2 June 2023

Memorandum

To: Financial Stability Committee
From: Central Bank of Iceland

_Re:_ Background to the decision on the countercyclical capital buffer

The Central Bank of Iceland Financial Stability Committee's (FSN) 15 March 2023 decision to increase the countercyclical capital buffer (CCyB) on financial institutions from 2.0% to 2.5% will take effect on 16 March 2024. Analyses of the level of cyclical systemic risk indicate that it has increased in recent years and is now near or above the average of the past several years. The main drivers of the increase are the surge in real estate prices since the beginning of the pandemic and the high inflation rate, which affects debt service burdens and repayment capacity. Inflation has proved persistent, both in Iceland and internationally, and interest rates have risen. The domestic banking system's market funding has grown more expensive, and elevated uncertainty in foreign funding markets has pushed credit spreads upwards. Furthermore, non-indexed fixed-rate loans in the amount of 650 b.kr. will be up for interest rate review in the coming two years. Increased capital shores up financial system resilience and better enables the system to withstand shocks. Raising the CCyB gives the FSN greater scope to lower it again later if warranted.

According to the Act on Financial Undertakings, the CCyB for exposures in Iceland shall generally range between 0% and 2.5%. It may exceed 2.5%, however, if the risk factors underlying the FSN's assessment warrant a higher buffer rate.[1]

Recent economic developments and outlook

The domestic economy is running hot, driven by growing private consumption and rapidly increasing tourism sector activity. Unemployment is close to its historical low, and GDP growth has been strong in the recent term. The global output growth outlook has deteriorated, however, and uncertainty is unusually pronounced. Inflation has risen steeply, both in Iceland and in trading partner countries, and the monetary policy stance has been tightened. Financial conditions have deteriorated in recent months. Rising interest rates have increased debt service burdens, and persistent inflation causes

[1]cf. Article 85(a), Paragraph 3 and Article 85(b), Paragraph 1 of the Act on Financial Undertakings, no. 161/2002.

stagnation in real wages. Adverse developments abroad can also affect financial stability in Iceland. Tight foreign credit markets have already made it more difficult for Icelandic financial institutions to obtain foreign funding.

Private sector debt

Twelve-month real growth in household debt measured -1.3% at the end of April, as compared with -0.5% at the end of December. Nominal growth is still relatively robust, however, at 8.4% as of April. About half of nominal growth is due to indexation on CPI-indexed loans, which account for just under half of household debt. In terms of net new mortgage lending, credit system lending to households has slowed markedly in recent months, in accordance with reduced housing market turnover. Real growth in household debt is likely to slow still further in coming months.

With rising nominal interest rates, debt service on new loans and existing variable-rate loans has increased, particularly on non-indexed loans. This alone weakens the quantity of credit demanded, but in addition, the Central Bank’s rules capping debt service-to-income ratios have grown more binding with rising interest rates. In recent months, households have turned increasingly to indexed loans, which generally have lower debt service early in the loan period than comparable non-indexed loans do. Since November 2022, a majority of net new mortgage loans have been indexed to the CPI.

Household debt totalled 79% of GDP and 152.6% of disposable income at the end of March. The debt-to-GDP ratio has fallen significantly in the recent term, while the debt-to-disposable income ratio has been relatively stable over the same period. The rise in these ratios, which occurred in the low-interest environment of the pandemic era, has now been halted and to some extent reversed.

By the end of March 2023, the ratio of corporate debt to GDP had fallen in real terms by 0.4% year-on-year, to 79%, while in price- and exchange rate-adjusted terms it had grown by 6,4%. On the whole, credit growth has eased slightly since December 2022, although domestic lending to businesses has gained pace somewhat, driven by bank lending. On the other hand, corporate bond issuance has contracted.

Arrears on loans from the systemically important banks to individuals and businesses are historically low. The facility-level non-performing loan ratio for loans to individuals was 0.75% at the end of March, up from 0.71% at the end of December 2022. Frozen loans have increased marginally as a share of the household credit stock, from 0.8% in mid-2022 to 1.1% at the end of March. The corporate non-performing loan ratio was 2.13% as of end-March, down from 2.25% at the end of

December. As before, arrears were most pronounced among companies in the hospitality industry (accommodation and restaurant services), measuring 6.2% after rising marginally between quarters. The share of frozen corporate loans was 4.8% at the end of March, down from 6.9% at the end of December, and is still falling. It is assumed that tighter financial conditions will show sooner or later in the form of increased arrears, but in this context, it should be noted that arrears can come to the fore with a time lag.

Real estate market

House price inflation has eased significantly in recent months. The number of homes available for sale is on the rise, and the average time-to-sale is growing longer. In April 2023, the capital area house price index had risen in real terms by 1.1% year-on-year, as compared with 7.1% in December. Prices have continued to climb in regional Iceland, however, and had risen in real terms by 6.6% year-on-year in April. This, too, represents a slowdown, however, as the real increase measured 10.9% year-on-year in December. Housing market turnover has contracted somewhat in recent months. In the first four months of 2023, turnover in transactions with multi-dwelling housing in greater Reykjavík was down by more than one-fourth in real terms, while turnover in transactions with single-family homes was lower by more than one-third. The contraction in turnover was somewhat smaller outside the greater Reykjavík area.

The ratio of house prices to fundamentals is high. The rise in house prices over and above fundamentals indicates significant imbalances in the market, with the associated systemic risk. There are signs that the imbalances peaked around mid-2022 and have been subsiding gradually since then. The application of borrower-based measures concurrent with interest rate hikes has dampened demand in the housing market, as can be seen in the slowdown in mortgage lending growth and reduced market turnover.

Turnover in registered contracts for commercial real estate (CRE) in greater Reykjavík contracted by more than one-fifth year-on-year in the first four months of 2023, although it remains relatively high in historical context. The large CRE firms’ operations are affected by rising financing costs. Returns on investment assets measured 5.6% in Q1/2023, as compared with 5.3% in Q1/2022. Offsetting this, higher interest rates put downward pressure on commercial property prices. Upward adjustments of investment asset values are still a large item on the CRE firms’ profit and loss accounts, however. A historically high percentage of the companies’ assets are occupied, and a large share of the leases are inflation-indexed. Large long-term loan maturities in the coming twelve months have lowered their current ratios and cash flow ratios, but the companies have ample collateral capacity, which gives them the flexibility to refinance.

The banks

The banks' interest income continues to rise, particularly because of balance sheet expansion and increased returns on liquid assets. Higher interest rates, credit growth, and significantly reduced impairment have strengthened the banks' operating performance in the recent term. Their return on equity was 12.5% in Q1/2023, as compared with 8.9% a year earlier.

The banks' impairment account currently stands at a historically low 0.78% of their loan portfolio. It is important that the banks be forward-looking in recognising impairment in accordance with current accounting rules. The banks' cross-default non-performing ratio declined during the quarter for both household and corporate loans.[2] The facility-level non-performing loan ratio measured only 1.4% at the end of Q1/2023 and has held broadly unchanged in recent quarters.[3] Rising interest rates and increased financing costs will have an adverse effect on loan quality in the coming term. As yet, however, there are few signs of increased financial distress among debtors.

The banks' domestic market-based funding is overly homogeneous and is limited almost entirely to covered bonds. Conditions in foreign credit markets have been challenging for some time. The banks' access to foreign credit has grown tighter, and credit spreads on their foreign-denominated bonds have risen somewhat. The banks have significantly reduced their refinancing risk for the next few months with recent bond issues. it is important to broaden the buyer group for the banks' unsecured bond issues in both Icelandic krónur and foreign currencies.

The systemically important banks' capital ratio was 24.0% at the end of Q1/2023, or 0.3 percentage points higher than at the same time in 2022. Following the increase in the CCyB to 2.5%, the banks' capital ratios are 1.5-4.2% above the overall required ratio.

Overall assessment of cyclical systemic risk

Financial conditions have tightened significantly in recent months, with swiftly rising interest rates and persistent inflation. At the same time, private sector credit growth has been limited. Developments differ between households and businesses, however: credit growth has gained

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[2] This refers to non-performing loans according to the cross-default method, according to which all of a borrower's loans are considered non-performing if one loan is frozen or in arrears by 90 days or more, or if the borrower is deemed unlikely to pay their obligations when due.
[3] The facility-level non-performing loan ratio is calculated in accordance with EBA standards.

pace among businesses and eased among households. The private sector debt-to-GDP ratio has continued to fall and is now 155% of GDP, Iceland's lowest since 1999. It is expected to keep declining if credit growth remains moderate.[4]

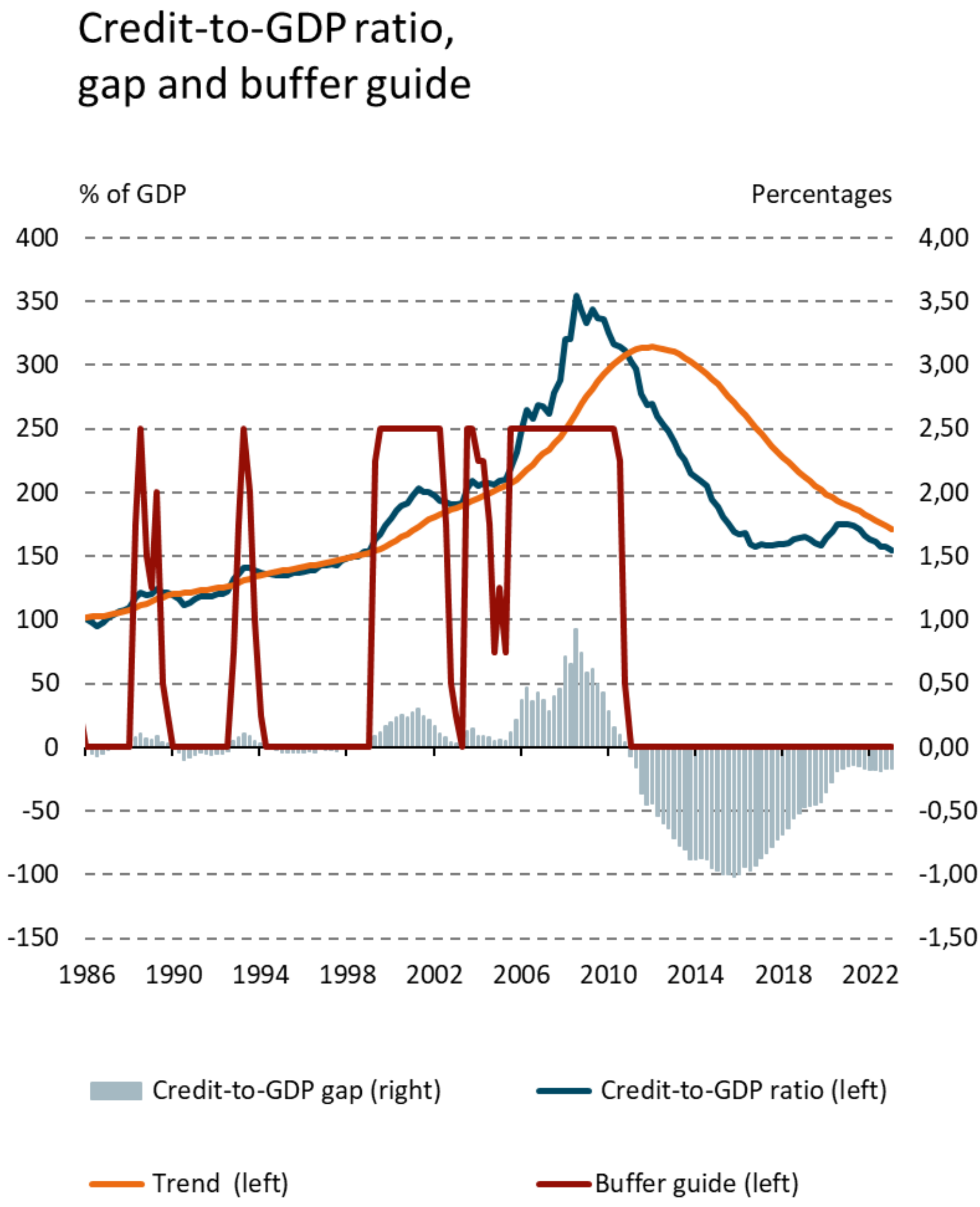
The combined effect of rising interest rates and tighter borrower-based measures has impeded the rise in house prices and somewhat mitigated imbalances in the market. The number of properties for sale has risen, and the average time-to-sale has grown longer. Significant imbalances remain, however, between house prices and fundamentals, and the likelihood of a price correction grows greater as financing costs increase.

Even though the banks' core operations are sound, their access to funding market has grown tighter. Credit spreads on the banks' foreign-denominated bond issues have risen, which will eventually affect growth in foreign currency lending. The banks must maintain their current covered bond issuance, with comparable bonds in krónur or foreign currencies, to satisfy MREL requirements.

A composite measure of the financial cycle indicated a continued upward phase in Q1/2023. The upward phase is driven by all the subcycles, although the housing cycle upswing is markedly more pronounced than the other. Fallin real housing prices in the capital city area for the last few months is still not visible in the estimate of a medium-term housing cycle. The domestic systemic risk indicator (d-SRI) has fallen for five consecutive quarters as is now just below historical average. The decline is driven by the fall in the private sector debt-to-GDP ratio and smaller current account deficits. Most indicators imply that the accumulation of cyclical systemic risk has lost momentum in recent months or has halted, although it is still uncertain to what extent it will be realised.

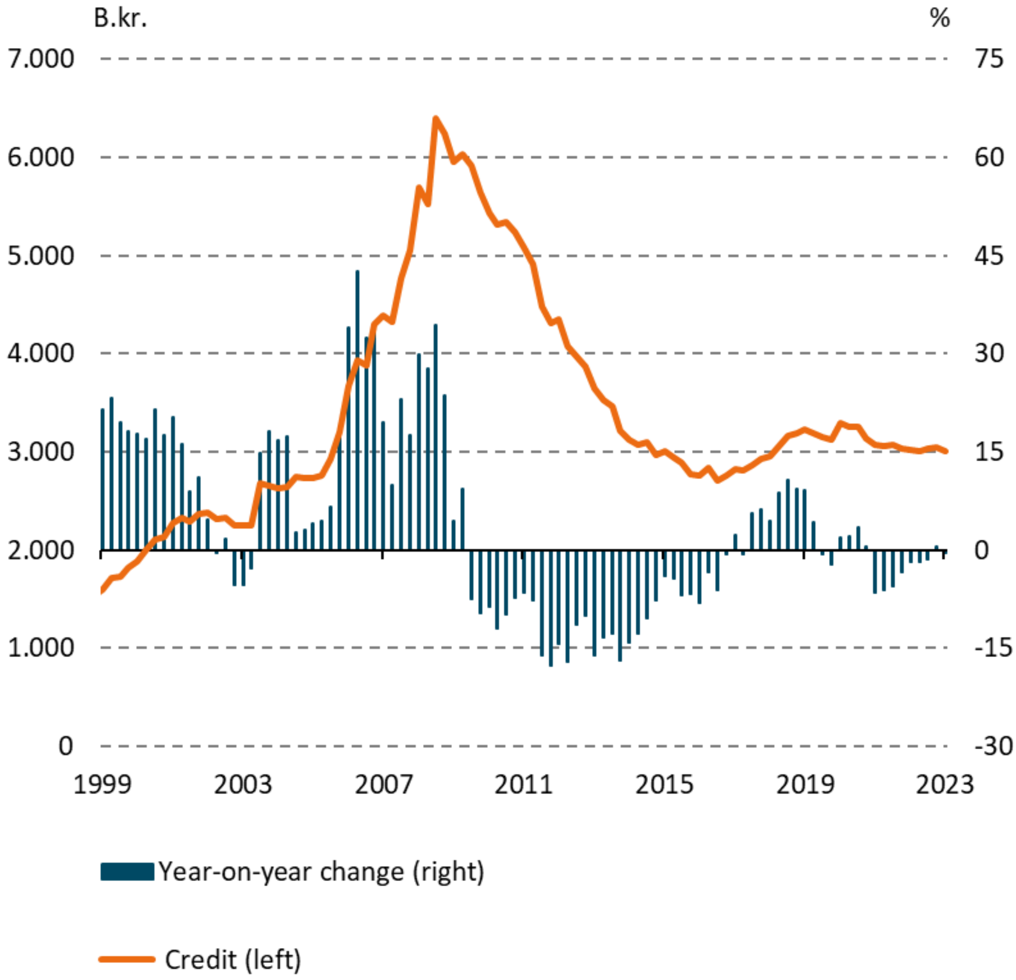
[4] The ratio of private sector debt – i.e., households and non-financial companies – to GDP.

Appendix – Charts



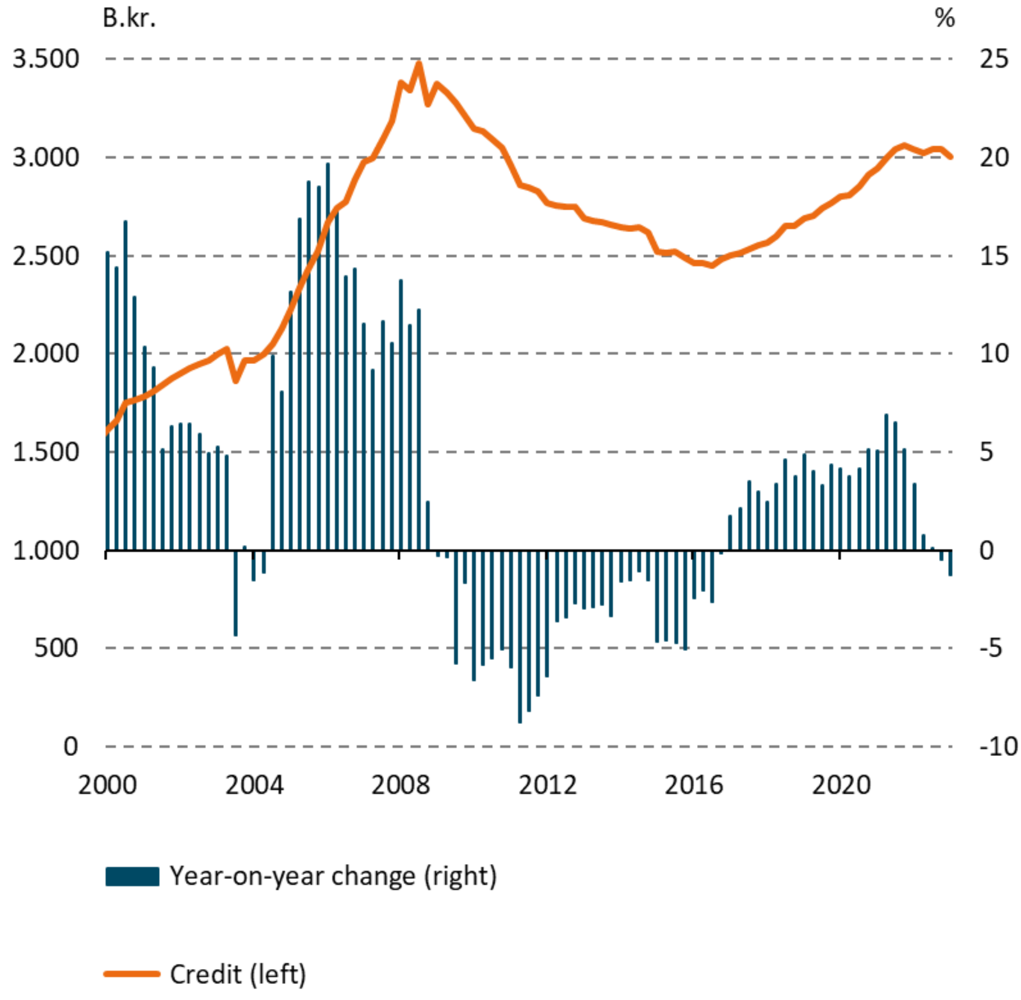
Total credit to households and firms, at claim value, as a percentage of the last four quarters GDP. The trend component is obtained with a one-sided Hodrick-Prescott filter with λ=400.000.
Sources: Statistics Iceland, Central Bank of Iceland.

Real credit to firms



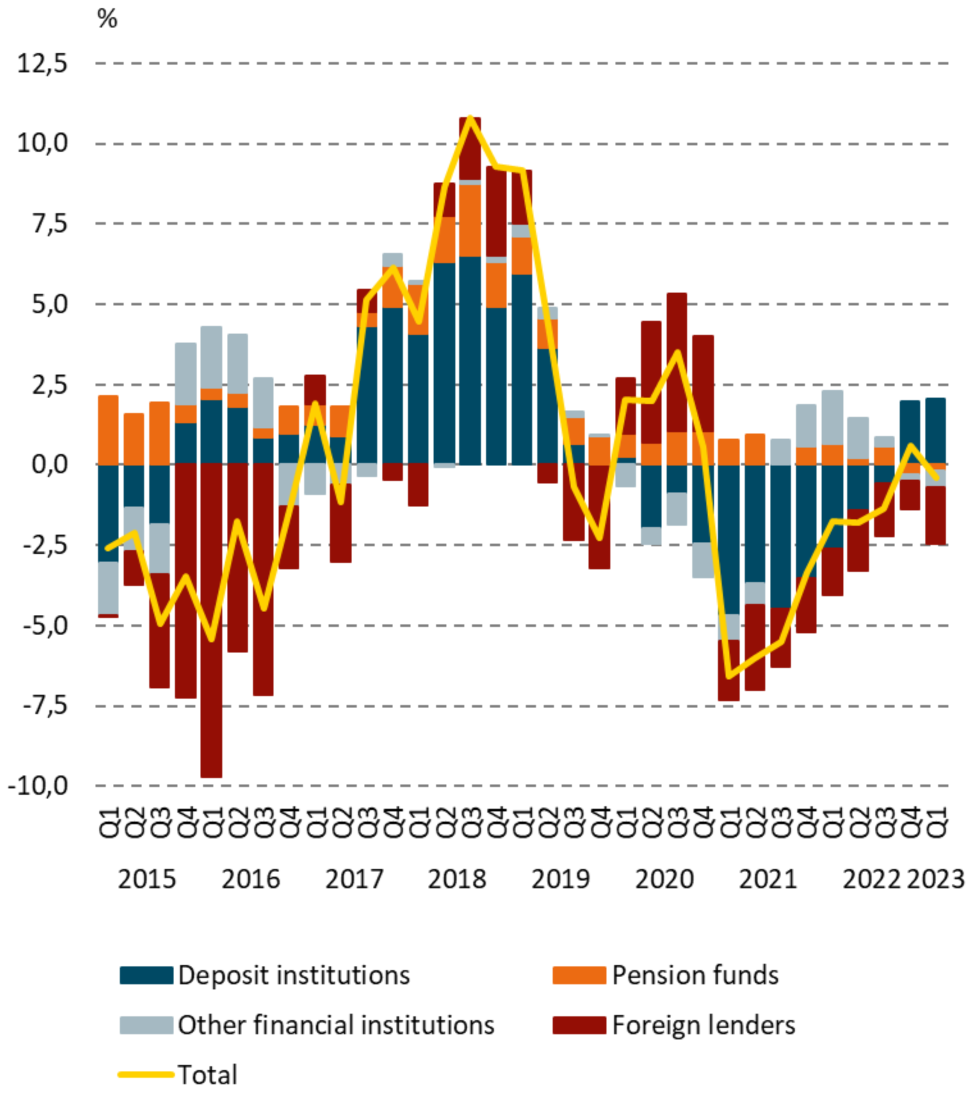
Claim value of credit to non-financial firms, at constant prices. Deflated with the consumer price index.
Sources: Statistics Iceland, Central Bank of Iceland.

Real household credit growth



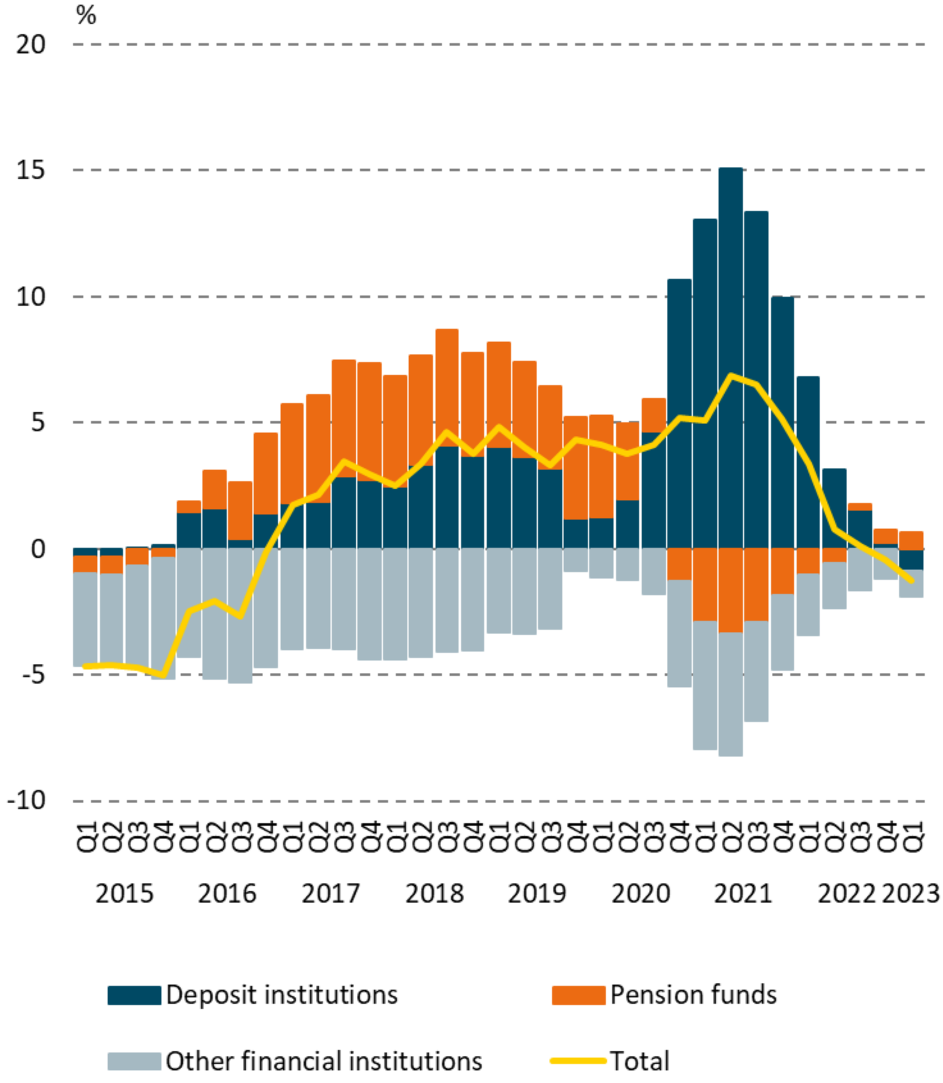
Claim value of total credit to households, at constant prices. Deflated with the consumer price index.
Sources: Statistics Iceland, Central Bank of Iceland.

Corporate debt real growth disaggregated by lender type



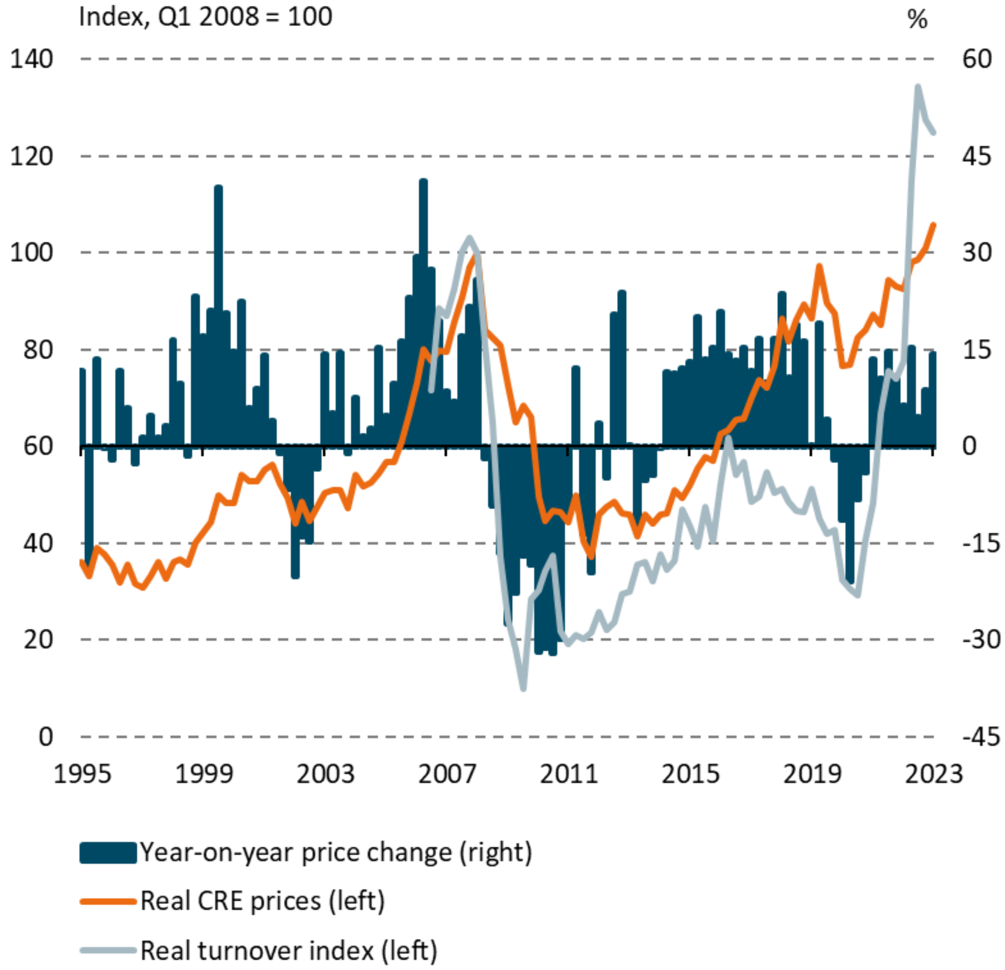
Claim value, deflated with the CPI, year-on-year change in aggregate and contribution of each lender type.
Sources: Statistics Iceland, Central Bank of Iceland.

Household debt disaggregated by lender type



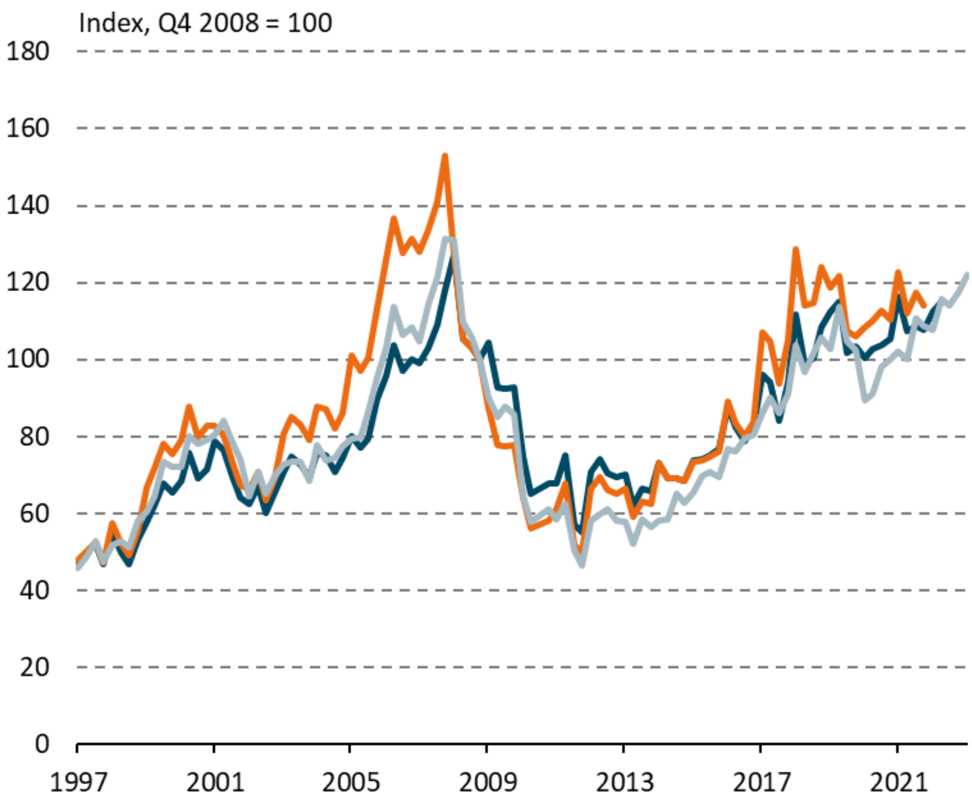
Real year-on-year change. Debt to financial institutions and issued marketable bonds.
Sources: Statistics Iceland, Central Bank of Iceland.

Real commercial property prices and turnover in the capital area



CRE price index, deflated with the CPI. The index shows the weighted average price of industrial, retail, and office space. The turnover index, deflated with the CPI, shows a four-quarter moving average. The most recent observations are preliminary.
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Commercial property price ratios



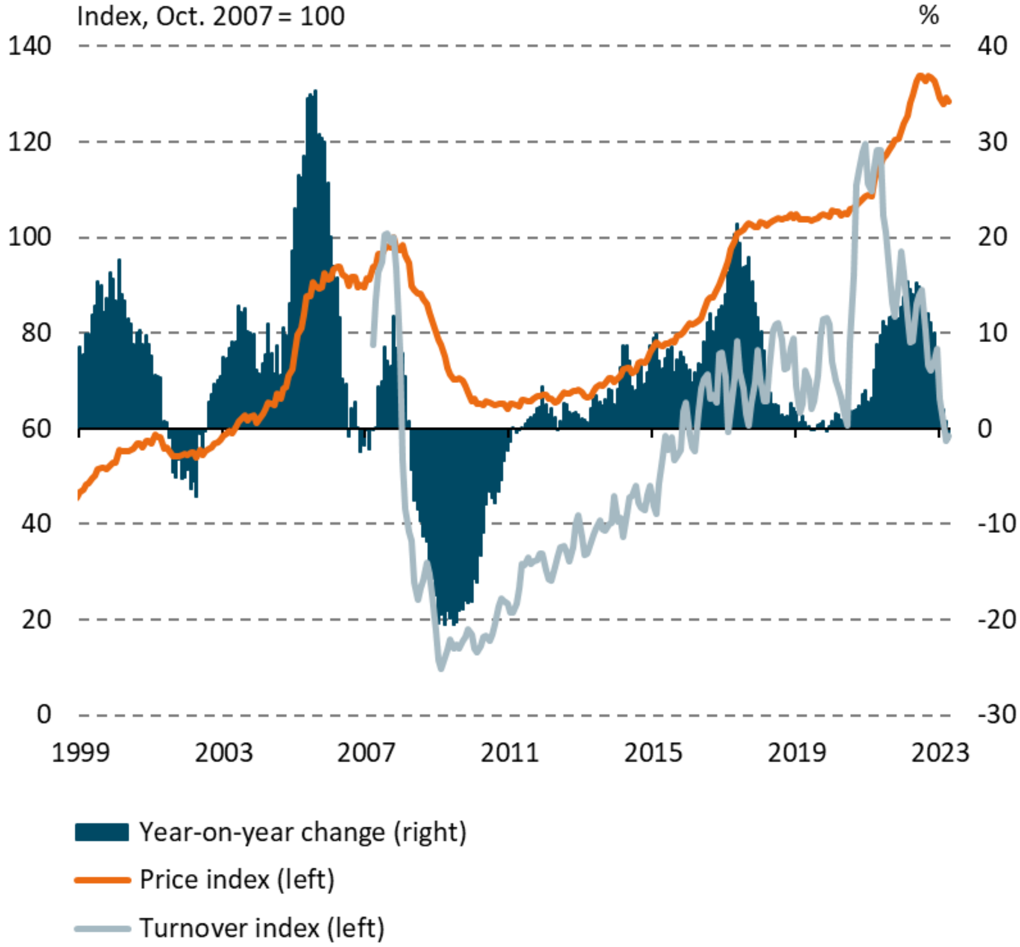
Price per m² / GDP per m²

Price per m² / Gross operating surplus per m²

Price per m² / Building cost index

Annual data for gross operating surplus are non-linearly interpolated.
Annual data for the CRE stock are linearly interpolated.
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

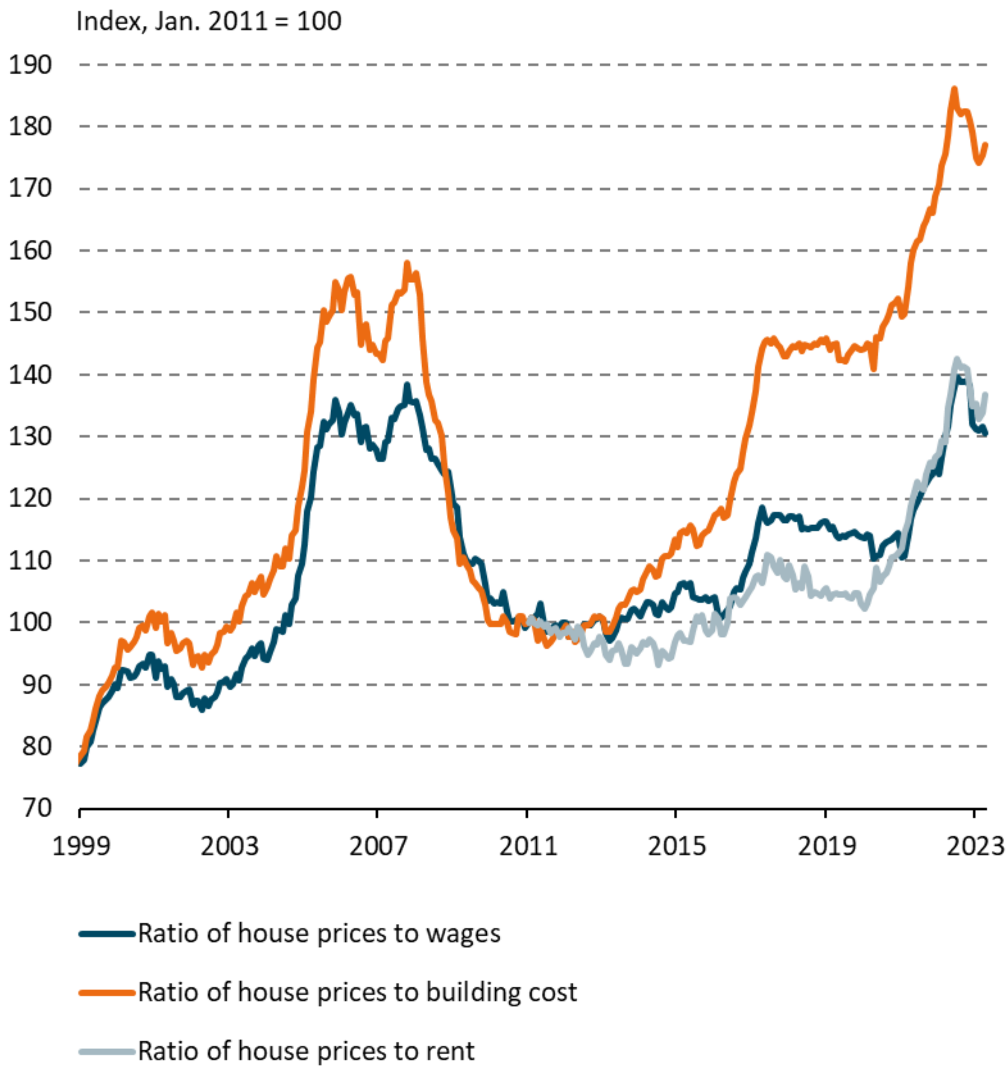
Real house prices and turnover in the capital area



Capital area house price index, deflated with the consumer price index. The turnover index shows three-month average turnover, deflated with the consumer price index. The turnover data are linearly interpolated in 2Q/2015 to correct for a strike at the Reykjavík Commissioner's office.

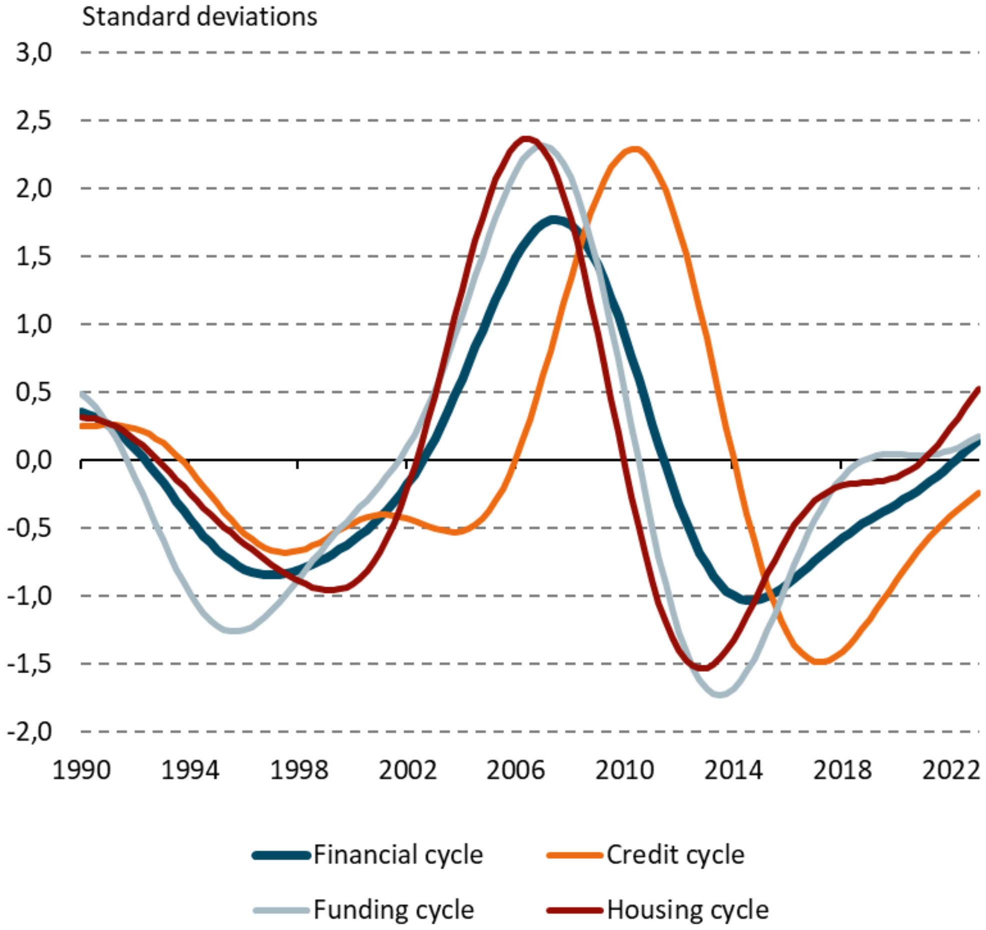
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Capital area house prices and determining factors



Sources: Registers Iceland, Statistics Iceland.

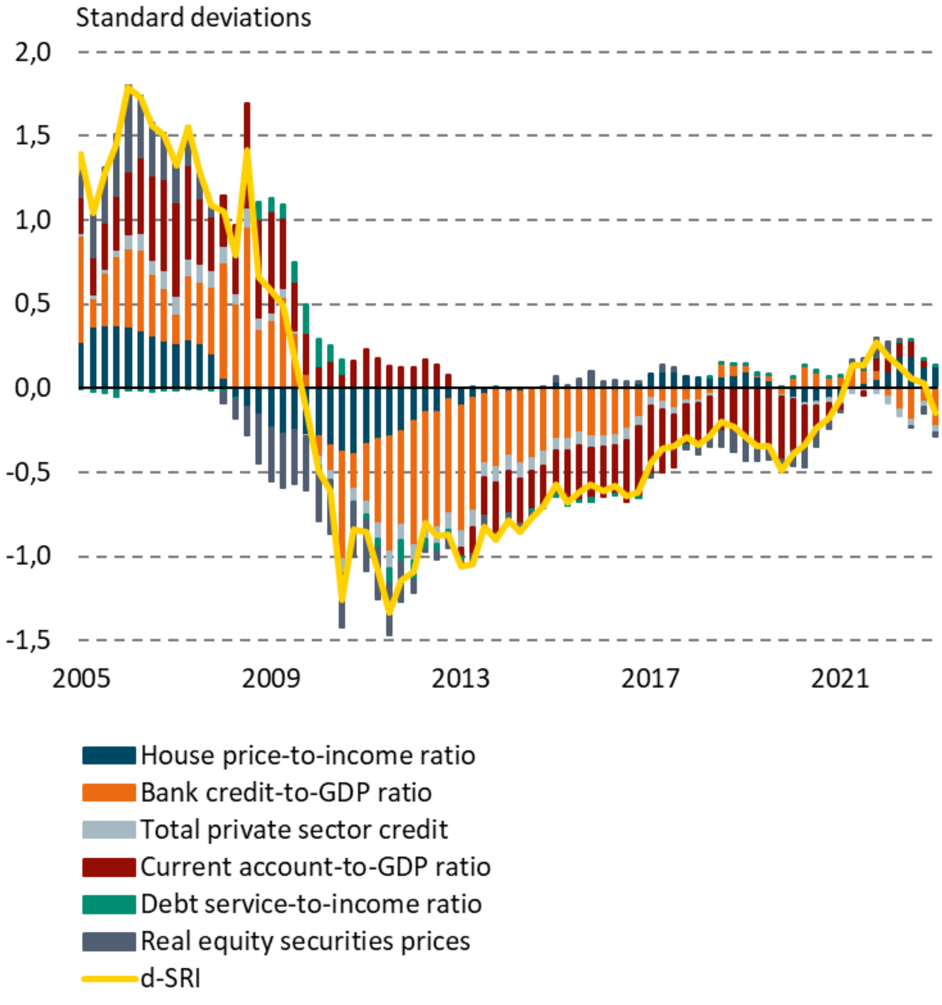
Financial cycle and subcycles



The financial cycle, the blue line, is a simple average of the subcycles. Each subcycle is a simple average of cyclical components from variables related to credit, housing, and bank funding, respectively. Cyclical components are obtained with a Christiano-Fitzgerald band-pass filter with a frequency band of 8-30 years.

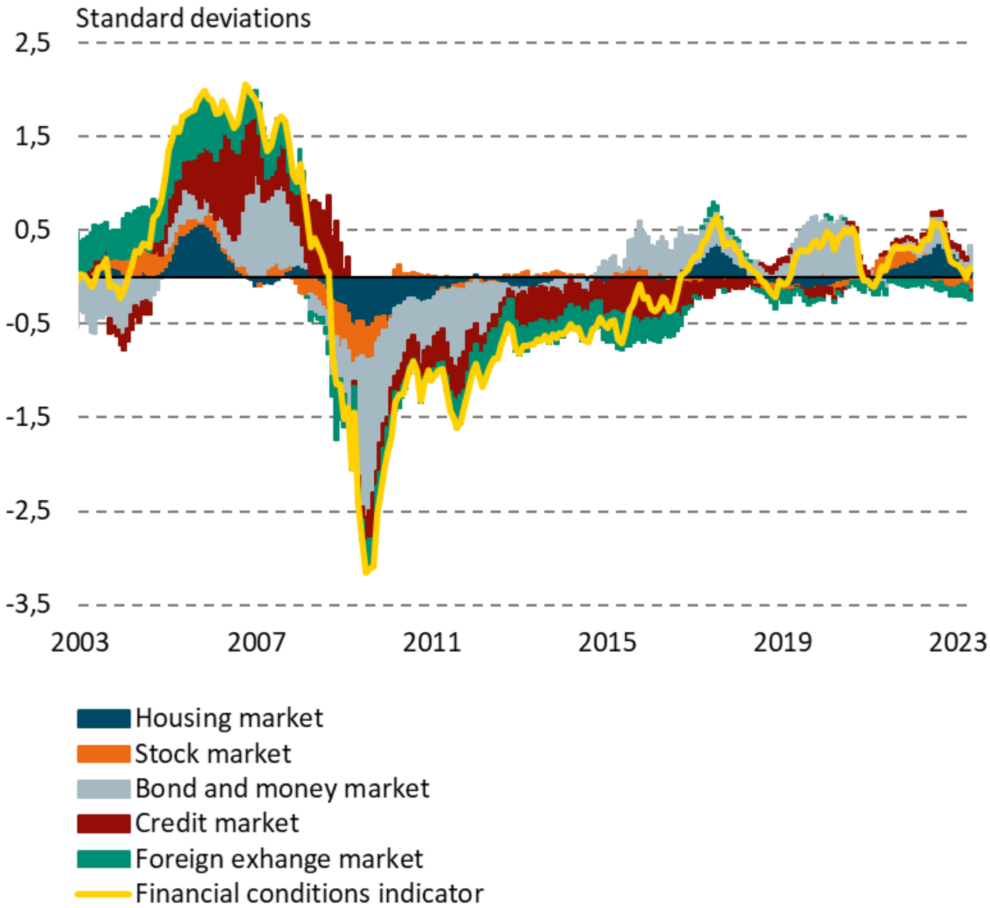
Sources: Registers Iceland, Statistics Iceland, Central Bank of Iceland.

Domestic systemic risk indicator (d-SRI)



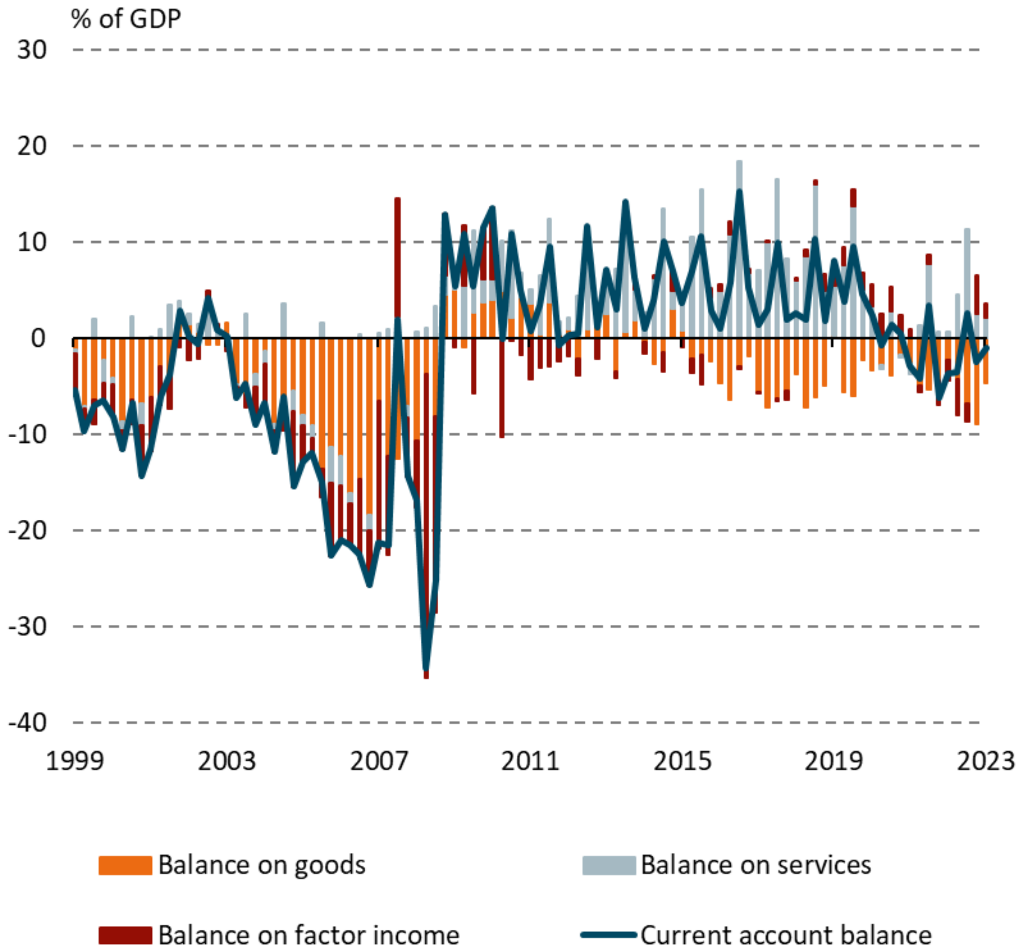
For the debt service-to-income ratio, data is lacking from Q1 2020 and onwards. The same value is repeated from that time to minimize the structural break in the indicator.
Sources: Statistics Iceland, Central Bank of Iceland..

Domestic financial conditions



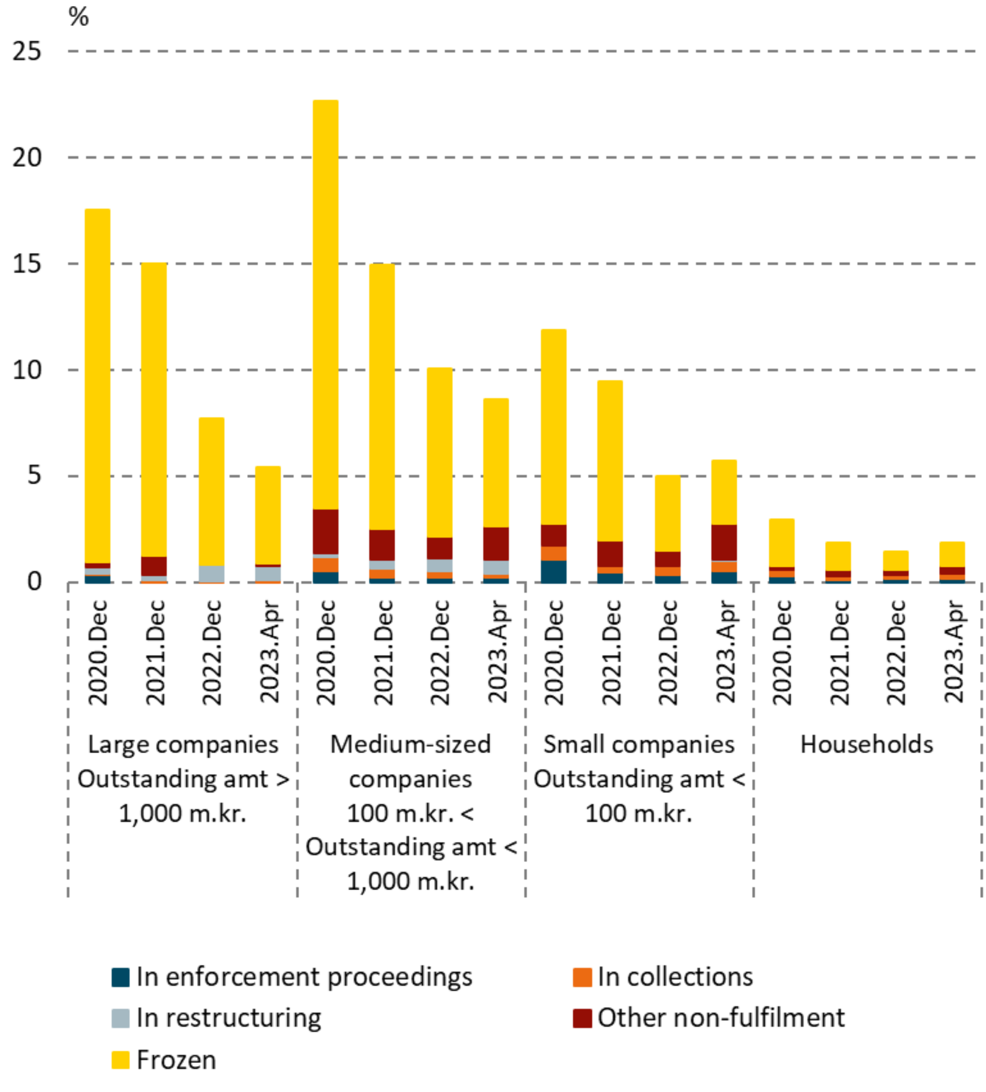
The financial conditions indicator consists of the first three principal components of selected indicators of financial conditions, scaled so that the mean is 0 and the standard deviation is 1. A lower index value indicates a deterioration in financial conditions. The estimation period is 2002-2023. Data for April is estimated.
Sources: Housing and Construction Authority, Nasdaq OMX Iceland, Statistics Iceland, Central Bank of Iceland..

Current account balance



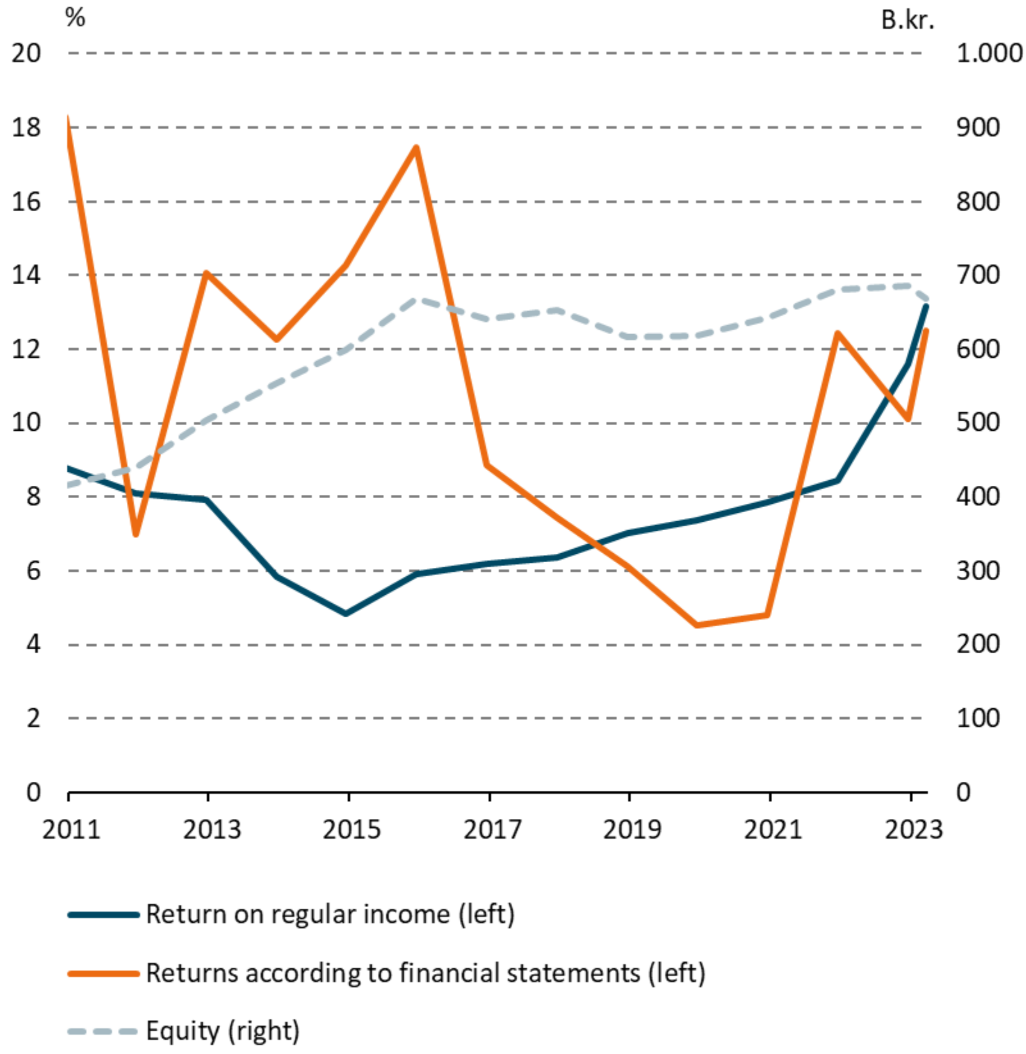
The effects of failed banks on factor income and the balance on services from Q4/2008 to Q4/2016 are ignored. From 2009 through 2012, the effect of Actavis on the balance on income is also ignored, owing to inaccurate data during the period. Secondary income is included in factor income.
Sources: Statistics Iceland, Central Bank of Iceland.

Status of non-performing loans, by borrower and type of impairment



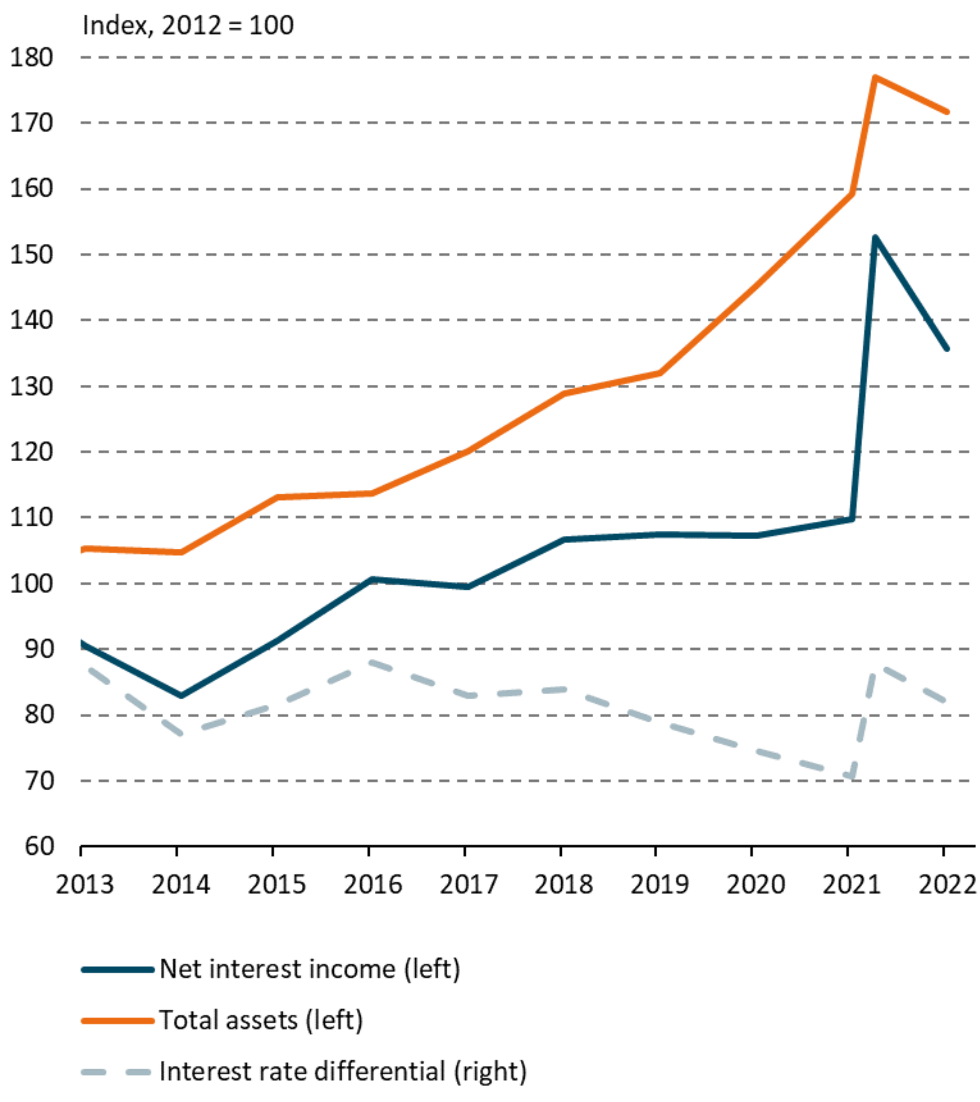
Cross-default nonperforming loans, share of each business size category. Domestic systemically important banks, parent companies, book value.
Source: Central Bank of Iceland.

D-SIB: Returns



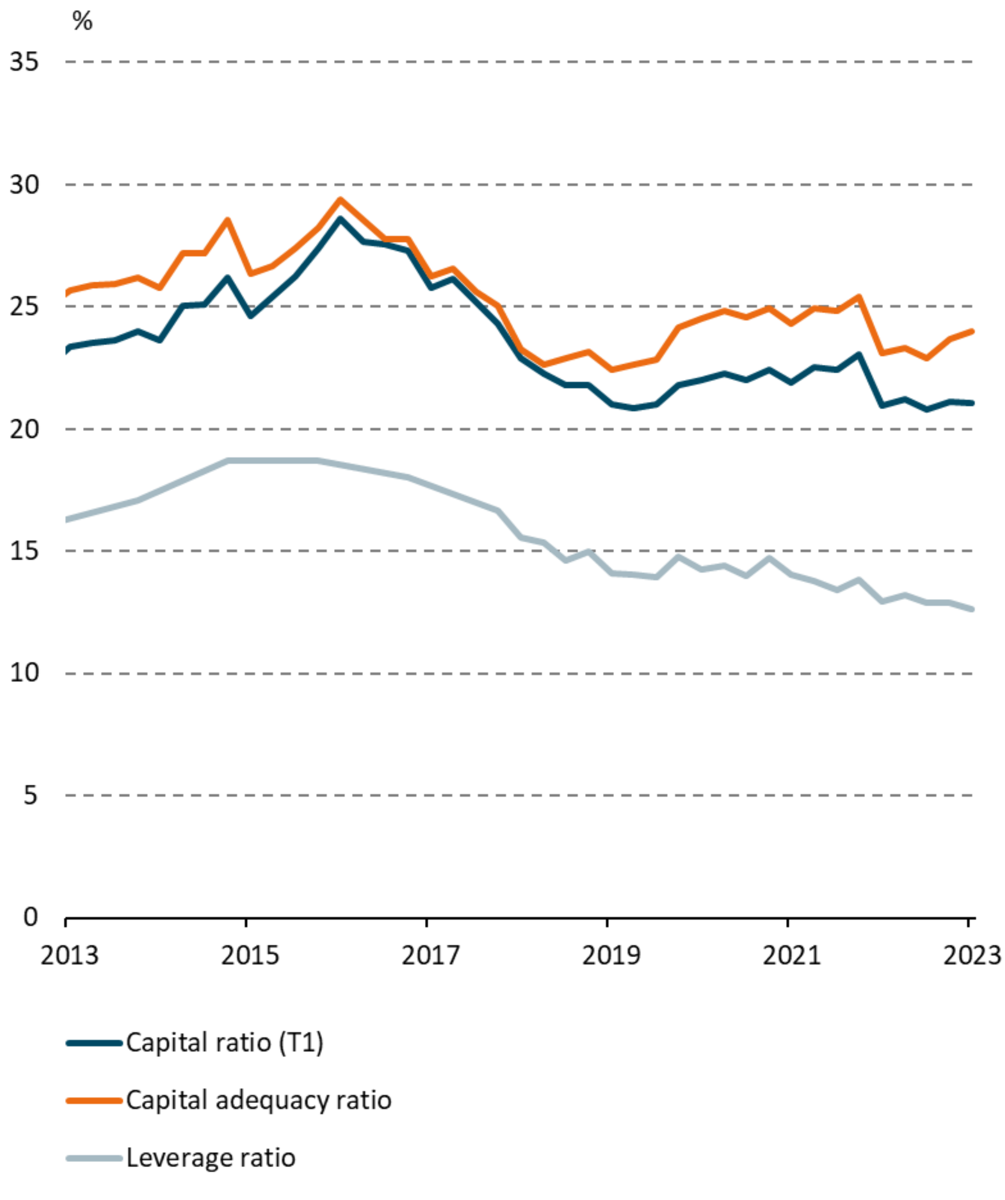
Returns are calculated on average equity, consolidated figures. The return on regular income is based on net interest income and fee/commission income net of regular expenses. The tax rate is 20% and is based on average equity. Valitor is excluded in 2017-2020.
Sources: Commercial banks' financial statements.

D-SIB: Net interest income, interest expense and interest rate differential



Domestic systematically important banks, consolidated figures. Annualised Q1 2023 data.
Sources: Commercial banks' financial statements.

D-SIB: Capital and leverage ratios



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