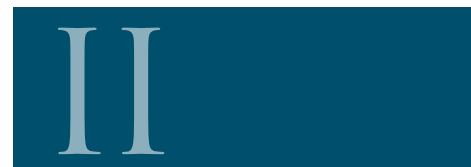


# Monetary policy and domestic financial markets



## Monetary policy and market interest rates

### The key interest rate has risen steeply this year ...

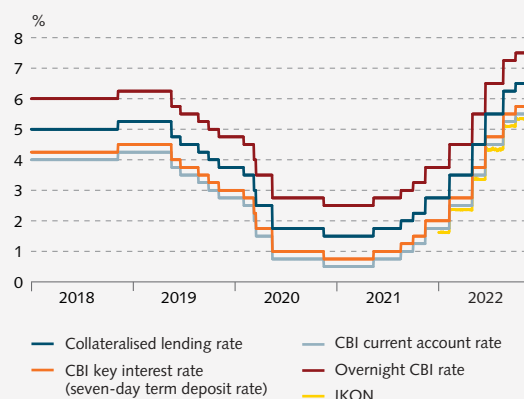
Prior to the publication of this *Monetary Bulletin*, the Bank's key interest rate – the rate on seven-day term deposits – was 5.75% (Chart II-1). As of this writing, it has been raised by 3.75 percentage points in 2022 to date and is 5 percentage points higher than it was two years ago, when it bottomed out after the onset of the COVID-19 pandemic. Short-term market rates have risen correspondingly.

The Bank's real rate has risen as well in the recent past, in line with the increase in the key rate and the decline in inflation. The real rate (as calculated using an average of various measures of inflation and one-year inflation expectations) is currently -0.4%. It has risen by 1.1 percentage points since the August *Monetary Bulletin* and by 2.9 percentage points from its May 2022 trough. The interest rate differential with abroad widened earlier this year but has narrowed again since August.

The baseline forecast assumes that the key rate will develop in line with the monetary policy rule in the Bank's macroeconomic model, which ensures that forecasted inflation will be broadly at the Bank's inflation target over the medium term.

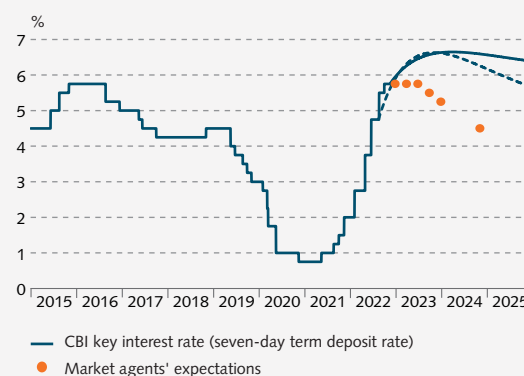
According to the survey taken by the Bank in early november, market agents expect that the key rate has peaked and will fall to 5.5% in late 2023 and reach 4.5% two years from now (Chart II-2). This is lower than in the previous survey, where respondents expected the key rate to peak at 6% early in 2023. Forward rates suggest, however, that interest rates will peak at 6½% in late 2023.

Chart II-1  
Central Bank of Iceland interest rates and short-term market rates<sup>1</sup>  
2 January 2018 - 18 November 2022



1. IKON is the interest rate on unsecured overnight deposits denominated in Icelandic krónur and held by the commercial banks.  
Source: Central Bank of Iceland.

Chart II-2  
Central Bank of Iceland key interest rate<sup>1</sup>  
1 January 2015 - 31 December 2025



1. The Central Bank's key interest rate and Treasury bond yields are used to estimate the yield curve. The broken line shows forward market interest rates prior to MB 2022/3. Market agents' expectations from Central Bank's survey. Estimated from the median response on expectations concerning the collateralised lending rate. The survey was carried out during the period 7-9 November 2022.  
Source: Central Bank of Iceland.

### ... and long-term rates keep rising

The yield on ten-year nominal Treasury bonds has risen by 2.2 percentage points year-to-date. Just before this *Monetary Bulletin* was published, it was 6.4%, its highest since mid-2016 (Chart II-3). Most of the rise in long-term nominal rates took place in H1, but the pace of the increase has eased somewhat since the summer. Long-term real rates have also been rising alongside the increase in the Bank's real rate. The yield on ten-year indexed Treasury bonds was 2% just before this *Monetary Bulletin* was published and has risen by 1.3 percentage points year-to-date.

The rapid rise in short-term rates has inverted the nominal yield curve, and two-year yields are now higher than ten-year yields. This reflects investors' expectations that short-term interest rates will fall once again, as is discussed above, and could suggest increased pessimism about the domestic economic outlook.

As can be seen in Chart II-4, the majority of the rise in nominal bond yields in H1 was due to an uptick in breakeven inflation rates. Breakeven inflation declined over the autumn as the bond market became more optimistic about the inflation outlook. This changed, however, with the publication of an unexpectedly high October inflation measurement, and the breakeven rate has been on the rise since. By mid-November, the ten-year breakeven rate was broadly as it was in mid-year (for further discussion of inflation expectations, see Chapter V).

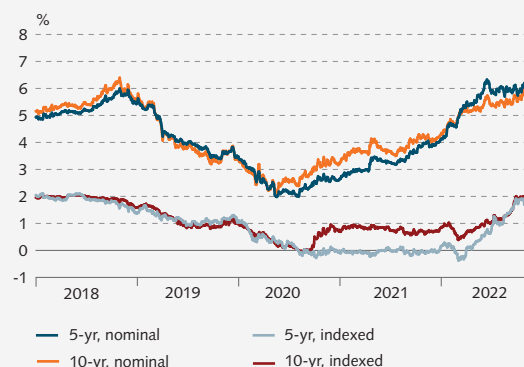
## Exchange rate of the króna

### The króna appreciated well into this year ...

The exchange rate of the króna rose by over 5% in trade-weighted terms in H1 (Chart II-5). It rose against the euro and the pound sterling, but this was offset by a fall against the US dollar. The dollar has risen against most currencies, as often happens during heightened global economic uncertainty (see Chapter I).

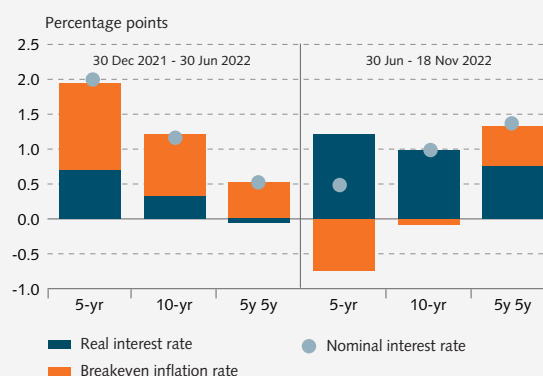
The domestic economic outlook gave cause for optimism after the relaxation of public health measures, and the tourism industry was expected to rebound over the summer. Yet the króna held broadly unchanged over the summer in spite of a surge in tourist arrivals. Probably because a large share of the appreciation expected over the summer had already been priced into the exchange rate, as forward currency sales grew strongly during the months beforehand, reflecting both increased speculation-driven trade with the króna and the probability that exporters had sold a portion of their expected foreign exchange revenues via forward contracts. It can be assumed, then, that broader authorisa-

Chart II-3  
Government-guaranteed bond yields<sup>1</sup>  
2 January 2018 - 18 November 2022



1. Based on the zero-coupon yield curve, estimated with the Nelson-Siegel method, using money market interest rates and Government-guaranteed bonds.  
Source: Central Bank of Iceland.

Chart II-4  
Breakdown of change in nominal bond interest rates<sup>1</sup>



1. Change in nominal Treasury bond yields (estimated using the Nelson-Siegel method) and contribution of corresponding changes in inflation-indexed bond yields and the breakeven inflation rate.  
Source: Central Bank of Iceland.

Chart II-5  
Exchange rate of the króna<sup>1</sup>  
2 January 2015 - 18 November 2022



1. Price of foreign currency in krónur. Narrow trade index.  
Source: Central Bank of Iceland.

tions for derivatives trading strengthened the effect of expectations on the exchange rate.

### ... but reversed as the year progressed ...

Foreign exchange market turnover was strong this autumn, owing to foreign direct investment in domestic technology and telecommunications companies, together with inflows into the domestic stock market following Iceland's promotion to secondary emerging market status by FTSE Russell. Furthermore, pension funds stepped up their foreign currency purchases, thereby offsetting inflows into the market to some extent, as their scope for foreign investment has increased with the steep drop in foreign asset prices. Forward currency sales have eased since mid-year, however, and in September there was an increase in forward purchases.

### ... and the króna has depreciated lately

The króna has come under increased downward pressure recently. In trade-weighted terms, it is now over 6% weaker than at mid-year, 4% below its October 2022 average, and broadly at the level seen in November 2021. Recent developments probably reflect increased pressure on the currency due to a strong pick-up in imports and a widening current account deficit. The interest rate differential with abroad has also narrowed following recent interest rate hikes overseas (see Chapter I). The Bank sold foreign currency in the market on a few occasions during this period.

### Króna assumed to be weaker than was assumed in August

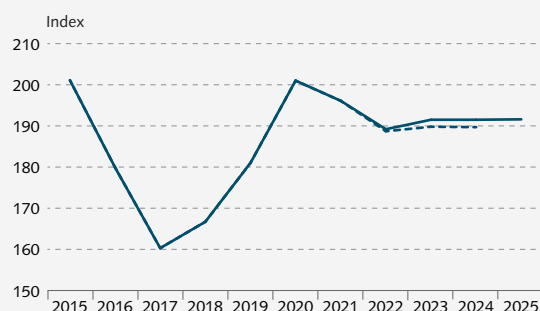
The exchange rate index stood at 188 points in Q3, in line with the Bank's August forecast. The króna has weakened more in Q4 to date, however, than was expected. In the baseline forecast it is assumed to follow a lower exchange rate path than was provided for in the Bank's August forecast (Chart II-6).

## Money holdings and lending

### Broad money growth has eased ...

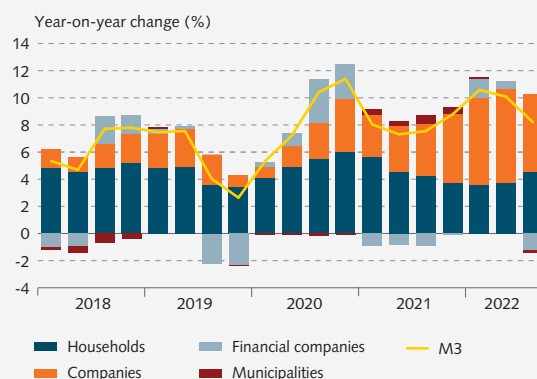
Year-on-year growth in M3 measured 8.9% in Q3/2022, somewhat less than in H1 (Chart II-7). Growth is driven mainly by an increase in corporate deposits, particularly those held by services and manufacturing companies. This aligns well with the rebound in tourism and growth in revenues from exports of marine and manufacturing products, which stems in part from sharply higher product prices. Year-on-year growth in household deposits measured 9% in Q3, picking up from the previous quar-

Chart II-6  
Exchange rate of the króna 2015-2025<sup>1</sup>



1. Price of foreign currency in krónur. Narrow trade index. Central Bank baseline forecast 2022-2025. The broken line shows MB 2022/3 forecast.  
Source: Central Bank of Iceland.

Chart II-7  
Money holdings<sup>1</sup>  
Q1/2018 - Q3/2022



1. M3 is adjusted for deposits of failed financial institutions. Companies include non-financial companies and non-profit institutions serving households.  
Source: Central Bank of Iceland.

ter after having been on the decline since the beginning of 2021.

### ... and mortgage lending growth should start easing soon

Annual growth in credit system lending has gained momentum, measuring 8½% in Q3/2022 (Chart II-8). Lending to households was up 10% year-on-year in Q3 and has held broadly stable throughout 2022 despite the recent weakening of the principal drivers of credit growth: interest rates are up sharply, borrower-based measures have tightened, and real wages have begun to shrink.

Mortgage lending growth should start easing soon, however, given the slowdown in housing market activity. This is consistent with the Central Bank's October lending survey, which suggests that the commercial banks expect demand for mortgages to ease in the near future. Offsetting this, however, is the recent increase in pension funds' mortgage lending activity.

### Corporate lending up strongly in 2022

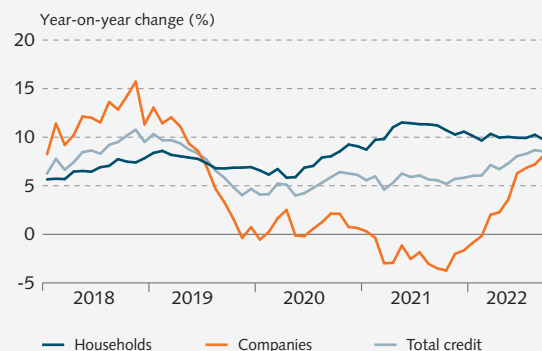
Credit system lending to businesses has grown since March, after contracting uninterrupted since the beginning of 2021. Year-on-year growth measured 7½% in Q3/2022 but was just over 8% after adjusting for the effects of exchange rate movements on foreign-denominated corporate loans. Lending to nearly all sectors has grown, although the increase is greatest in lending to companies in construction and services. It is likely that companies have pent-up need to invest after last year's contraction in corporate lending, and the Central Bank's investment survey indicates that investment spending will continue to rise (see Chapter III). Nevertheless, the commercial banks expect supply and demand for corporate credit to remain broadly unchanged in coming months.

Credit system lending was sluggish starting with the onset of the pandemic but then contracted in 2021. The corporate sector offset this by funding through bond issues and borrowing from institutional investment funds, although not all companies have access to these sources of financing (Chart II-9). Financing from outside the credit system has been on the wane recently, while credit system lending has increased accordingly.

### Households are generally well positioned, but their financial conditions have worsened ...

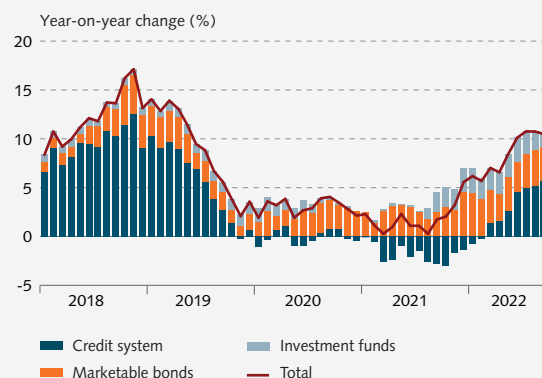
Household indebtedness has been largely unchanged in recent years (Chart II-10). Households' arrears are limited and have not increased despite large interest

Chart II-8  
Credit system lending<sup>1</sup>  
January 2018 - September 2022



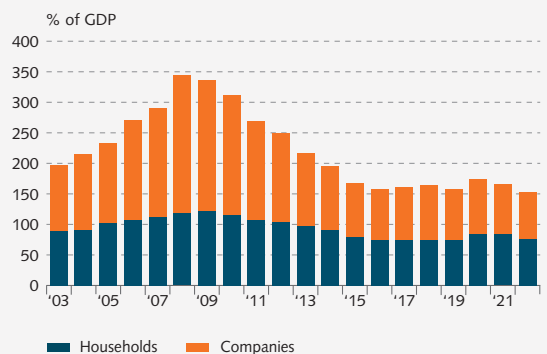
1. Credit stock adjusted for reclassification and effect of Government debt relief measures. Excluding loans to deposit institutions, failed financial institutions, and the Government. Companies include non-financial companies and non-profit institutions serving households.  
Source: Central Bank of Iceland.

Chart II-9  
Lending to non-financial companies  
January 2018 - September 2022



Source: Central Bank of Iceland.

Chart II-10  
Household and non-financial corporate debt 2003-2022<sup>1</sup>



1. Debt owed to financial undertakings and marketable bonds issued. Excluding financial institutions (which includes holding companies). Debt based on H1/2022. GDP for 2022 based on Central Bank baseline forecast.  
Sources: Statistics Iceland, Central Bank of Iceland.

rate hikes. Their asset position has also improved with rising asset prices, and their saving ratio is relatively high in historical terms (see Chapter III). The ratio of household interest expense to disposable income has risen since 2021, however, after falling steeply in the wake of pandemic-era interest rate cuts (Chart II-11). It is still below its historical average, though, despite this year's jump in interest rates, reflecting the large increase in disposable income.

For the most part, the increase in the Central Bank's key interest rate has passed through to household rates, and the spread between rates on new non-indexed mortgage loans and the deposit rates offered to households has remained broadly stable (Chart II-12). Increased competition for household deposits probably plays a role, as the banks' market funding did not increase in line with the lending growth of the past few years. Furthermore, interest rate hikes now have a more immediate effect on leveraged households' debt service burden than they did previously, as just over a fourth of household mortgages are variable-rate non-indexed loans, and most fixed-rate non-indexed loans have a fixed interest period of only three years. Borrowers who locked in historically low mortgage rates will therefore see their debt service burden rise when the fixed period expires, all else being equal. The share of indexed loans among new mortgages has increased in recent months, although indexed interest rates have begun to rise since H1, in line with a generally rising real rate.

### ... and a similar trend can be seen with businesses

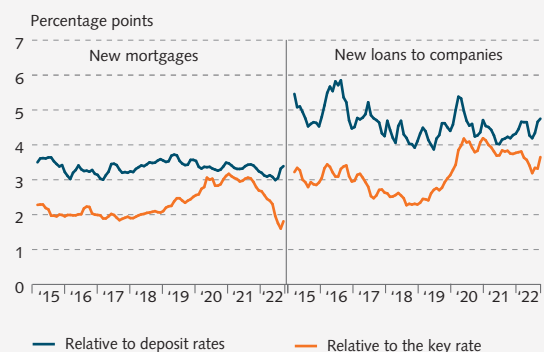
Firms' position has improved during the year, and economic activity was strong in H1. Export prices have risen considerably, and the tourism industry has rebounded. Corporate debt has held steady as a share of GDP despite stronger credit growth during the year (Chart II-10). In addition, the banks' corporate loan losses have been less than was projected early in the pandemic, and arrears have been limited. Interest rates on new corporate loans have risen concurrent with the rise in the key rate, and credit spreads over and above deposit rates available to firms have widened since 2021. The commercial banks' liquidity has been constrained by recent interest rate hikes, and conditions in international funding markets have been challenging for them. In coming months, firms' access to credit will probably depend in part on how well these liquidity constraints can be unwound. It is also unknown how much impact the uncertain global economic outlook will have, as firms' demand for credit financing appeared to contract markedly when pandemic-related uncertainty was high.

Chart II-11  
Household mortgage interest expense 2003-2022<sup>1</sup>



1. Mortgage interest expense for 2022 estimated using interest rates and household mortgage loan stock. Disposable income for 2022 based on Central Bank baseline forecast.

Chart II-12  
Credit spreads<sup>1</sup>  
March 2015 - September 2022



1. The difference between a weighted average of the large commercial banks' non-indexed lending rates and, on the one hand, the Central Bank's key rate, and on the other, a weighted average of their deposit rates. Three-month moving average. Source: Central Bank of Iceland.

## Asset prices

### Imbalances between supply and demand have pushed house prices sharply upwards ...

As is widely the case abroad, house prices in Iceland surged in the wake of the pandemic. Lower interest rates, significant accumulated savings, and growth in disposable income made it easier to buy a home, and both turnover and transaction numbers grew markedly, particularly among first-time buyers (Chart II-13). The number of homes for sale plummeted, however, and severe mismatches developed between supply and demand early in 2021. It appears that the number of homes built during the pre-pandemic years did not satisfy increased demand for housing.

Housing market activity began to ease somewhat mid-2021. Although demand was slowed by rising interest rates, it still outpaced supply, maintaining price pressures and pushing twelve-month house price inflation in greater Reykjavík to 25.5% by July 2022, its highest since December 2005.

### ... far outstripping the rise in rent prices

Rent prices have picked up in 2022 to date, measuring 8.4% year-on-year in October (Chart II-14). To an extent, this goes hand-in-hand with the rise in interest rates and the general price level, the increase in tourist numbers, and the decline in the percentage of first-time buyers, which is now nearly 5 percentage points below its 2021 peak. Another factor is that the Central Bank lowered maximum loan-to-value ratios and capped debt service-to-income ratios on new mortgages. House prices have therefore declined marginally relative to rent prices and wages in the past three months, although both ratios are still far above their historical averages. This chimes in with developments in many other advanced economies, where capital flowed into the housing market because of low interest rates and fiscal support in the wake of the pandemic (Chart II-15).

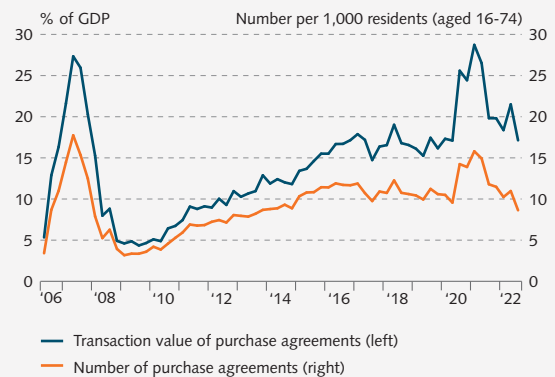
### The housing market is apparently starting to cool

Signs of a changed housing market climate are growing ever clearer, though. House price inflation has eased month by month since June, even though prices were still 21.5% higher in October than they were a year earlier (Chart II-14). The number of properties for sale has risen again and is now more than double that in April, when only about 1,000 homes were on the market. The share of newly constructed homes for sale has also risen in recent months, reflecting strong construction sector activity (see Chapter III), and housing supply is now

Chart II-13

Number and transaction value of house purchase agreements nationwide<sup>1</sup>

Q2/2006 – Q3/2022



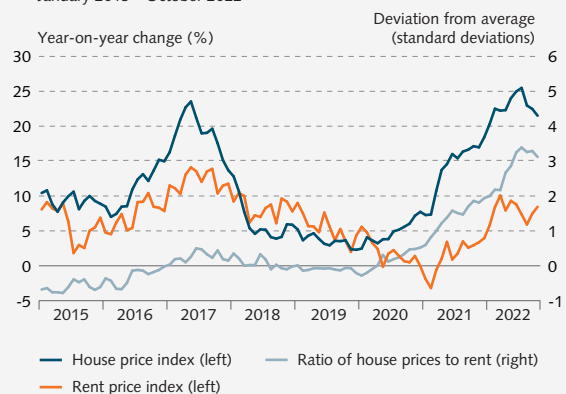
1. Number and transaction value of purchase agreements on date of purchase, seasonally adjusted by the Central Bank. GDP data from Statistics Iceland. Central Bank baseline forecast for GDP in Q3/2022.

Sources: Housing and Construction Authority, Statistics Iceland, Central Bank of Iceland.

Chart II-14

House prices and rent<sup>1</sup>

January 2015 - October 2022

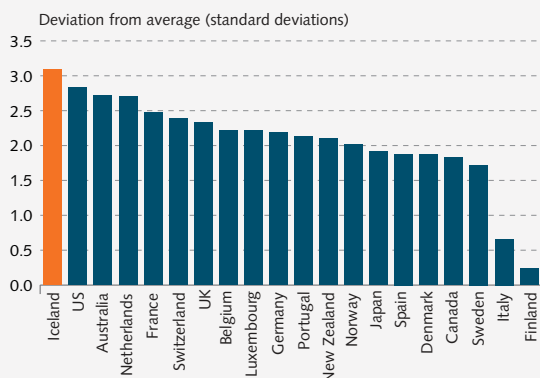


1. House prices and rent in the greater Reykjavík area. Deviation of the house price-to-rent ratio from the 2011-2022 average, measured in standard deviations.

Sources: Housing and Construction Authority, Central Bank of Iceland.

Chart II-15

House price-to-rent ratios in selected OECD-countries<sup>1</sup>



1. Figures for Canada, Iceland, Norway, Switzerland, and UK in Q3/2022, and for New Zealand in Q1/2022, Australia in Q4/2021, and Japan in Q2/2021. Data for other countries in Q2/2022.

Sources: Housing and Construction Authority, Refinitiv Datastream, Central Bank of Iceland.

expected to grow more strongly in 2022 and 2023 than was estimated in this past spring. The average time-to-sale has therefore risen in the recent term, concurrent with a decline in the number of purchase agreements (Chart II-16). By the same token, the share of properties selling at a premium on the asking price has fallen in recent months. Furthermore, as is noted above, there are signs that demand for mortgage loans is easing. Construction company executives also expect demand for residential housing to weaken in the next six months, and they consider this a major driver of an anticipated slide in prices.

House prices have softened more rapidly than was assumed in August, and according to the current baseline forecast, year-on-year house price inflation looks set to ease significantly from Q4 well into next year. There are uncertainties in play that could slow down this trend, however, mainly the war in Ukraine and the resulting surge in commodity prices. The uncertainty that developed earlier this year about deliveries of inputs has eased, but it is unclear how strongly the energy crisis will affect the price of construction sector inputs this winter and whether the war will exacerbate delivery problems. There is also considerable uncertainty about the impact of this season's wage negotiations. Moreover, an influx of immigrants could put more pressure on house prices than is currently envisioned.

### Share prices falling

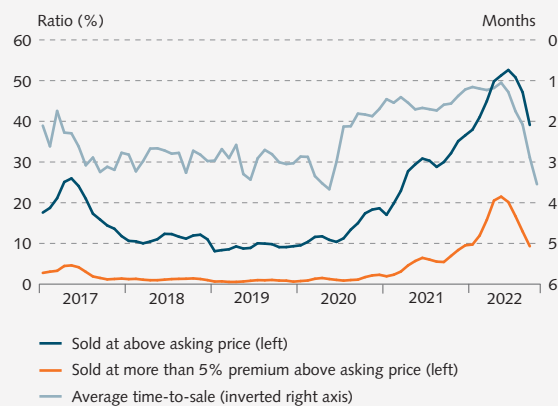
The OMXI10 index has fallen by roughly one-fifth in 2022 to date. The drop in share prices, which accords with developments seen widely abroad, reflects the bleaker global economic outlook, higher interest rates, and increased global economic uncertainty.

As is mentioned above, the Icelandic equity market was promoted to secondary emerging market status by index provider FTSE Russell on 19 September. It had previously been classified as a frontier market, which excluded it from the investment mandates of many international investment funds. Investors appear to have bought sizeable shareholdings during the run-up to the reclassification, but contrary to many observers' expectations, Icelandic share prices fell in the wake of the change, suggesting that demand from foreign investors may have been weaker than previously assumed. It is nevertheless hoped that the reclassification will attract foreign capital to the Icelandic equity market over time, as far more funds invest according to secondary emerging market indices than frontier market indices.

Chart II-16

Properties sold at a premium on the asking price and average time-to-sale nationwide<sup>1</sup>

January 2017 - September 2022



1. Properties sold at a premium on the asking price as a percentage of sold properties. Three-month moving average. The number of purchase agreements is seasonally adjusted by the Central Bank.

Sources: Housing and Construction Authority, Morgunbladið Real Estate Website (mbl.is), Central Bank of Iceland.