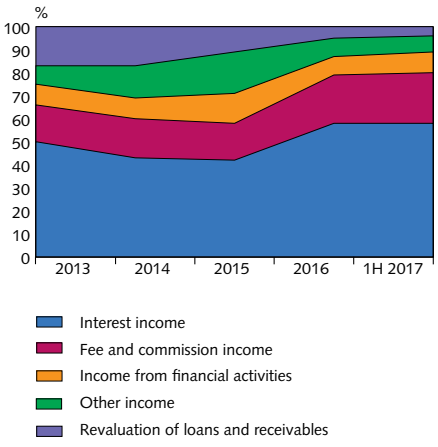
1. Consolidated figures. Capital base as % of risk-weighted base.
2. CAR for MP bank until 2015.
Sources: Commercial banks' financial statements.

Chart VI-2
D-SIB: Assets and liabilities[1]
End of June 2017



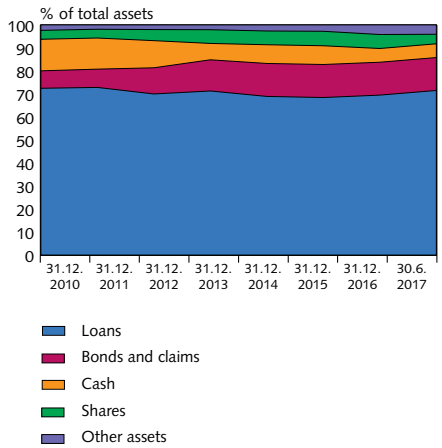
1. Domestic systemically important banks, consolidated accounts.
Sources: Commercial banks' financial statements, Central bank of Iceland.

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



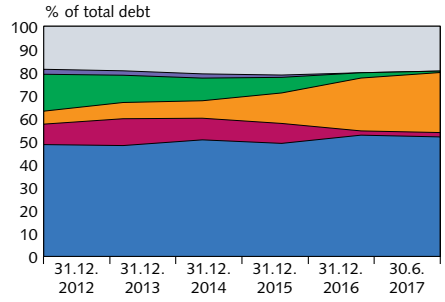
1. Domestic systemically important banks, consolidated figures.
Sources: Commercial banks' financial statements, Central bank of Iceland.

Chart VI-4
D-SIB: Assets[1]



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

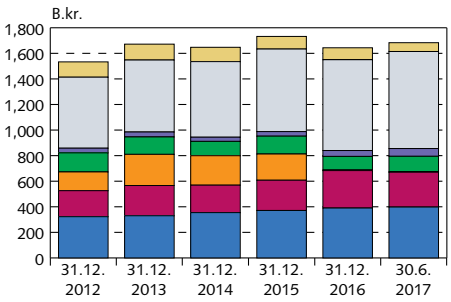
Chart VI-5
D-SIB: Funding[1]



Customer deposits
Loans from DMBs and financial institutions in winding-up proceedings
Securities issuance
Other borrowings
Subordinated loans
Equity

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

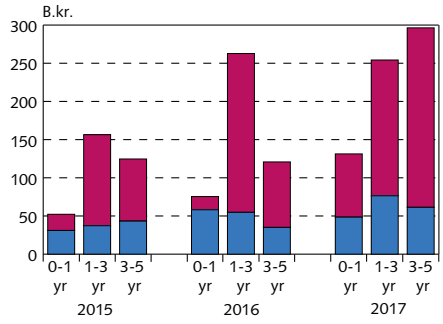
Chart VI-6
D-SIB: Depositors[1]



Non-financial companies
Financial companies
Financial institutions in winding-up proceedings
Pension funds
General government
Households
Non-residents

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

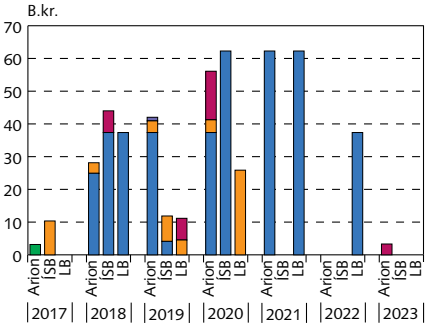
Chart VI-7
D-SIB: Bond maturities[1]



ISK bonds
FX bonds

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

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

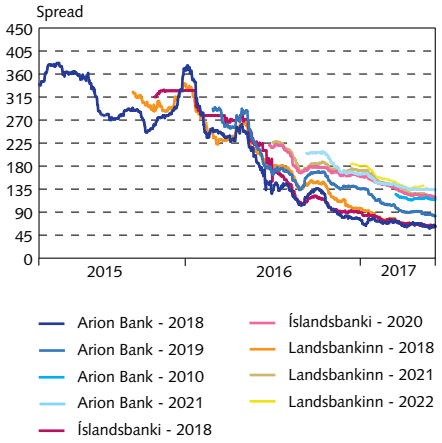


EUR
NOK
SEK
USD
Other

1. At 30 september 2017 exchange rate.
Source: Nasdaq Iceland.

Chart VI-9

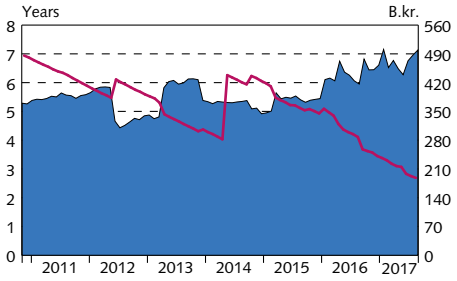
D-SIB: Spread on listed foreign bonds, EUR[1]



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

Chart VI-10

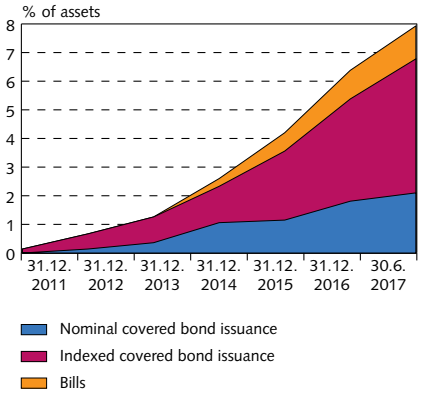
D-SIB: Average residual maturity and total issuance of funding in foreign currency[1]



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

Chart VI-11

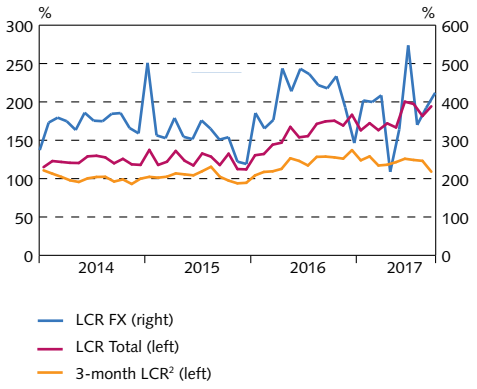
D-SIB: Total outstanding domestic issuance[1]



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

Chart VI-12

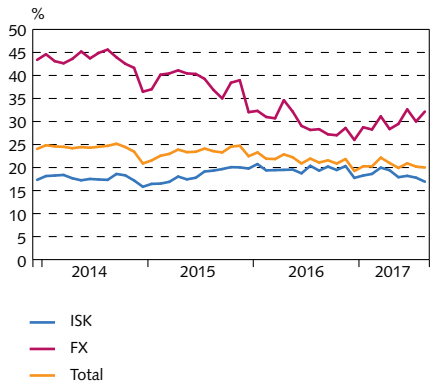
D-SIB: Liquidity coverage ratio[1]



1. Domestic systemically important banks, consolidated figures 2. In accordance with older liquidity rules. New LCR rules were implemented in march 2017.
Source: Central Bank of Iceland.

Chart VI-13

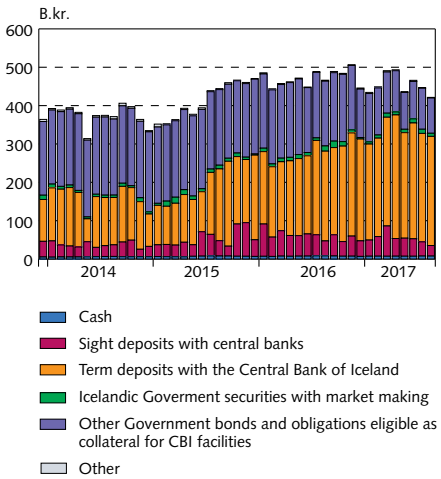
DMBs: Ratio of liquid assets to total assets[1]



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

Chart VI-14

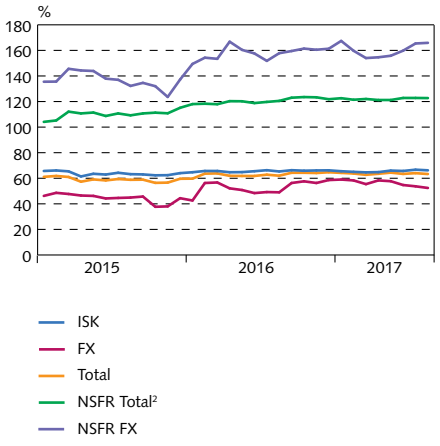
D-SIB: Liquid assets[1]



1. Liquid assets in Icelandic krónur. 2. 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]

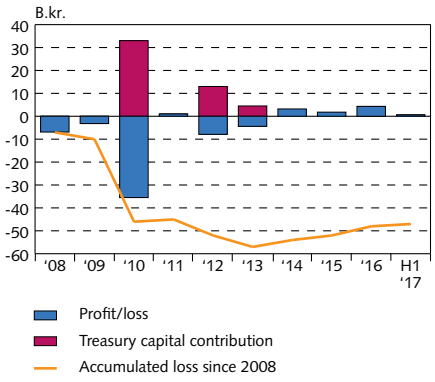


1. D-SIB: Domestic systemically important banks. Core funding is defined here as deposits held by resident individuals and non-financial companies (excluding pension funds), plus capital, subordinated loans, and issued negotiable securities with a residual maturity of more than three years. 2. According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

VII Other financial market entities

Chart VII-1

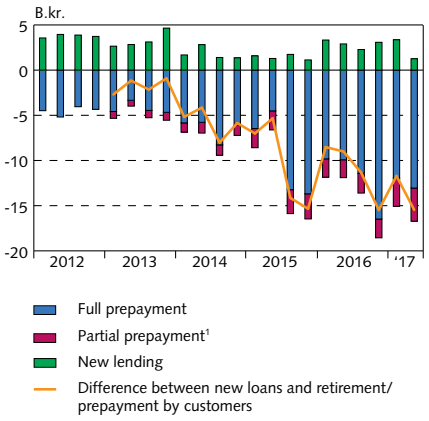
HFF: Profit/loss and Treasury capital contribution



Sources: HFF annual and semi-annual accounts.

Chart VII-2

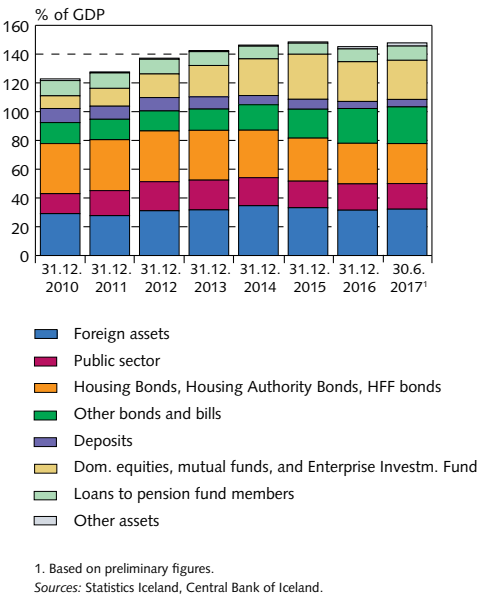
HFF: Customer prepayments and new loans



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

Chart VII-3

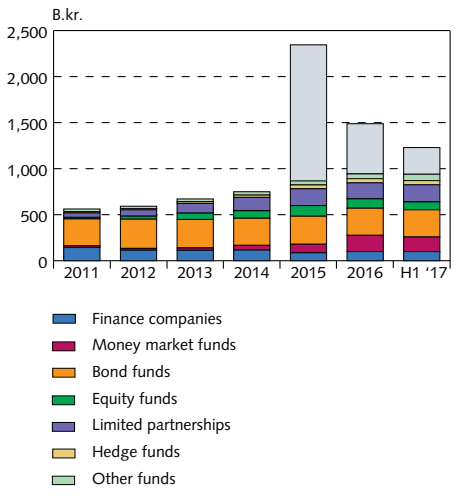
Pension funds: Distribution of assets[1]



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

Chart VII-4

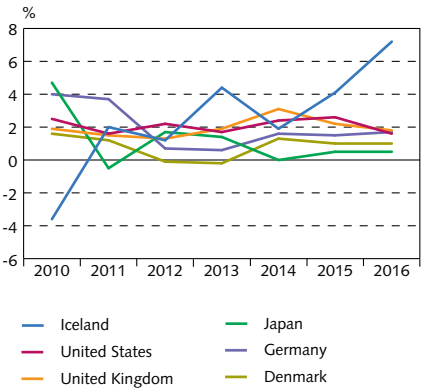
Size of the shadow banking system



Source: Central Bank of Iceland.

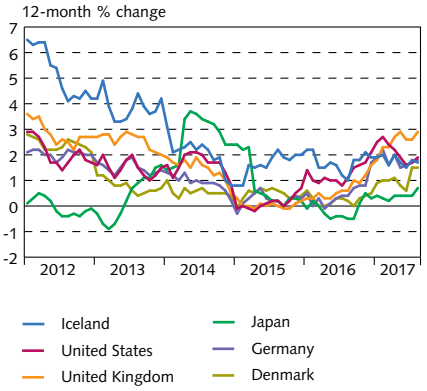
VIII International comparison

Chart VIII-1
Output growth



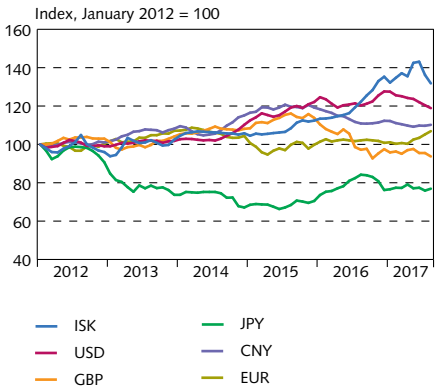
Sources: IMF, Statistic Iceland.

Chart VIII-2
Inflation[1]



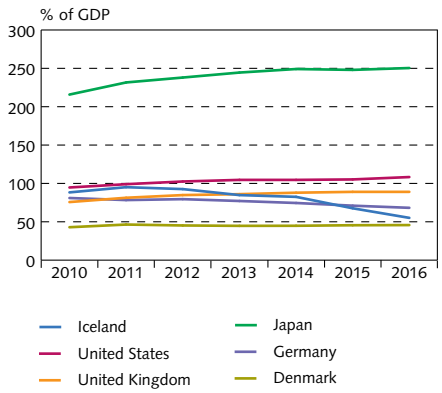
1. Consumer price index.
Source: OECD.

Chart VIII-3
Currency exchange rates[1]



1. BIS nominal indices.
Source: BIS.

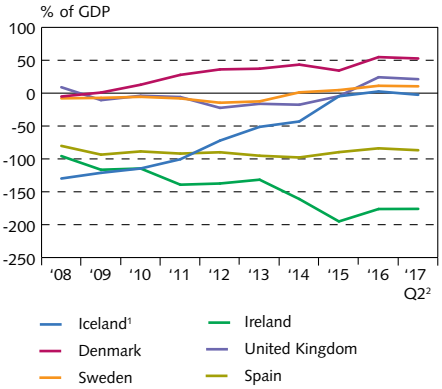
Chart VIII-4
Government debt



Source: IMF.

Chart VIII-5

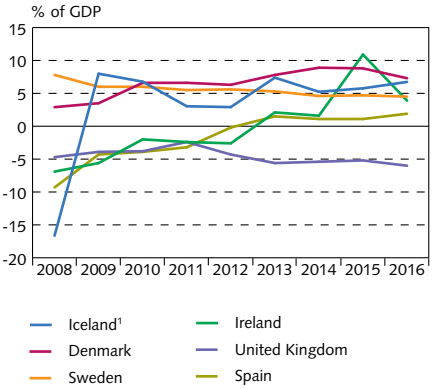
International investment position



1. Iceland's IIP is adjusted for the effects of the old banks in 2008-2015. 2. Newest value at any given time.
Sources: Eurostat, Statistics Iceland, Central Bank of Iceland.

Chart VIII-6

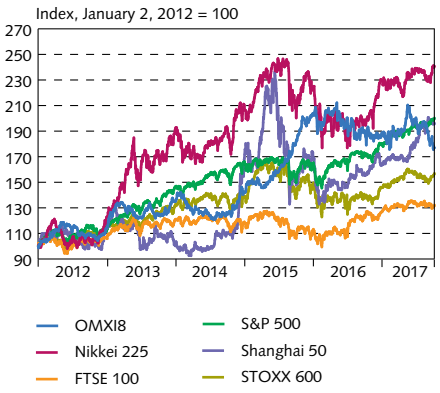
Current account



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

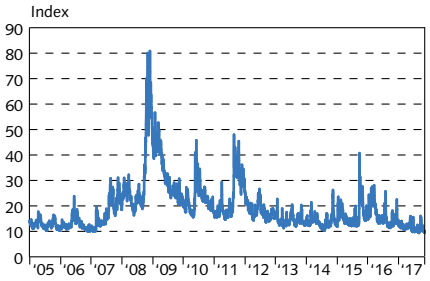
Share price indices



Source: Macrobond.

Chart VIII-8

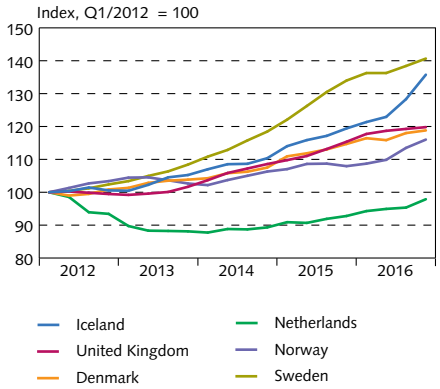
VIX[1]



1. CBOE Volatility Index.
Source: Macrobond.

Chart VIII-9

Real estate prices

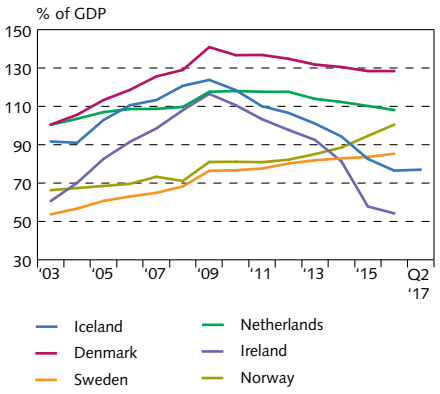


Source: OECD.

Chart VIII-10

Households: Debt as share of GDP

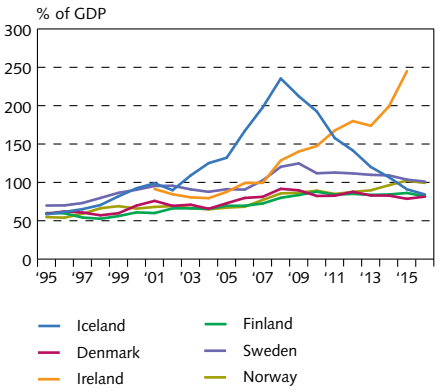
2003 - Q2/2017



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

Chart VIII-11

Corporate debt as percentage of GDP in international comparison[1]

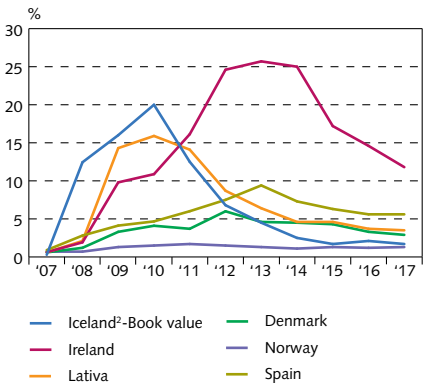


1. Debt owed to domestic and foreign financial undertakings and market bonds issued.

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

Chart VIII-12

Default ratios[1]



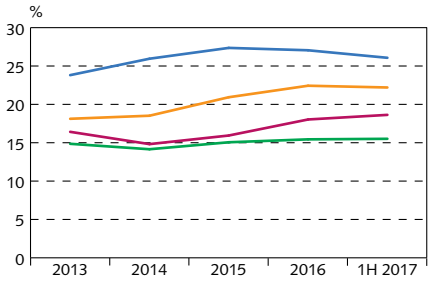
1. Households and corporates. Banks' non-performing loans as a percentage of gross loan portfolio w/o write-downs. 2017-Q1 figures for Denmark, Norway and Ireland. 2. 2007: Figures estimated from the annual accounts of the failed banks. 2008: Central Bank estimates.

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

Chart VIII-13

Tier 1 ratio

Average of ratios



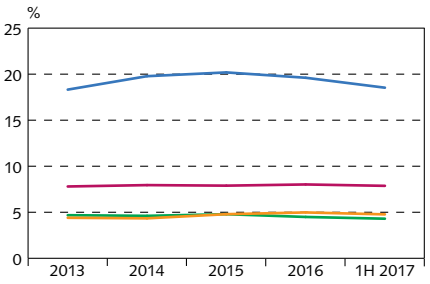
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-14

Leverage ratio[1]

Average of ratios



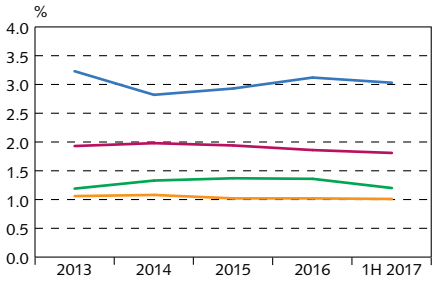
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

1. IFRS Tier 1 leverage ratio.
Source: SNL Financial.

Chart VIII-15

Net interest margin

Average of ratios



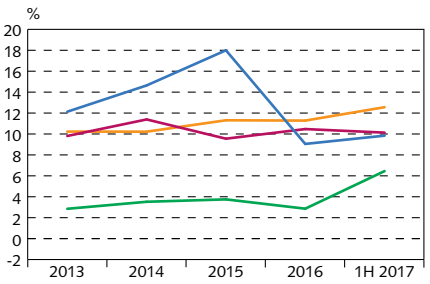
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-16

Return on equity

Average of ratios



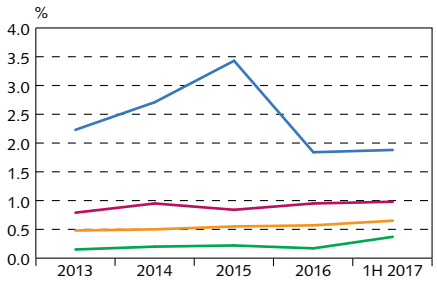
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-17

Return on total assets

Average of ratios



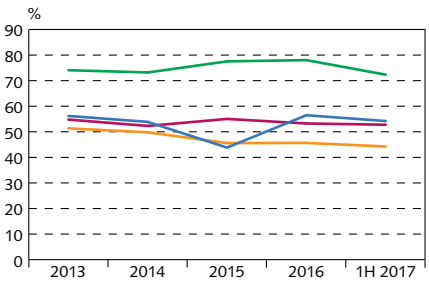
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-18

Cost-to-income

Average of ratios



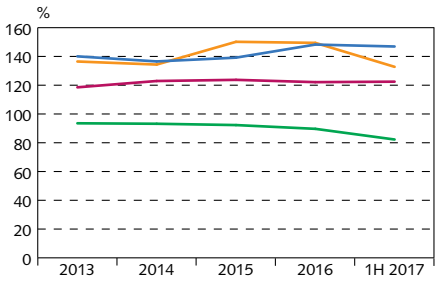
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-19

Loans/deposits

Average of ratios



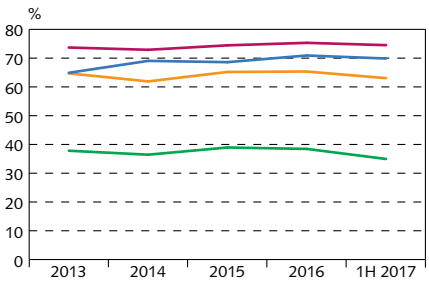
D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Chart VIII-20

Loans/assets

Average of ratios



D-SIB
Nordic banks of similiar size as the D-SIB's
Big Nordic banks
Big European banks

Source: SNL Financial.

Appendix II

Tables

Table 1 Financial system assets[1]

Assets, b.kr	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*30.6. 2017*	*Change from 31.12. 2016, %*
Central bank of Iceland	1,004	957	948	901	774	-14
Commercial banks	2,968	2,939	3,175	3,199	3,365	5
Savings banks	60	59	22	23	22	-3
Other credit institutions1	1,340	1,328	2,653	1,719	1,452	-16
thereof Housing Financing Fund	863	824	804	787	775	-1
Pension funds	2,696	2,935	3,284	3,538	3,688	4
Insurance companies	165	169	171	177	192	8
Mutual funds, investment and institutional funds	452	488	599	670	654	-2
Total assets	8,685	8,874	10,852	10,227	10,147	-1

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. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*30.06. 2017*	*Change from 31.12. 2016, %*
Cash and cash balance with Central Bank	184,184	139,069	294,599	385,056	405,593	5
Deposits in domestic deposit taking corporations	3,993	5,286	2,888	4,176	6,066	45
Deposits in foreign deposit taking corporations	84,187	91,729	99,074	56,299	74,718	33
Domestic credit	1,901,695	1,980,343	2,072,205	2,187,741	2,284,571	4
Foreign credit	184,077	162,477	142,601	132,419	131,818	0
Domestic marketable bonds and bills	266,856	270,133	263,711	206,056	199,023	-3
Foreign marketable bonds and bills	163,054	133,415	99,227	53,590	70,039	31
Domestic equities and investment fund shares	147,036	144,260	152,631	130,720	124,146	-5
Foreign equties and investment fund shares	2,771	2,786	1,844	2,197	3,360	53
Other domestic assets	86,654	63,576	62,516	56,906	75,581	33
Other foreign assets	3,909	4,315	5,767	6,703	11,975	79
Total	3,028,416	2,997,389	3,197,062	3,221,861	3,386,889	5

Source: Central Bank of Iceland.

Table 3 Other financial coporations' assets

Assets, b.kr.	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*30.6. 2017*	*Change from 31.12. 2016, %*
Cash and cash balance with Central Bank	24,472	41,944	38,819	77,712	101,161	30
Deposits in domestic deposit taking corporations	84,692	72,135	233,424	72,927	83,180	14
Deposits in foreign deposit taking corporations	11,326	76,326	616,589	60,734	33,987	-44
Domestic credit	1,051,141	1,013,568	944,089	873,767	839,185	-4
Foreign credit	11,874	7,900	163,189	136,426	61,775	-55
Domestic marketable bonds and bills	45,123	42,401	241,551	217,428	134,785	-38
Foreign marketable bonds and bills	861	1,076	4,965	3,501	2,153	-39
Domestic equities and investment fund shares	13,486	11,864	221,386	160,158	105,801	-34
Foreign equties and investment fund shares	42,438	7,603	94,481	68,507	51,233	-25
Other domestic assets	51,417	50,667	68,700	35,292	33,294	-6
Other foreign assets	3,529	2,521	25,483	12,323	5,710	-54
Total	1,340,358	1,328,006	2,652,676	1,718,776	1,452,265	-16

Source: Central Bank of Iceland.

Table 4 Pension fund assets

Assets, b.kr.	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*30.6. 2017*	*Change from 31.12. 2016, %*
Deposits in domestic deposit taking corporations	161,525	129,275	151,726	116,879	127,419	9
Deposits in foreign deposit taking corporations	3,239	6,273	8,605	18,450	10,621	-42
Domestic credit	176,127	171,063	175,253	237,972	283,685	19
Foreign credit	-	-	80	199	218	9
Domestic marketable bonds and bills	1,325,519	1,408,405	1,509,429	1,719,302	1,770,678	3
Foreign marketable bonds and bills	4,245	3,269	1,777	926	1,205	30
Domestic equities and investment fund shares	412,588	511,373	692,267	671,762	676,299	1
Foreign equties and investment fund shares	591,541	685,428	724,540	748,148	794,170	6
Domestic insurance and pension entitlements	13,214	13,291	14,281	16,997	16,171	-5
Foreign insurance and pension entitlements	-	-	35	44	31	-30
Other domestic assets	7,578	6,695	6,335	7,491	7,006	-6
Other foreign assets	-	-	3	1	1	0
Total	2,695,575	2,935,072	3,284,331	3,538,171	3,687,504	4

Source: Central Bank of Iceland.

Table 5 Insurance companies' assets

Assets, b.kr.	*31.12. 2013*	*31.12. 2014*	*31.12. 2015*	*31.12. 2016*	*30.6. 2017*	*Change from 31.12. 2016, %*
Cash and cash balance with Central Bank	-	-	1,753	2,053	1,943	-5
Deposits in domestic deposit taking corporations	13,832	8,394	7,258	4,452	5,283	19
Deposits in foreign deposit taking corporations	1,017	68	1,395	208	111	-47
Domestic credit	3,070	2,880	1,239	1,487	2,834	91
Foreign credit	8	1	0	0	0	-
Domestic marketable bonds and bills	68,390	70,578	66,092	67,595	63,374	-6
Foreign marketable bonds and bills	3,658	4,495	3,999	3,740	3,324	-11
Domestic equities and investment fund shares	37,806	43,745	53,421	60,664	69,098	14
Foreign equties and investment fund shares	6,708	6,932	6,457	5,945	6,146	3
Domestic insurance and pension entitlements	19,287	19,911	17,024	17,869	27,332	53
Foreign insurance and pension entitlements	1,162	1,521	7,257	7,451	6,585	-12
Other domestic assets	8,263	8,771	3,835	4,426	4,934	11
Other foreign assets	1,493	1,269	1,117	1,312	1,218	-7
Total	164,694	168,565	170,847	177,202	192,182	8

Source: Central Bank of Iceland.

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

Income and expenses, b.kr	*30.6. 2013*	*30.6. 2014*	*30.6. 2015*	*30.6. 2016*	*30.6. 2017*	*Change from 30.6 2016, %*
Arion Bank hf.						
Operating income	20,515	25,527	35,930	27,183	30,001	10
Net interest income	12,667	11,966	13,175	14,626	15,320	5
Net fee and commission income	5,298	6,593	7,434	6,747	6,838	1
Other operating income	2,550	6,968	15,321	5,810	7,843	35
Operating expenses	12,736	12,802	13,029	15,156	16,509	9
Change in loan values	-134	-2,001	81	-945	-1,289	36
Income Tax Expense	1,937	3,842	3,756	3,576	4,735	32
Net gain from discontinued operations, net of tax	-65	6,525	262	363	420	16
Profit	5,911	17,409	19,326	9,759	10,466	7
Íslandsbanki hf.						
Operating income	20,606	21,199	22,272	30,161	22,718	-25
Net interest income	14,518	13,568	13,550	15,895	15,211	-4
Net fee and commission income	5,122	5,672	6,423	6,659	6,813	2
Other operating income	966	1,959	2,299	7,607	694	-91
Operating expenses	12,917	11,777	12,466	13,424	13,441	0
Change in loan values	-7,850	-5,739	-4,308	-369	-440	19
Income Tax Expense	3,927	4,765	4,248	5,213	4,075	-22
Net gain from discontinued operations, net of tax	-404	4,259	924	1,124	2,399	113
Profit	11,208	14,655	10,790	13,017	8,041	-38
Landsbankinn hf.						
Operating income	28,451	21,811	27,034	26,307	27,987	6
Net interest income	16,997	15,240	16,198	17,611	18,176	3
Net fee and commission income	2,960	2,921	3,394	3,894	4,432	14
Other operating income	8,494	3,650	7,442	4,802	5,379	12
Operating expenses	16,145	11,787	12,058	12,256	12,048	-2
Change in loan values	-7,570	-11,446	-1,845	-2,275	-1,301	-43
Income Tax Expense	4,351	6,592	4,416	5,028	4,587	-9
Net gain from discontinued operations, net of tax	0	0	0	0	0	-
Profit	15,525	14,878	12,405	11,298	12,653	12
D-SIBs						
Operating income	69,572	68,537	85,236	83,651	80,706	-4
Net interest income	44,182	40,774	42,923	48,132	48,707	1
Net fee and commission income	13,380	15,186	17,251	17,300	18,083	5
Other operating income	12,010	12,577	25,062	18,219	13,916	-24
Operating expenses	41,798	36,366	37,553	40,836	41,998	3
Change in loan values	-15,554	-19,186	-6,072	-3,589	-3,030	-16
Income Tax Expense	10,215	15,199	12,420	13,817	13,397	-3
Net gain from discontinued operations, net of tax	-469	10,784	1,186	1,487	2,819	90
Profit	32,644	46,942	42,521	34,074	31,160	-9

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

%	31.12.2013	31.12.2014	31.12.2015	31.12.2016	30.6.2017
Return on equity	12.2	14.1	16.8	8.9	9.8
Return on assets	2.2	2.7	3.5	1.8	1.9
Expenses as a share of net interest and commission income	71.0	68.0	63.0	62.0	59.0
Expenses as a share of total assets	2.8	2.5	2.5	2.6	2.4
Net interest and commission income as a share of total income	66.0	64.0	58.0	81.0	82.0
Net interest as a share of total assets	3.0	2.7	2.9	3.0	3.0
Capital ratio	26.2	28.5	28.2	27.7	26.6
Foreign exchange as a share of the capital base	6.4	6.1	2.2	-0.5	-0.4
Liquidity coverage ratio (LCR) total	116,6	137,4	130,5	163,0	197.3
Liquidity coverage ratio (LCR) FX	360,4	501.8	371	403.8	423.7
Net stable funding (NSFR) total		104,5	115,4	123,0	123.6
Net stable funding (NSFR) FX		136.7	136.9	161.8	158.9

Source: Central Bank of Iceland.

Table 8 Commercial banks' foreign bond issues last 12 months (1.10.2016 - 30.9.2017)

Issuer	Date	Currency	Ammount B.kr.	Years	Premium on interbank rate[1], %
Arion bank					
	Oct. 16	SEK	3.2	2.0	1.09
	Oct.16, Jan.17	NOK	4.4	4.0	1.95
	Dec.16, Jan.17	EUR	60.0	5.0	1,625 fixed
	Jan.17, Feb. 17	SEK	3.8	3.0	1.35
	Apr.17	NOK	3.1	6.0	3,05 fixed
	Apr.17	NOK	3.1	10.0	3,40 fixed
	Jun.17	EUR	34.0	3.0	0,75 fixed
Total			111.6		
Íslandsbanki					
	Jul.17	EUR	0.4	1.5	0.4
	Sep.17	EUR	1.3	1.5	0.38
	Sep.17	EUR	1.3	1.5	0.38
	Sep.17	EUR	1.3	1.5	0.5
Total			4.2		
Landsbankinn					
	Nov.16	SEK	3.1	4.0	1.5
	Nov.16	SEK	9.2	3.5	1,38 fixed
	Mar.17	EUR	34.0	5.0	1,375 fixed
	Jun.17	SEK	8.4	4.0	1
	Jun.17	SEK	3.6	4.0	0,75 fixed
Total			58.3		

1. Interest premium on three-month interbank rate in the relevant currency unless otherwise specified.

Source: Nasdaq 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.

Table 10 Indicators for the international position

	Unit	*2012*	*2013*	*2014*	*2015*	*2016*	*2017F2*
Net IIP[1]	% of GDP	-72.2	-51.3	-43.1	-4.8	2.6	-2.5
External debt[2]	% of GDP	187.4	163.5	155.3	119.1	101.8	94.1
Treasuries' FX debt as a share of total debt	%	29.6	26.9	27.9	23.0	18.1	10.8
DMB's FX denominated bonds	% of GDP	19.0	19.8	17.1	17.1	18.9	19.0
Current account[3]	% of GDP	2.9	7.4	5.2	5.8	6.7	5.9
Foreign reserves	% of GDP	30.2	25.7	26.3	29.2	33.3	26.7
Foreign reserves financed in ISK	% of GDP	-4.7	-4.1	1.0	13.6	24.2	21.8
Foreign reserves/RAM	%	77.3	70.0	80.1	115.9	185.7	157.9
Terms of trade	Value	80.6	79.5	86.9	87.5	90.7	93.3
Nominal exchange rate[4]	Value	232.7	210.1	206.6	191.5	163.8	155.4
Real exchange rate[5]	Value	82.0	87.0	91.8	99.6	117.5	124.7
Treasury's highest credit rating	Rating	Baa3/BBB-	Baa2/BBB	Baa2/BBB	Baa1/BBB+	A3/A-	A2/A

1. Based on underlying IIP position until 2015. 2. External debt excluding equity, investment fund share, derivatives and other investment. Excluding old banks. 3. Most recent four quarters in 2017Q2. 4. Narrow trade index*. 5. Based on consumer price

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

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 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.
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.
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%.
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.
Liquidity rules	The Central Bank's liquidity rules are based on the liquidity coverage ratio (LCR) require ments developed by the Basel Committee on Banking Supervision (BCBS) and are largely harmonised with European Union liquidity rules. Credit institutions must always have suffi cient 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.
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.
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).
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.