

## III Monetary policy and domestic financial markets

The Central Bank's key interest rate has been unchanged for a little over a year, but the Bank's real rate has fallen and the interest rate differential vis-à-vis Iceland's main trading partners has narrowed. Other market rates have developed broadly in line with the Bank's key rate. According to a recent survey, market agents expect the Central Bank to raise its key interest rate in the near future. The breakeven inflation rate in the bond market has risen in recent months, indicating that market agents expect inflation to rise. There are signs that investors have increased concerns about the domestic economic outlook, and the króna has depreciated in the recent past. Growth in M3 is still relatively rapid, and credit growth is at its strongest since the economic recovery began. In spite of this, the rise in house prices has eased, and share prices have fallen in 2018 to date. Private sector debt is relatively low in historical context, however, and foreign-denominated debt is limited. Some of the commercial banks and pension funds have raised fixed non-indexed interest rates recently, but private sector financial conditions appear broadly unchanged in other respects.

### Monetary policy

#### Central Bank's key rate unchanged this year ...

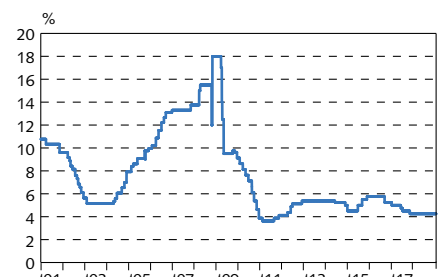
The Central Bank's Monetary Policy Committee has held the Bank's policy rate unchanged since October 2017. The key rate — that is, the rate on seven-day term deposits — was 4.25% just before the publication of this *Monetary Bulletin* and has only once been lower since the start of the inflation-targeting regime in 2001 (Chart III-1). Accepted rates in auctions of bills issued by the Treasury and the banks have developed in line with the Bank's key rate, as have rates in the interbank market for krónur, but there has been little trading in the interbank market thus far in 2018.

#### ... but the Bank's real rate continues to fall

The monetary stance has eased in the recent term, alongside the rise in inflation and inflation expectations (for further information, see Chapter VI). The Bank's real rate in terms of the average of various measures of inflation and one-year inflation expectations is now 0.8% (Table III-1). It has fallen by 0.4 percentage points since the August *Monetary Bulletin* and about 1 percentage point since November 2017. The Bank's real rate in terms of current twelve-month inflation has also fallen. It is now 1.4%, or 0.9 percentage points lower than it was a year ago. Overall, the decline in the Bank's real rate has been transmitted to real market rates (Chart III-2), although it has been transmitted least to fixed indexed mortgage lending rates.<sup>1</sup>

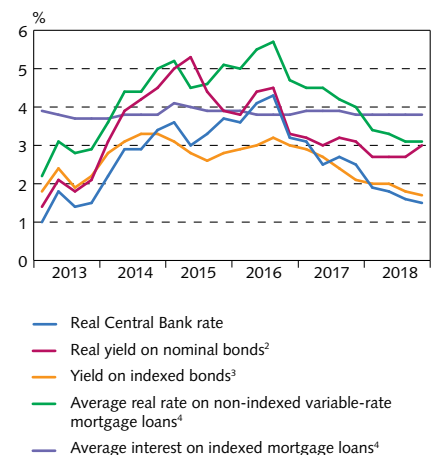
1. The transmission of Central Bank interest rates to other market rates and indexed mortgage lending rates is discussed further in Box 1.

Chart III-1  
Central Bank of Iceland key interest rate<sup>1</sup>  
3 January 2001 - 2 November 2018



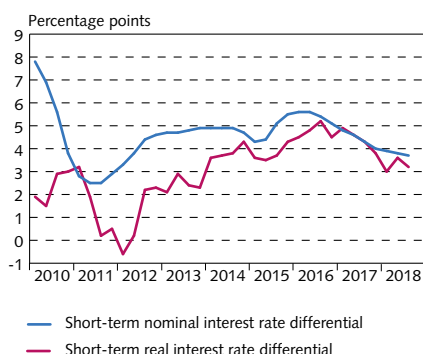
1. The Central Bank's key interest rate is defined as follows: the 7-day collateralised lending rate (until 31 March 2009), the rate on deposit institutions' current accounts with the Central Bank (1 April 2009 - 30 September 2009), the average of the current account rate and the rate on 28-day certificates of deposit (1 October 2009 - 20 May 2014), and the rate on 7-day term deposits (from 21 May 2014 onwards).  
Source: Central Bank of Iceland.

Chart III-2  
Real Central Bank interest rate and  
real market rates<sup>1</sup>  
Q1/2013 - Q4/2018



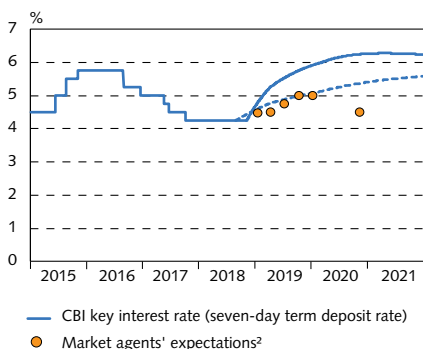
1. Based on data until 2 November 2018. 2. Five-year rate from the estimated nominal yield curve. 3. Five-year rate from the estimated real yield curve. 4. Simple average of lowest lending rates from the three largest commercial banks. Fixed-rate period of five years or more on indexed mortgage loans.  
Source: Central Bank of Iceland.

Chart III-3  
Interest rate differential with main trading partners<sup>1</sup>  
Q1/2010 - Q4/2018



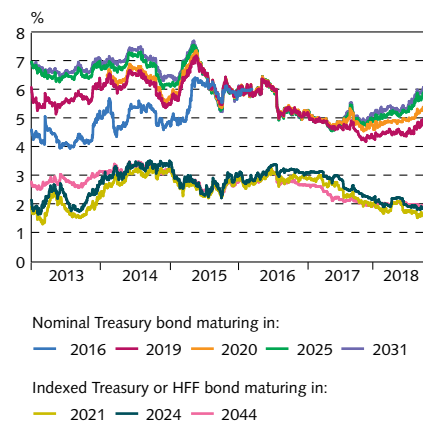
1. The difference between the Central Bank of Iceland's key interest rate and the weighted average key rate in Iceland's main trading partner countries. Real rates are based on current twelve-month inflation. Based on domestic data until 2 November 2018. Central Bank baseline forecast Q4/2018 for international data.  
Sources: Thomson Reuters, Central Bank of Iceland.

Chart III-4  
Central Bank of Iceland key interest rate and expected developments<sup>1</sup>  
1 January 2015 - 31 December 2021



1. The Central Bank's key interest rate and Treasury bond yields were used to estimate the yield curve. Broken lines show forward market interest rates prior to MB 2018/3. 2. Estimated from the median response in the Central Bank's survey of market agents' expectations concerning the collateralised lending rate. The survey was carried out during the period 29-31 October 2018.  
Source: Central Bank of Iceland.

Chart III-5  
Nominal and indexed bond yields  
2 January 2013 - 2 November 2018



Nominal Treasury bond maturing in:  
— 2016 — 2019 — 2020 — 2025 — 2031

Indexed Treasury or HFF bond maturing in:  
— 2021 — 2024 — 2044

Source: Central Bank of Iceland.

## Interest rate differential with abroad has narrowed

The nominal interest rate differential vis-à-vis Iceland's main trading partners has continued to narrow as the margin of spare capacity in leading advanced economies has diminished and interest rates have risen (see Chapter II). The nominal interest rate spread has shrunk by 0.3 percentage points in the past year and is at its smallest since mid-2012 (Chart III-3). The real interest rate differential has narrowed accordingly.

Table III-1 The monetary stance (%)

	Current stance (2 Nov. '18)	Change from MB 2018/3 (24 Aug. '18)	Change from MB 2017/4 (10 Nov. '17)
<i>Real interest rate in terms of:<sup>1</sup></i>			
Twelve-month inflation	1.4	-0.1	-0.9
Business inflation expectations (one-year)	1.2	0.0	-0.6
Household inflation expectations (one-year)	0.7	-0.1	-0.5
Market inflation expectations (one-year) <sup>2</sup>	0.6	-0.6	-1.1
One-year breakeven inflation rate <sup>3</sup>	0.3	-0.8	-1.7
Central Bank inflation forecast <sup>4</sup>	0.8	-0.5	-0.7
Average	0.8	-0.4	-1.0

1. The nominal rate on financial institutions' seven-day term deposits with the Central Bank. 2. Based on survey of market participants' expectations. 3. The one-year breakeven inflation rate based on the difference between the nominal and indexed yield curves (five-day moving average). 4. The Central Bank forecast of twelve-month inflation four quarters ahead.

Source: Central Bank of Iceland.

## Market agents expect rate increases

According to the Central Bank's quarterly survey of market agents' expectations, carried out in late October, respondents expect the Bank's key rate to be raised by 0.25 percentage points in Q4/2018, followed by further increases in 2019. They assume that the key rate will be 5% by the end of 2019 and then begin to decline again (Chart III-4). This is a higher rate than they expected at the time of the August survey. Forward interest rates suggest that the key rate will rise even further, to 6% by end-2019 and 6.25% by the end of 2021.

## Market interest rates and risk premia

### The breakeven inflation rate in the bond market has risen

Nominal Treasury bond yields began to rise in late 2017, and the yield on the longest bonds is now 6%, the highest since summer 2016. At the same time, yields on indexed Treasury and Housing Financing Fund (HFF) bonds have fallen in line with the decline in the Central Bank's real rate, and indexed rates are now 1.4-1.9%, down from 2.0-2.4% a year ago (Chart III-5). Yields on the commercial banks' covered bonds have developed similarly. The spread between nominal and indexed bond rates has therefore widened in recent months, and this increase in the breakeven rate suggests that inflation expectations have risen.

Bond market turnover has declined in the recent term with reduced Treasury bond issuance and limited issuance of indexed bonds. Pension fund's demand for domestic bonds seems to have declined since the capital controls on resident entities' foreign investments were lifted. Furthermore, capital inflows for new investment in the domestic bond market have been negligible (Chart III-6).

### Special reserve requirement lowered

In June 2016, the Central Bank introduced a special capital flow management measure that entailed a 40% special reserve requirement (SRR) on new inflows of foreign currency for investment in high-yielding deposits and listed bonds and bills issued in krónur. The special reserve amount must be held in a non-interest-bearing account with the Central Bank for one year (see, for example, Box 1 in *Monetary Bulletin* 2018/2). Conditions for lowering the SRR have developed with the narrowing of the interest rate differential and a lower exchange rate of the króna. The SRR was therefore lowered to 20% at the beginning of November.

### Risk premia on Treasury foreign obligations are at their lowest in a decade

Measures of risk premia on Treasury foreign obligations have remained broadly unchanged this year, even though Moody's Investors Service changed the outlook on Iceland's sovereign credit ratings from stable to positive this summer. The CDS spread on the Treasury is now 0.6 percentage points, its lowest in about a decade (Chart III-7). The unrest in the financial markets during the autumn appears not to have affected the risk premium, but interest rate spreads on domestic commercial banks' international bond issues have risen during the year, as they have for many foreign financial institutions, partly because of increased uncertainty about the global economy.

### Exchange rate of the króna

#### Indications of increased net capital outflows over the course of the year

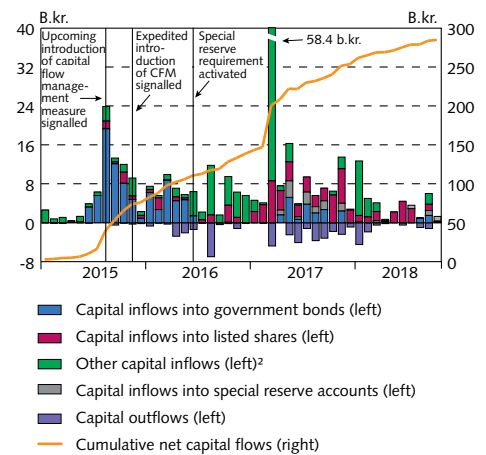
Net capital outflows have been modest since spring 2017, when most of the capital controls were lifted, in spite of foreign securities purchases by domestic investors, pension funds in particular (Chart III-8). Net capital outflows excluding international reserves totalled nearly 83 b.kr. in Q1/2018, although a portion of this was due to the sale of holdings in a domestic commercial bank. In Q2, outflows totalled less than 11 b.kr., but there are signs of increased net outflows in Q3, which put pressure on the exchange rate of the króna.

#### Króna has weakened in the recent term

The króna remained relatively stable in H1/2018, and exchange rate volatility had receded after a brief spike following the liberalisation of the capital controls in 2017. Early in September, however, the exchange rate began to fall, and the trade-weighted exchange rate index measured about 180 points just before this publication went to press; therefore, the currency had depreciated by about 10% since the beginning of September. This is its lowest value since end-July 2016, more than two years ago (Chart III-9). The slide in the exchange rate is due to some extent to temporary uncertainty about domestic airline WOW Air's financing in early September. The macroeconomic factors that have generally driven the appreciation of the króna in recent years appear to have given way as well. Terms of trade have deteriorated

Chart III-6

Capital flows due to registered new investments<sup>1</sup>  
January 2015 - October 2018

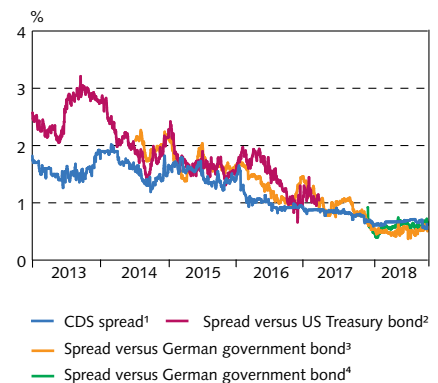


1. Investment commencing after 31 October 2009 and based on new inflows of foreign currency that is converted to domestic currency at a financial institution in Iceland. 2. Other inflows in March 2017 derive almost entirely from non-residents' acquisition of a holding in a domestic commercial bank.

Source: Central Bank of Iceland.

Chart III-7

Risk premia on Icelandic Treasury obligations  
2 January 2013 - 2 November 2018

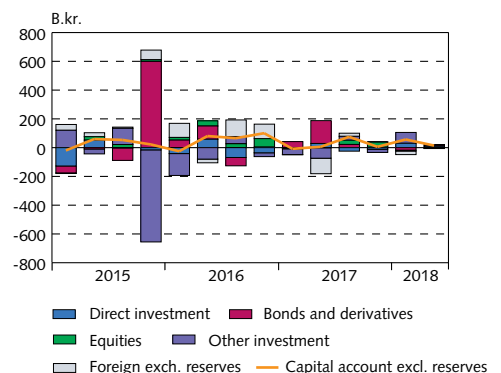


1. Five-year USD obligations. 2. USD bonds maturing in 2022. 3. Eurobonds maturing in 2020. 4. Eurobonds maturing in 2022.

Source: Bloomberg.

Chart III-8

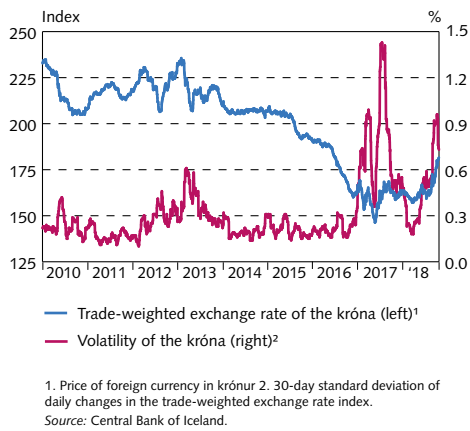
Capital flows<sup>1</sup>  
Q1/2015 - Q2/2018



1. Capital account balance (net capital outflows) and net capital flows to foreign direct investment, portfolio investment (bonds, derivatives, and equities), and other investment. Positive (negative) numbers represent an increase (decrease) in resident entities' foreign assets or a decrease (increase) in their foreign debt. Large movements in Q4/2015 reflect the settlement of the failed banks' estates.

Source: Central Bank of Iceland.

Chart III-9  
Exchange rate and volatility of the króna  
4 January 2010 - 2 November 2018



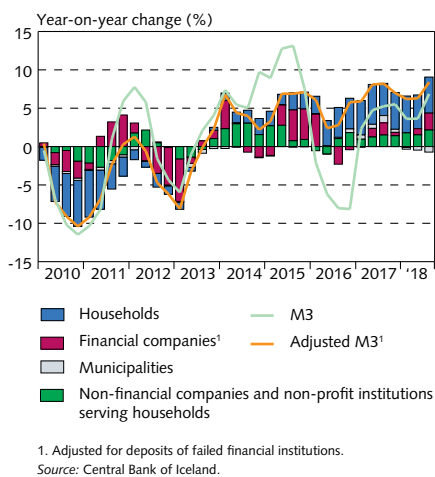
and export growth has slowed. Furthermore, tourism companies' operating environment has grown more difficult, and the outlook is for a slowdown in output growth in H2/2018.

These factors, together with growing concerns about the results of the upcoming wage negotiations, appear to have contributed to investor pessimism, which in turn has led to a depreciation of the króna. Greater uncertainty has also shown in increased exchange rate volatility, as relatively small transactions can have a strong impact on prices in a thin market. The Central Bank did not intervene in the market in 2018, until unrest began to take hold in early September. Since then, the Bank has intervened twice, selling currency for a total of 2.4 b.kr.

### Market agents expect the króna to depreciate further

According to the Bank's survey of market agents' expectations, conducted in late October, respondents expect the exchange rate of the króna to fall by almost 2% over the next two years. This is a smaller depreciation than in the last survey, when participants expected a 4½% decline in the next two years, as the exchange rate was nearly 10% lower in October, when the survey was taken, than in August.

Chart III-10  
Money holdings  
Q1/2010 - Q3/2018



### Money holdings and lending

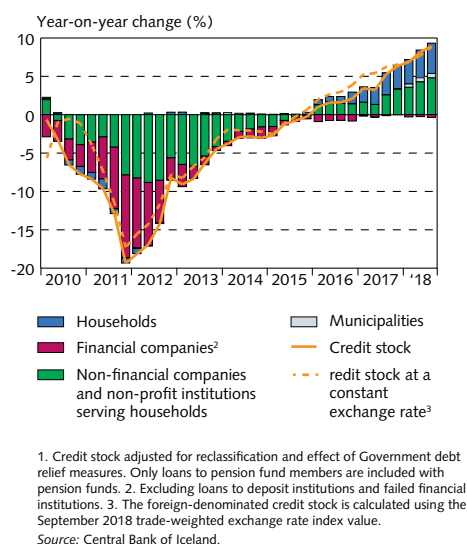
#### Deposit institutions' excess reserves have grown ...

Banknotes and coin have increased at roughly the same pace as in the past few years, in tandem with growth in economic activity and foreign tourist arrivals. Deposit institutions' excess reserves — i.e., the balance on their current accounts with the Central Bank in excess of required reserves — grew faster between years in Q3 than during the quarters beforehand.

#### ... and growth in M3 exceeds nominal GDP growth ...

Annual growth in M3 measured 8½% in Q3/2018, after adjusting for deposits held by the failed financial institutions (Chart III-10). This is a stronger growth rate than in H1 but broadly in line with that seen in Q3/2017. Growth in M3 exceeded estimated nominal GDP growth in Q3, as it did towards the end of 2017.

Chart III-11  
Credit system lending to resident borrowers  
and sectoral contribution<sup>1</sup>  
Q1/2010 - Q3/2018



#### ... owing, as before, to an increase in household deposits

As in the recent past, growth in M3 is attributable to an increase in household deposits. Even though private consumption has grown solidly in the recent term, households' disposable income has grown even faster, and household saving has therefore increased (See Chapter IV). Some of this increased saving found its way to deposit accounts, which have grown by over 10% in the past year.

#### Growth in lending to domestic borrowers continues to pick up ...

Growth in credit system lending to domestic borrowers was sluggish at the beginning of the economic recovery but began to gain steam in H2/2017 and has continued to increase in 2018 to date. After adjusting for the Government's debt relief measures, the stock of credit system loans to domestic borrowers grew in nominal terms by

an estimated 9% year-on-year in Q3, the swiftest growth rate in a decade (Chart III-11).

### ... due mainly to growth in corporate lending ...

When corporate investment began to pick up at the beginning of the recovery, the increase was equity-financed to a large degree. Right after firms began to seek out more financing, the share of marketable bonds was greater than before, and the large real estate companies played a major role. Now, however, operating companies have obtained direct credit financing from credit institutions to a greater degree than before. Lending to such companies has therefore increased rapidly in recent months, with growth approaching 12½% year-on-year in nominal terms in Q3. As before, credit growth is broad-based and extends to virtually all sectors of the economy, albeit in particular to services companies (especially real estate firms), construction companies, and tourism-related companies (Chart III-12).

### ... although lending to households also continues to rise

Credit system lending to households has also gained pace in recent quarters. After adjusting for the Government's debt relief measures, the stock of credit system loans to households grew in nominal terms by an estimated 7% year-on-year in Q3 (Chart III-11). Pension fund lending still accounts for the lion's share of the increase, and the funds' share of the credit market has grown simultaneously. The ratio of loans to fund members to the funds' total assets is now above its twenty-year average.

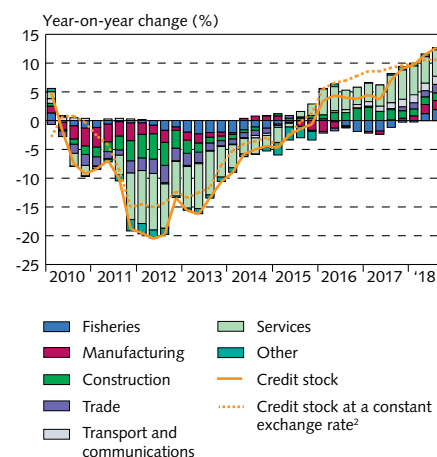
## Asset prices and financial conditions

### House price inflation continues to ease ...

House prices in the greater Reykjavík area were up 3.9% year-on-year in September, and rent rose by 6.1%, according to figures from Registers Iceland. The year-on-year rise in house prices has been tapering off from its peak of nearly 24%, reached in May 2017. House prices in regional Iceland have risen more than those in the capital area in the recent past, as the high price per square metre in greater Reykjavík may well have stimulated demand for housing in nearby communities. In October, house prices in regional Iceland had risen by 14.1% year-on-year, while the rise nationwide measured only 5.8% (Chart III-13).

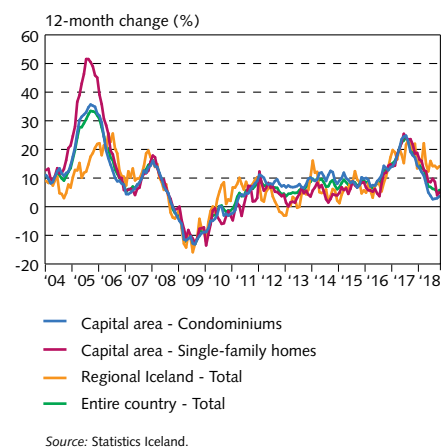
Demand for housing in greater Reykjavík appears to be robust at present, however, with registered purchase agreements increasing in number by nearly 12% year-on-year in the first nine months of 2018 and contracts for the purchase of newly built housing up by some 14%. First-time buyers accounted for over 26% of purchases in Q3, the largest share since before the crisis. The number of new properties in the market has grown markedly since last year, but the number advertised for sale has begun to taper off after peaking in April 2018. The average time-to-sale for capital area homes was 1.6 months in September, 1.4 months shorter than it was a year ago.

Chart III-12  
Credit system lending to non-financial companies<sup>1</sup>  
Q1/2010 - Q3/2018



1. Estimated loans for September 2018. Excluding loans from failed financial institutions. 2. The foreign-denominated credit stock is calculated using the September 2018 trade-weighted exchange rate index value.  
Source: Central Bank of Iceland.

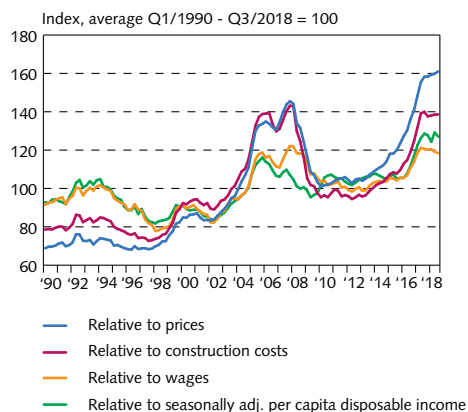
Chart III-13  
Market price of residential housing  
January 2004 - October 2018



Source: Statistics Iceland.

Chart III-14

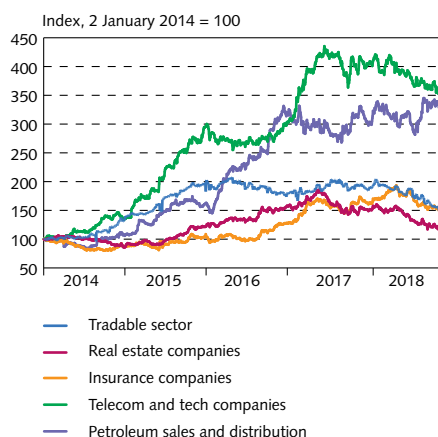
House prices relative to prices, construction costs, wages, and income<sup>1</sup>  
Q1/1990 - Q3/2018



1. The ratio of house prices to the CPI, the building cost index, the wage index, and disposable income per capita (based on the working-age population).  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-15

Share prices by sector<sup>1</sup>  
2 January 2014 - 2 November 2018



1. Average change in share price of listed companies in selected sectors, adjusted for dividend payments and share capital reductions.  
Source: Nasdaq Iceland.

### ... in line with macroeconomic fundamentals

By Q3, real house prices had risen 60% from the early 2010 trough. During the period, there was a significant mismatch between house prices and their macroeconomic determinants, owing primarily to strong growth in short-term rentals to tourists and rapid population growth at a time of limited supply of new housing. (Chart III-14). Unlike the situation in the last housing market boom, the current upswing has not been driven by a surge in lending and indebtedness (see *Monetary Bulletin* 2017/4). Real house prices in terms of the CPI are now higher than ever before and appear to be still on the rise. The rise in house prices relative to wages, income, and building costs appears to have halted, however. Prices are still high relative to construction costs, though, indicating that there is still some incentive to build new properties.

### Share prices down in 2018 to date

The Nasdaq Iceland OMX18 index stands about where it was at the time of the August *Monetary Bulletin*, and about 4% lower than it was a year ago. Share prices fell somewhat at mid-year, following profit warnings from insurance companies, and varying Icelandair share prices have affected the stock market as well. Share prices have fallen since early summer in most sectors, apart from oil companies, whose share prices rose over the same period (Chart III-15). Turnover in the main market totalled 401 b.kr. during the first ten months of the year, about 27% less than over the same period in 2017.

### Private sector debt level low in historical context ...

The private sector debt-to-GDP ratio has risen slightly since end-2016, to 160% of estimated GDP by mid-2018. It has therefore risen by 2 percentage points year-on-year (Chart III-16). Corporate debt increased by 9.8% year-on-year in nominal terms, to 86% of GDP, 2 percentage points higher than at the same time a year ago. Corporate debt to domestic financial institutions grew most, whereas there was little change in issued marketable bonds and debt to foreign financial institutions. Household debt increased by 6% over the same period, giving a year-end debt ratio of 75%. Although the private sector debt ratio has risen slightly in the recent term, it remains low in historical context, and foreign-denominated debt levels have fallen sharply since before the crisis (Chart III-17). Households' foreign-denominated debt is virtually non-existent, and in the corporate sector, foreign debt is limited mainly to export companies. Furthermore, public sector and financial sector debt in foreign currencies has declined markedly.

### ... and non-performing loans are on the decline

The share of household debt in arrears to the three large commercial banks and the HFF measured 2.3% at the end of September, after falling by just under 1 percentage point in the previous twelve months. Furthermore, the number of individuals on the CreditInfo default register declined by 6.4% year-on-year in September. The share of firms in default to credit institutions has also fallen, to 6.5% by September,

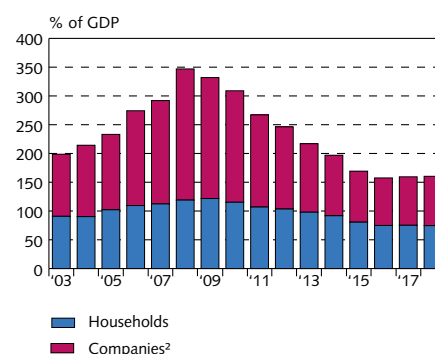
a reduction of 2.5 percentage points from the previous year. In September, the number of firms on the default register had fallen by 5% year-on-year. In spite of the decline in default, corporate insolvencies increased in number between years in H1, although the number of insolvencies relative to the total number of companies has remained stable in the recent term. New company registrations declined slightly in number in 2017 and have continued to fall in 2018.

### Fixed non-indexed mortgage lending rates have risen

Until this autumn, non-indexed deposit and lending rates offered by banks and pension funds had been virtually unchanged since October 2017, as Central Bank rates had been unchanged since then. In September and October, some commercial banks and pension funds raised rates on fixed non-indexed mortgages, with the average increase equal to  $\frac{1}{3}$  of a percentage point. Indexed interest rates have been broadly unchanged over this period, however, apart from variable rates charged by some of the pension funds. As before, pension fund loans bear somewhat lower interest rates than comparable loans from the commercial banks.

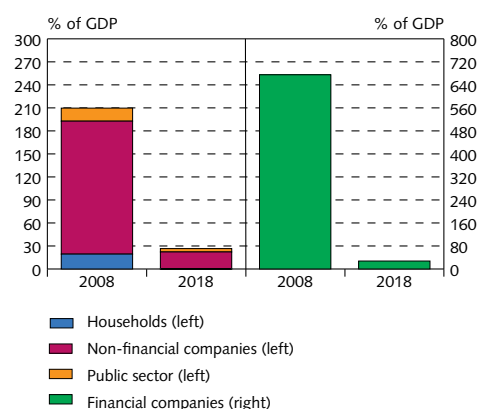
The arrangements for credit institutions' minimum required reserves with the Central Bank were changed in early June. The change was not intended to affect the monetary stance and does not appear to have done so. Recent increases in mortgage lending rates appear rather to reflect rising inflation expectations. In other respects, households' and businesses' financial conditions are broadly unchanged since the last *Monetary Bulletin*, and access to credit appears more or less unchanged as well.

Chart III-16  
Household and non-financial corporate debt 2003-2018<sup>1</sup>



1. Debt owed to financial undertakings and market bonds issued. 2. Excluding financial institutions (which includes holding companies).  
Sources: Statistics Iceland, Central Bank of Iceland.

Chart III-17  
Foreign-denominated debt<sup>1</sup>



1. Liabilities denominated in or linked to foreign currencies. Non-financial corporations (excluding holding companies). 2008 figures are from September 2008 for households and businesses and August 2008 for the public sector. 2018 figures are from June 2018 for households and businesses and September 2018 for the public sector (year-end estimates from MB 2018/4 for municipalities).  
Sources: Statistics Iceland, Central Bank of Iceland.