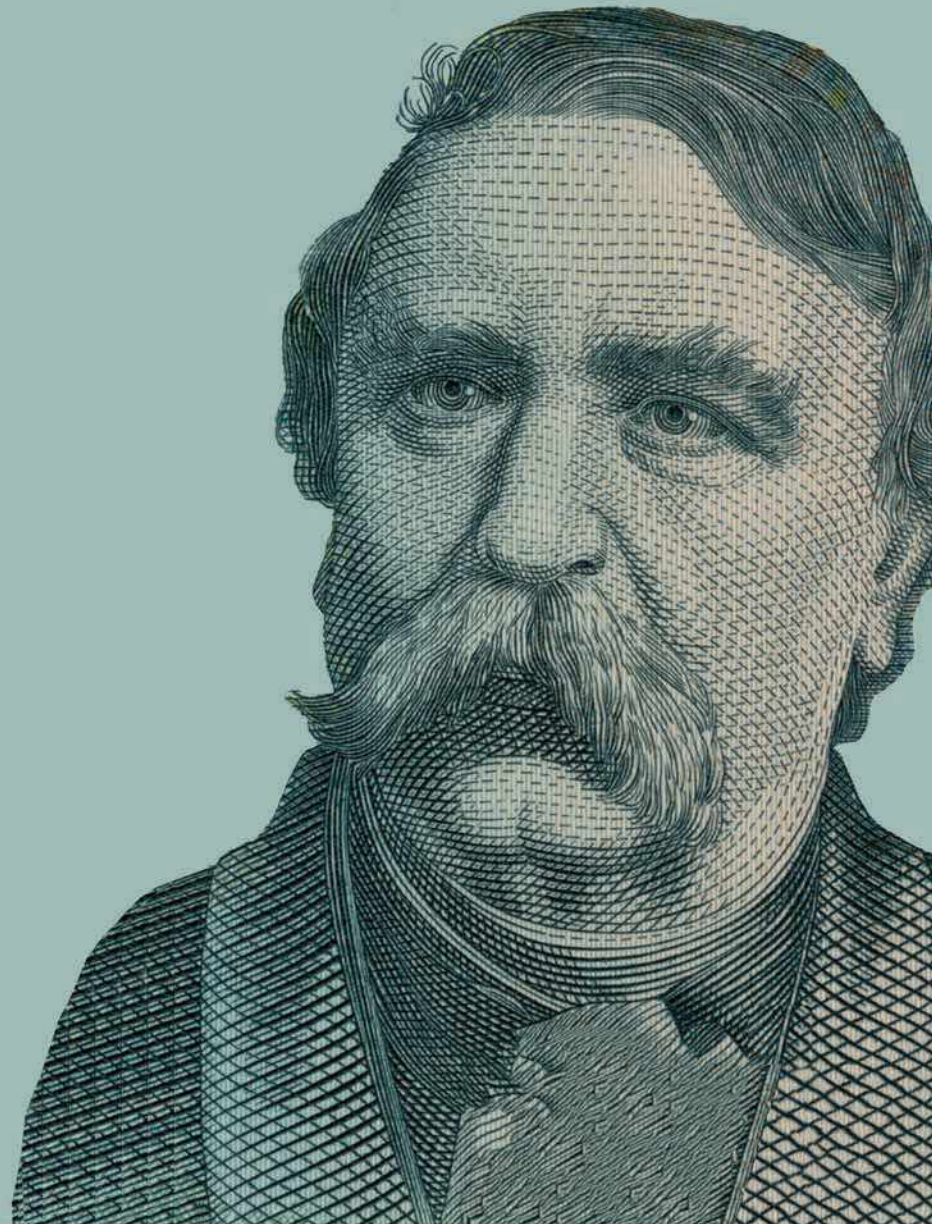
FINANCIAL STABILITY REPORT



2024
MAY

'...a nation is strong where property and independence are guarded by free hands.'

Ferenc Deák

FINANCIAL STABILITY REPORT

2024

MAY

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Financial stability is a state in which the financial system, including key financial markets and financial institutions, is capable of withstanding economic shocks and can fulfil its key functions smoothly, i.e. intermediating financial resources, managing financial risks and processing payment transactions.

The Magyar Nemzeti Bank's fundamental interest and joint responsibility with other government institutions is to maintain and promote the stability of the domestic financial system. The role of the Magyar Nemzeti Bank in the maintenance of financial stability is defined by Act CXXXIX of 2013 on the Magyar Nemzeti Bank.

Without prejudice to its primary objective of achieving and maintaining price stability, the MNB supports the maintenance of the stability of the financial intermediary system, the enhancement of its resilience and its sustainable contribution to economic growth; furthermore, the MNB supports the economic policy of the government using the instruments at its disposal.

The MNB establishes the macro-prudential policy for the stability of the entire system of financial intermediation, with the objective of enhancing the resilience of the financial intermediation system and ensuring its sustainable contribution to economic growth. To that end and within the limits specified in the Act, the MNB explores the business and economic risks threatening the system of financial intermediation as a whole and promotes the prevention of the development of systemic risks and the reduction or elimination of the evolved systemic risks; furthermore, in the event of disturbances to the credit market, it contributes to the balanced implementation of the function of the system of intermediation in financing the economy by stimulating lending and by restraining lending in the event of excessive credit outflow.

The primary objective of the Financial Stability Report is to inform stakeholders about topical issues related to financial stability, and thereby raise the risk awareness of those concerned as well as to maintain and strengthen confidence in the financial system. Accordingly, it is the Magyar Nemzeti Bank's intention to ensure the availability of the information needed for financial decisions, and thereby contribute to increasing the stability of the financial system as a whole.

The analyses in this Report were prepared by the Directorate Financial System Analysis, with the contribution of the Directorate Supervision and Analysis of Credit Institutions, and the Directorate Monetary Policy and Financial Market Analysis, under the general direction of Ádám Banai, Executive Director for Monetary Policy Instruments, Financial Stability and Foreign Reserve Management.

The Report was approved for publication by Barnabás Virág, Deputy Governor.

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The Report incorporates the Financial Stability Council's valuable comments and suggestions following its meetings on 2 April and 23 May 2024, and those of the Monetary Council following its meeting on 23 April 2024.

This Report is based on information for the period up to 30 April 2024. As data frequency is divergent, the analysis horizons may also differ.

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Executive Summary

The Hungarian banking system remains stable, and its shock resilience is strong. The outstanding profitability in 2023 was due to the high interest rate environment and certain one-off items. Banking system profits will decline in 2024, as credit risks are expected to rise in conjunction with the normalisation of monetary conditions. In line with global trends, risks related to domestic commercial real estate lending deserve special attention, but at the same time, the systemic risk capital buffer reactivated by the MNB in a precautionary manner limits the build-up of such risks. The household credit market has started to recover, while the corporate credit market is characterised by a wait-and-see approach, mainly in the investment loan segment. The share of non-performing loans stagnated in the corporate segment, but fell significantly in the case of household loans. The NPL ratio in both segments is historically low, and thus overall portfolio quality is adequate.

The operating environment for European banks is characterised by weak economic growth and a slowing disinflationary trend, which is fragile due to geopolitical risks. The EU banking sector achieved an outstanding return-on-equity of 10 per cent in 2023, as a result of tight monetary conditions. However, the positive profitability effect of the higher interest rate environment will not last. The gradual increase in interest expenses and the slowdown in lending dynamics are already eroding interest income. With the expected normalisation of monetary conditions, the decline in interest revenue may also exert pressure on profitability. In the last quarter of 2023, the decline in nominal house prices halted in most EU Member States, which means that banks' cyclical housing risks have eased. They have not, however, been fully eliminated due to continued substantial overvaluation. The estimated value of commercial real estate fell significantly due to a sharp drop in investment volume and a rise in expected returns. In these markets, falling prices increase credit risk and the expected losses of the banking system via the revaluation of collaterals. In most EU Member States, as a result of past and recent regulatory decisions, banks have already started to build up their capital buffers to ensure that they have adequate reserves to deal with these risks.

The Hungarian banking system remained stable in an environment impacted by numerous challenges in the past period, and its shock resilience is strong. The risks identified in previous Financial Stability Reports are currently not materialising. The liquidity of the banking system has continued to rise from a high base, with the operational liquidity buffer equivalent to almost three quarters of deposits in February 2024. The loan-to-deposit ratio declined from a peak of 76.6 per cent in June 2023 to 74.5 per cent at the end of February 2024. This trend was supported by an increase in both household deposits in 2023 Q4 – in addition to corporate deposits – and credit dynamics lagging behind the growth in deposits.

The quality of the loan portfolios remained good. The NPL ratio of the corporate loan portfolio stagnated at a historically low level of 3.8 per cent. The ratio of non-performing loans in the household sector has fallen by almost one half since end-2022, when the moratorium was lifted, to 2.4 per cent by the end of February 2024. In 2023 H1, this development was supported to a great extent by the reclassification of transactions previously falling under the payment moratorium to performing loans, which was complemented by active bank portfolio cleaning throughout the year. The capital position is also adequate, and banks have sufficient free capital even taking into account the buffer requirements in 2024. Based on the results of the stress test, the domestic credit institution sector would meet the regulatory requirements for liquidity and capital adequacy even in the event of a serious shock, i.e. it would remain stable even in an environment less favourable than expected. The lending capacity of the banking system, and thus its role in supporting economic growth, would remain adequate even after a severe shock with a very low probability.

Hungarian banks achieved historically high profitability in 2023. The nearly 24-per cent return on equity was, however, due in part to the high interest rate environment during the period and specific one-off items (reversals of impairment losses on Russian and Ukrainian exposures, revaluations of prenatal baby support loans and Home Purchase Subsidy loans, and an increase in dividend income from subsidiaries), which pose downside risks for the future.

Credit risks are likely to increase in several segments of the loan portfolio, which may also have a negative impact on profitability. No material impact is expected regarding the removal of the SME interest rate cap in April, as interest

rates have already fallen to the range of capped rates. The future of the interest rate cap on household mortgage loans remains uncertain. Taking into account the expected repricing, its lifting may cause a significant increase in repayment instalments for a small group of borrowers only. Non-compliance with the child-related conditions for family subsidies under subsidised loan schemes can also be identified as a risk. One quarter of borrowers who took out a prenatal baby support loan in the second half of 2019 did not have a child by June 2023; therefore, the credit risk monitoring of these clients deserves increased attention.

In line with global trends, risks related to domestic commercial real estate lending also deserve particular attention. On the one hand, the domestic market is still adjusting to the structural changes brought about by the coronavirus epidemic. On the other hand, in line with European trends, the rise in yields has led to a fall in property values, which may pose a risk to the banking system due to the revaluation of collaterals. In 2023, within the portfolio of project loans secured by commercial real estate, there was a high proportion of collateral with increasing value, which showed a trend that ran counter to market trends; consequently, it is important for credit institutions to closely monitor the evolution of the value of collateralised real estate. Finally, in addition to higher interest rates and low market liquidity, there is also a refinancing risk on maturing loans, although the refinancing needs in the near future are low compared to the EU average. Risks to the banking system are mitigated by the sector's low exposure to commercial real estate compared to 2008 and the continued good quality of the portfolio. The systemic risk buffer, which was reactivated by the MNB on a precautionary basis, also limits the build-up of such risks.

The annual growth rate of the loan portfolio of the household sector may have reached its lowest point at a level of 3 per cent in 2023, while the corporate sector rate may have bottomed out at 2 per cent in early 2024. Credit dynamics in both sectors may remain in the single-digit range in 2024, despite a gradual rise. The value of new contracts in the corporate sector stagnated in 2023, while that in the household sector declined in year-on-year terms, but the latter segment has been recovering since the fourth quarter. Banks' lending activity has been in line with the cyclical position of the economy. In 2024, banks expect demand to pick up in both credit segments, thanks to rising consumer confidence from disinflationary developments and an improving growth outlook. In terms of corporate lending, the high amount of liquid assets accumulated by corporations may lead to a structural reduction in demand, while household lending will continue to be supported by the family support system, which was transformed in 2024.

Main financial stability indicators

FINANCIAL STABILITY INDICATORS - SUMMARY TABLE					
	2008	2019	2022	2023	Most recent data
Lending					
Annual growth rate of loans outstanding - corporate sector (%)	6.5	14.2	14.0	6.0	2.5 (March 2024)
Annual growth rate of loans outstanding - SME sector (%)	11.7	14.7	13.5	3.4	1.7 (March 2024)*
Annual growth rate of loans outstanding - household sector (%)	19.1	16.7	6.3	2.7	4.2 (March 2024)
Real estate markets					
Annual change in the number of housing transactions (%)	-13.4	-4.5	-12.5	-21.0	30.0 (Q1 2024)
Share of housing transactions with loans (%)	48.1	42.0	40.0	33.0	39.4 (Q1 2024)
Annual change in house prices (%)	0.2	18.1	12.3	5.8	7.2 (March 2024)*
Housing market overvaluation (%)	3.6	-1.1	11.0	12.4	-
Vacancy rate - Budapest office market (%)	16.8	5.6	11.3	13.3	13.8 (March 2024)
Vacancy rate - industrial-logistics market of Budapest and its environs (%)	17.3	1.9	3.8	8.6	8.0 (March 2024)
Project loans/regulatory capital (%)	73.3	26.6	44.9	38.1	-
Portfolio quality					
Corporate NPL-ratio (%)	5.4	3.9	3.9	3.8	3.8 (Febr 2024)
Household NPL-ratio (%)	3.8	4.2	4.4	2.8	2.4 (Febr 2024)
Profitability					
Return on Equity (%)	11.3	11.5	8.9	23.8	-
Return on Assets (%)	0.87	1.20	0.71	1.95	-
Capital position					
Capital Adequacy Ratio (%)	12.9	18.0	18.9	19.3	-
Leverage ratio (%)	-	8.9	8.1	8.5	-
Liquidity					
Loan-to-deposit ratio (%)	152.0	75.5	71.2	74.5	73.0 (March 2024)
Liquidity Coverage Ratio (%)	-	148.4	154.1	182.6	179.8 (Febr 2024)

** Preliminary data.*

Notes:

Data of the credit institution sector (except for real estate market indicators).

Annual growth rate of loans outstanding: Annual growth rate based on annual transactions (balance of disbursements and repayments).

Project loans/regulatory capital: Based on the institutions' project loan portfolio secured by commercial real estate and Bond Funding for Growth Scheme portfolio related to commercial real estate developments and investments.

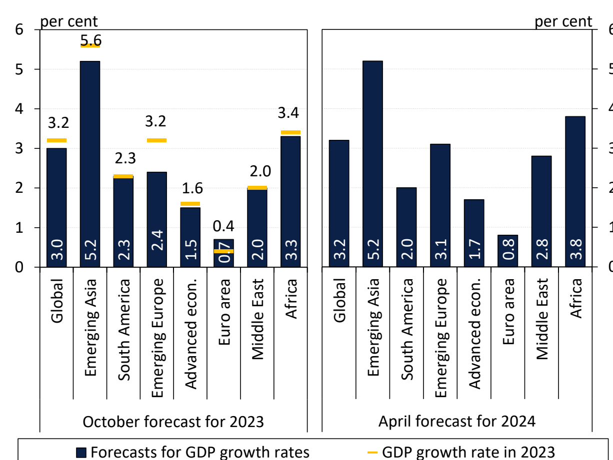
NPL-ratio: The definition of non-performing loans changed in 2015. From then on, in addition to the loans over 90 days past due, loans less than 90 days past due where non-payment is likely are also classified as non-performing. Calculated by clients until 2010 and by contracts from 2010.

1. Geopolitical risks threaten global growth and disinflation

In 2024, stability risks to the financial intermediary system may be dominated by various geopolitical developments and real estate market trends. While the Russia–Ukraine war began more than two years ago, new geopolitical risks emerged in the Middle East in 2023, boosting threats to global commodity and energy security as well as frictions in global supply chains, and worsening growth and disinflation prospects for the global economy, particularly in Europe. Rising maritime transport costs and a possible further significant increase in the cost of energy may put an end to the current trend of disinflation. While inflation has eased around the world, leading central banks are holding off on lowering policy rates, believing that monetary policy should remain tight long enough to return inflation to the 2-per cent target in a sustainable manner over the medium term. Uncertain outlooks and rising geopolitical risks are curbing economic growth and may delay the normalisation of inflation and interest rates.

Despite the poor economic growth outlook, the European banking system was highly profitable in 2023, mainly due to the higher interest rate environment. However, the expected normalisation of interest rates and stagnation in lending may affect the sustainability of high banking profitability. In most EU Member States, the decline in housing prices has come to a halt, thus easing the cyclical risks to banks stemming from the housing market. However, such risks have not disappeared, as overvaluation remains high. Risks related to commercial real estate-backed loans have increased, and the cyclical decline in capital values in this segment of real estate market is expected to continue, exacerbated by structural changes in the office market segment. A growing number of real estate developers with significant outstanding loans are facing liquidity problems and insolvency due to the scarcity of funds available and higher refinancing costs. Regulators in most EU Member States have already started to build up capital buffers (countercyclical capital buffers or sectoral systemic risk capital buffers) to ensure that banks have sufficient reserves to deal with the risks.

Chart 1: Real GDP growth projections of the IMF for 2023 and 2024

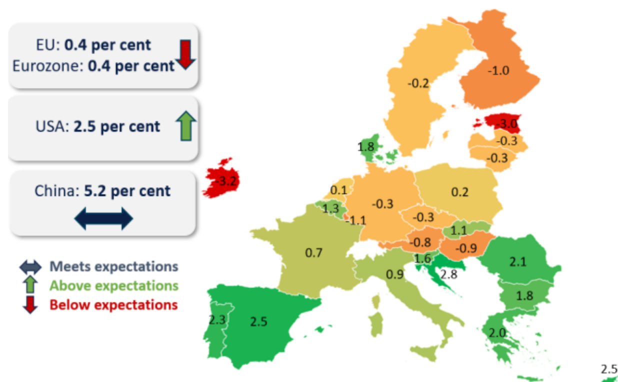


Source: IMF

1.1. Subdued European growth prospects amid moderating inflation and significant geopolitical risks

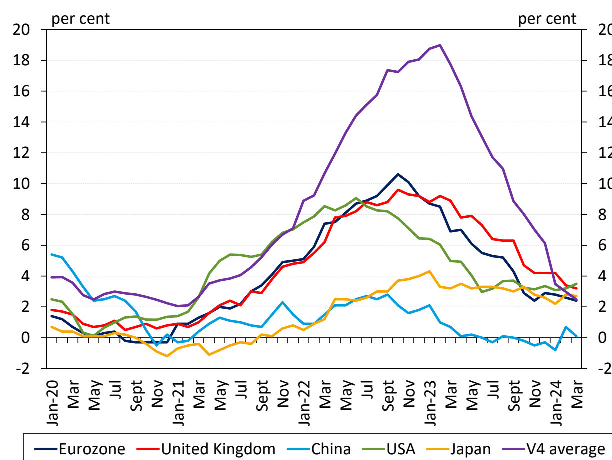
Given the significant downside risks to global GDP growth, an upswing is unlikely. According to the April forecast of the International Monetary Fund (IMF), the world economy will grow by 3.2 per cent in 2024 as well (Chart 1). However, there is a high degree of uncertainty surrounding the global macroeconomic outlook this year due to mounting geopolitical risks. Armed conflicts in the Middle East increase frictions in global supply chains and threaten the security of global commodity and energy supply. Uncertain economic and political outlooks (elections are being held in many countries in 2024) have prompted many companies to postpone investment decisions, leading to a drop in the volume of foreign direct investment (FDI), which in turn has an adverse impact on global economic growth. According to OECD data, FDI in 2023 was 7 per cent lower than in the previous year. Governments may be forced to cut primary spending as a result of higher interest rates and a heavier debt burden due to increased borrowing to fight the coronavirus

Chart 2: Annual real GDP growth in EU Member States in 2023



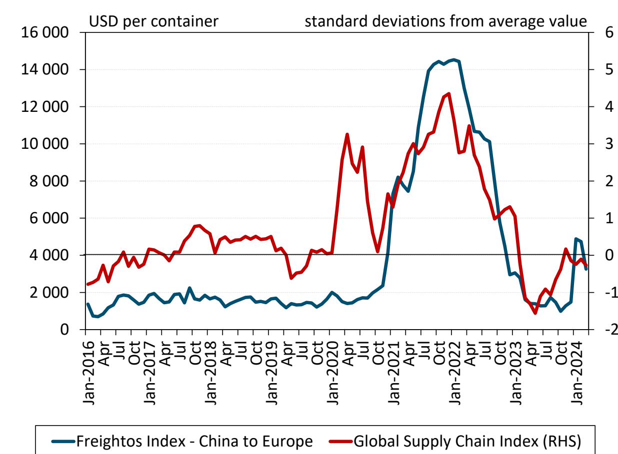
Note: Based on annual GDP data, not adjusted for calendar effects. Source: Eurostat

Chart 3: Inflation trends by country and region



Source: OECD

Chart 4: Development of Global Supply Chain Index and the cost of maritime container shipping



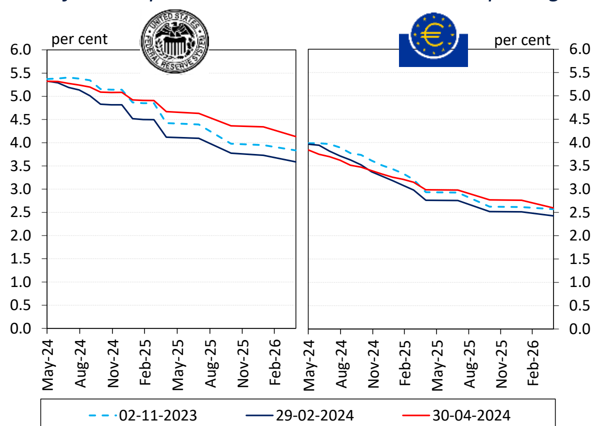
Source: Federal Reserve Bank of New York, Freightos Data

epidemic, which will also have a negative impact on economic growth. Moreover, the global economic outlook is undermined by the fact that the expected growth rates of China and India have slowed compared to previous years.

The economic performance of the EU Member States remained subdued, while the US economy showed dynamic growth. In 2023, the German economy contracted, while the French and Italian economies only grew at a moderate rate (Chart 2). While higher energy prices curbed Germany's economic performance in 2023, in 2024 slow growth is expected again due to rigid fiscal debt brake rules limiting the country's structural budget deficit to 0.35 per cent of gross domestic product, in addition to a slowdown in both industry and exports. The EU and euro area economies grew at an annual rate of just 0.4 per cent in 2023. By contrast, the US economy grew by 2.5 per cent and has more favourable growth prospects for 2024 compared to the euro area economy. The reasons for this include faster improving consumer confidence and retail sales, a more resistant than expected real estate sector to interest rate hikes, a more flexible labour market, and the fact that the USA is a major energy exporter.

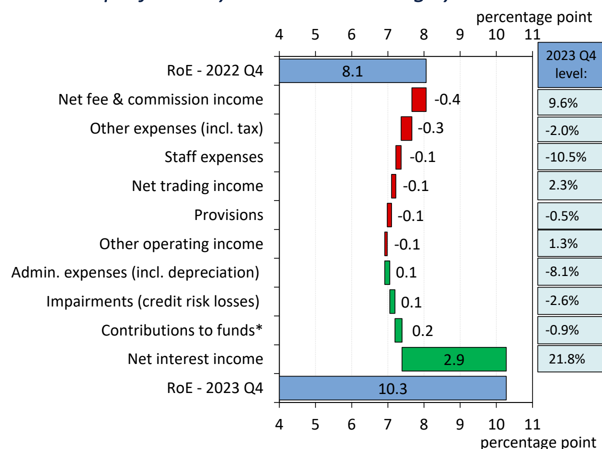
Despite the global decline in inflation rates, the disinflationary process remains fragile. Rising commodity and food prices and falling natural gas prices have had a favourable impact on inflation, with the rate of price increases dropping sharply in most countries (Chart 3). However, the current level of inflation in most countries is still above the level considered desirable by central banks, and curbing inflation continues to be a priority. China remains close to deflation, a sign of weak economic growth. Attacks on ships plying the Red Sea shipping route have intensified supply chain frictions and the risk of a possible regional escalation of conflicts in the Middle East, which may lead to a significant rise in inflation and growth risks for the world, especially Europe, due to higher energy prices (Chart 4). While most countries in Europe have essentially ended its dependence on Russian energy imports, this has increased the importance of energy sources from the Middle East (crude oil, LNG). Therefore, the current disinflationary trend may be interrupted by a rise in maritime transport costs and a possible further substantial increase in energy prices. The dynamic increase in services prices also runs counter to the decline in inflation.

Chart 5: Expected interest rate paths for central banks of developed countries based on market pricing



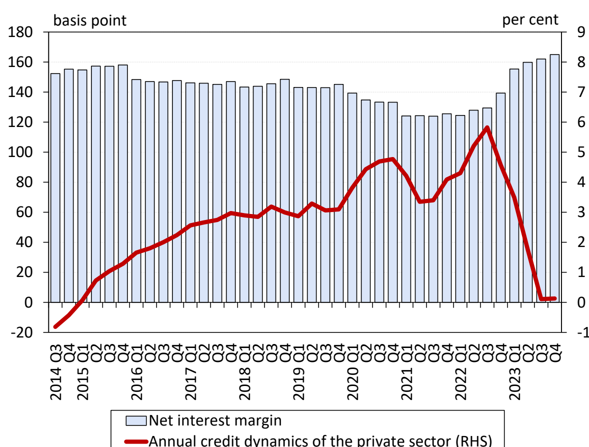
Note: Expected interest rate paths on the basis of interest rate swaps in the case of the Fed and on the basis of EONIA forward yields in the case of the ECB. Source: Bloomberg

Chart 6: Impact of changes in factors determining profitability in the EU banking system



Note: *Contributions to deposit guarantee schemes and resolution funds. Source: EBA

Chart 7: Annual credit dynamics in the private sector and net interest margin trends in the European Union



Note: Transaction-based annual growth rate of credit institutions' loans to households and non-financial corporations. The net interest margin is based on the EBA Risk Dashboard's sample of 164 banks, covering more than 80 per cent of the EU/EEA banking sector by total assets. Source: EBA, ECB

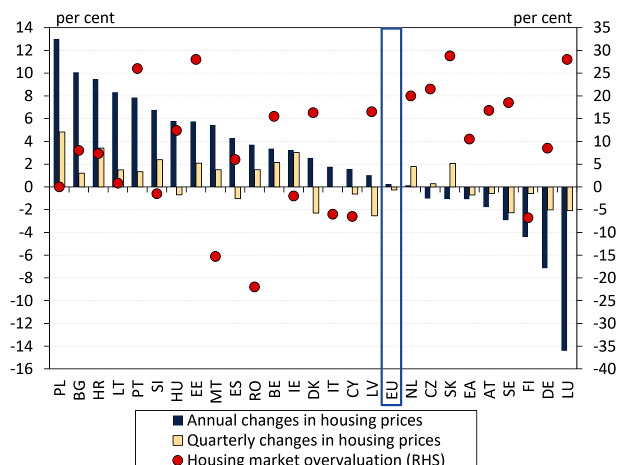
Leading central banks completed their tightening cycles in 2023, but are holding off on rate cuts. The major global central banks ended their rate hike cycles in 2023 H2. Both the Fed and the ECB are currently operating in data-driven mode, waiting for convincing evidence that inflation will reach the central bank target of 2 per cent and remain there for a sustained period before they start to cut rates. Current market expectations for rate cuts show a less steep path than six months or one month ago (Chart 5). On the basis of market-priced expectations, the first rate cut in the euro area may occur in mid-2024. However, as market-priced expectations do not necessarily coincide with central bank policymakers' preferred interest rate path, central bank communications may continue to generate significant volatility in the markets. Both the Fed and the ECB believe that keeping policy rates unchanged long enough will bring inflation back to the target range in a sustainable manner. The Fed's caution is also explained by the fact that the strong US economy and tight labour market are working against a decline in inflation. Central banks in various emerging markets (Brazil, Czechia and Hungary) have already started to cut their policy rates in response to falling inflation, while others continue to wait.

1.2. The EU banking system has been highly profitable, despite stagnating lending and increased real estate market risks

The profitability of the EU banking system was particularly high, driven by robust growth in interest income. The return on equity (RoE) of the EU banking system rose from 8.1 per cent in 2022 to 10.3 per cent by 2023 (Chart 6). The year-on-year increase in RoE is explained by the significant growth in net interest income from 18.9 per cent to 21.8 per cent as a percentage of equity. Net commission and fee income fell as a percentage of equity as business and lending activity declined, while other expenses rose. The changes in the other factors affecting profitability were not significant and had an overall neutral impact on profitability.

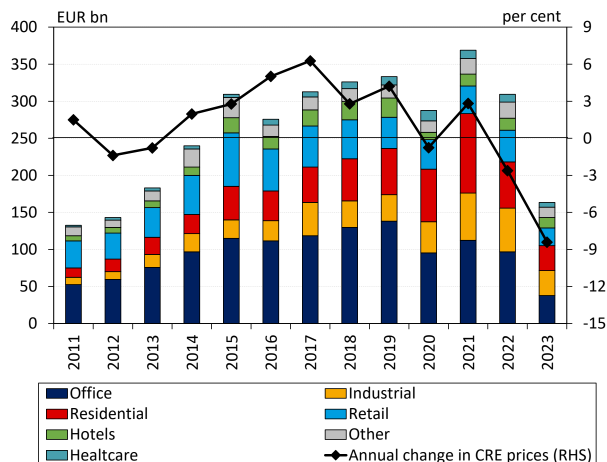
Interest income increased due to higher margins, while lending activity stagnated in 2023. In the EU Member States, the 19 per cent growth in banks' annual net interest income was driven by the net interest margin, which rose to 165 basis points in 2023 Q4 from 139 basis points in the same period of the previous year (Chart 7). The increase in the margin was a combined result of monetary tightening and the time needed for transmission, as banks' liabilities were repriced more slowly and to a lesser extent than their assets. Interest

Chart 8: Developments in housing prices and housing market overvaluation



Note: Data as of 2023 Q4. Source: ECB, Eurostat, MNB

Chart 9: Investment volume and annual change in prices on the commercial real estate market in Europe



Note: Data include the investment volume of following countries: EU Member States, UK, Norway, Switzerland, Serbia and Ukraine. The price index covers the euro area. Source: CBRE, ECB

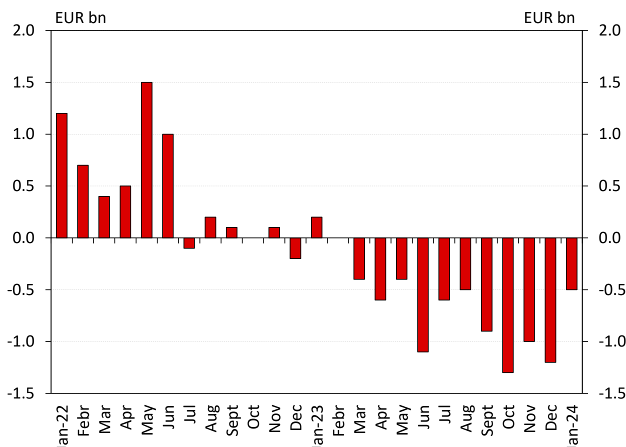
income, on the other hand, grew even though private sector credit did not increase last year. Since the interest rate environment has peaked, in case of further stagnation of lending, the increase in interest income may already be limited.

Despite high levels of overvaluation in the market, house prices fell on an annual basis in only a few Member States. From the second half of 2022, several EU countries experienced a decline in nominal house prices. This was mainly the case where the share of the population renting at market prices or the outstanding mortgage debt is high, i.e. where house prices are more sensitive to changes in interest rates.[1] In 2023 Q4, however, nominal house prices stopped falling on an annual basis in the majority of EU Member States, while the EU average rose by 0.2 per cent (Chart 8). That house prices did not drop (or only dropped at a moderate rate) in several Member States was also supported by the fact that, in the current economic environment, the trends exacerbating the housing market downturn are less typical than in previous cycles: unemployment rates did not rise and households' ability to repay debts did not deteriorate in the EU as a whole. However, the level of overvaluation in the housing market remains high, which means that the cyclical risks stemming from the depreciation of residential mortgage collateral have not yet disappeared.

The halving of demand in the commercial real estate market has an adverse effect on the value of bank collateral. In Europe, investment flows in the commercial real estate market fell from EUR 309 billion in 2022 to EUR 163 billion in 2023, i.e. they decreased by almost one half (Chart 9). While this decline affected all market segments, the largest drop (61 per cent) was observed in the office market, the level of which fell below the low point of the last real estate cycle. In the office market, structural risks have intensified in addition to cyclical ones, and rising vacancy rates have been due in part to changing work patterns. Weak demand and rising expected yields have led to a significant fall in property prices, with commercial real estate prices in the euro area falling by 8 per cent, while prime office markets in several Western European cities saw annual capital value decrease by 18 to 23 per cent in 2023. The cyclical downturn is expected to continue, which in turn may further increase the risk cost of bank loans secured by commercial real estate. Systemic risks are, however,

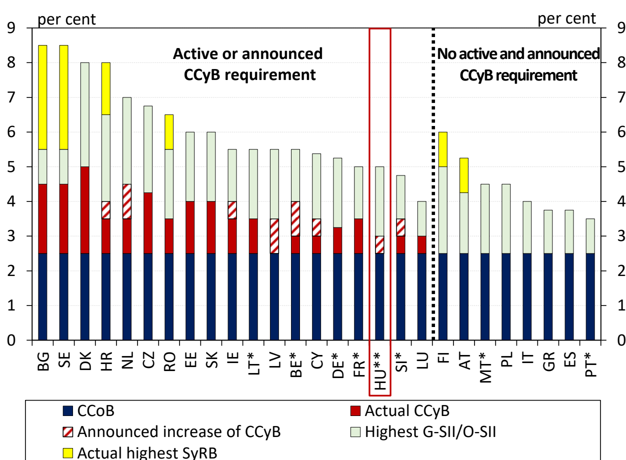
[1] See the MNB's May 2024 Housing Market Report.

Chart 10: Transaction-based monthly changes in the net asset value of European real estate funds



Source: Bloomberg, Morningstar

Chart 11: Announced capital buffer requirements of EU Member States



Note: Buffers announced by 5 April 2024. CCoB: Capital Conservation Buffer; CCyB: Countercyclical Capital Buffer; G-SII/O-SII: Globally/Other Systemically Important Institutions' Capital Buffer; SyRB: Systemic Risk Buffer. *Sectoral SyRB. **A CRE-related SyRB has already been announced. Source: ESRB, websites of national authorities

mitigated by the fact that the ratio of commercial real estate loans to total assets exceeds 10 per cent in only five small European countries, with the average at 4.9 per cent.

Real estate developers' difficulties in raising funds elevates the cyclical risks, particularly in Germany. In 2023, the dual challenges of falling real estate prices and rising (re)financing costs in the German market led to bankruptcy proceedings for several property developers with significant project and loan portfolios. In the final two months of 2023, companies from one of Europe's largest property holdings also filed for bankruptcy. Developers' financial difficulties have been exacerbated by the tighter lending conditions imposed by banks, which have been pro-cyclical in their response to rising risks, as well as declining investor interest. The latter was also reflected in the net outflows from European real estate funds, which had been ongoing for a year in January 2024, albeit at a still moderate EUR 8.5 billion annually, or 4.4 per cent of the total net asset value (Chart 10). In the UK, German and French markets, around one quarter of commercial real estate-backed loans will mature in 2024 and 2025, which increases refinancing risks.

Most EU Member States are in the process of building up capital buffers, and strong bank profitability has been conducive to these efforts. The portfolio quality of the EU banking system did not deteriorate significantly in 2023, with NPL ratios remaining low. However, EU Member States have begun to prepare to mitigate potentially accumulating systemic risks. By early April 2024, 19 EU countries had announced the implementation of a positive countercyclical capital buffer (CCyB) rate, while some countries are using a sectoral systemic risk buffer (SyRB) to manage the accumulation of risks in specific segments (e.g. real estate) (Chart 11). European banking systems are facing the challenges ahead with strong capital positions and sound fundamentals, with sector-wide CET1 ratios close to 16 per cent at the end of September 2023, while the announced capital buffer requirements will provide further room for risk management.

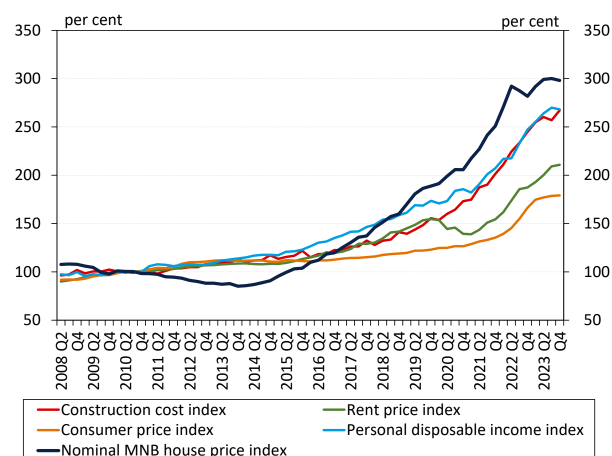
2. Cyclical risks are moderate in the residential real estate market, but remain high in the commercial real estate market

House prices rose by 5.8 per cent in 2023 compared to 2022. On an annual basis, disposable incomes, rents, construction costs and consumer prices rose at a somewhat faster rate than house prices. The estimated overvaluation of house prices relative to fundamentals did not change significantly in 2023, amounting to 12 per cent in the fourth quarter. In 2023 Q4, housing market turnover was already 21 per cent above its low from the end of 2022, while in 2024 Q1, due to falling lending rates and rising real wages, the share of housing purchases with a mortgage rose to 39 per cent from 33 per cent in 2023. Due to the restructuring of family subsidies, in settlement types not eligible for the rural Home Purchase Subsidy Scheme for Families ('rural HPS'), families not committing themselves to having more children have been excluded from the eligibility for the scheme since the beginning of the year, and therefore housing affordability has deteriorated for them.

In 2023, investment turnover in the commercial real estate market was down 38 per cent compared to the previous year, while capital values fell by 21 per cent in the office market, based on the rise in expected prime yields, compared to 2022 Q2, the period when the trend in yields reversed. Based on the planned completion volumes, the vacancy rate of Budapest's office and industrial-logistics properties may continue to rise in 2024, unless demand picks up substantially. According to the vast majority of real estate experts, the cyclical position of the market is still in a downturn phase or at the bottom of the cycle, and therefore bank collateral values may continue to decline, but the exposure of credit institutions to the real estate market via project lending is still moderate at both the sector level and the level of individual institutions. In 2023, within the project loan portfolio of credit institutions secured by commercial real estate, the proportion of collateral with increasing value was high, which ran contrary to market trends; therefore, it is important for credit institutions to closely monitor the development of the value of collateralised real estate and account for value increases only in the event of real and substantial improvement in the income-generating capacity of the real estate. In addition to higher interest rates and low market liquidity, there is also a risk of refinancing expiring project loans, but the need for refinancing due in the near future is low compared to the European Union average.

2.1. The residential real estate market is characterised by moderate price dynamics compared to the improvement in fundamentals

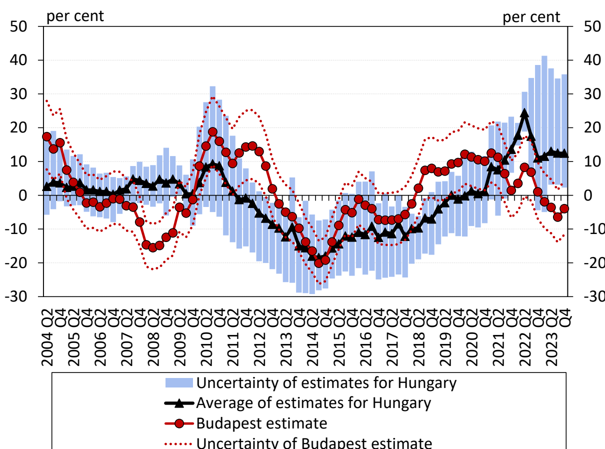
Chart 12: Development of the nominal MNB house price index and some fundamentals



Note: 2010 = 100 per cent. Source: MNB, HCSO

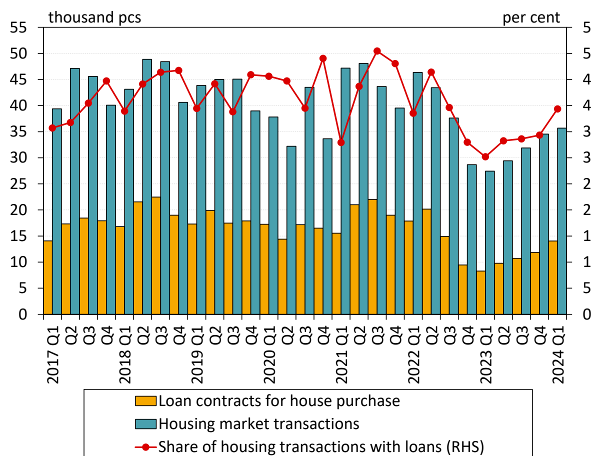
House prices rose in nominal terms, but fell in real terms on an annual basis. Nominal house prices advanced by 5.8 per cent in 2023 on a national average, according to the MNB's house price index, which represents a 1.8-per cent decrease in real terms. There were no significant differences in house price trends by settlement type. Annual house price dynamics accelerated in 2023 H2, but this was due to the lower base. Housing prices exceeded the level of 2022 Q2 by 2 per cent at the end of 2023. While the rate of house price growth diverged from the fundamentals during the upward phase of the housing cycle, the level of fundamentals started to catch up last year (Chart 12). The disposable income of households and construction costs both rose by 9 per cent, while rents

Chart 13: Deviation of house prices from the estimated equilibrium level justified by fundamentals



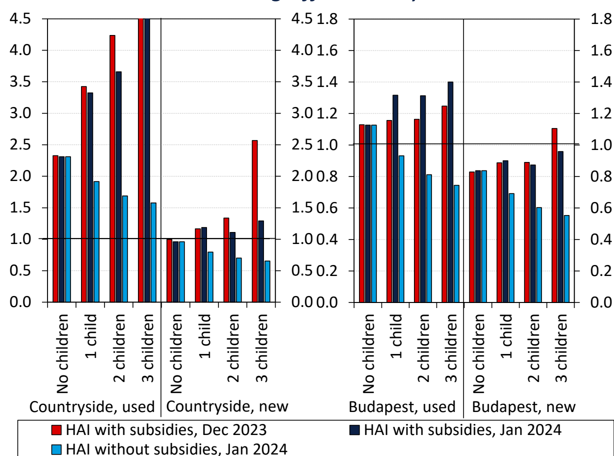
Note: For a detailed methodology, see the May 2024 Housing Market Report of the MNB. Source: MNB

Chart 14: Home purchase loans and housing market transactions



Source: MNB

Chart 15: Impact of changes in family subsidies on housing affordability



Note: Not including the loan waiver of HPS Plus. The HAI (Housing Affordability Index) shows the number of times the income of a household with two average earners covers the income required for the financed purchase of an average home. If the value of the indicator is

increased by 12 per cent in 2023 Q4 compared to the same period one year earlier, with both of these rates exceeding annual house price dynamics.

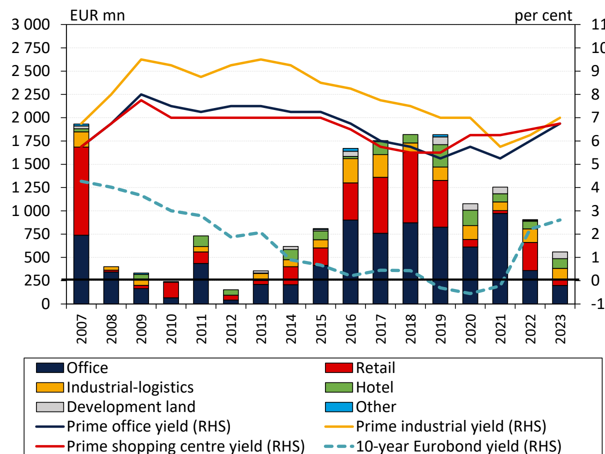
The overvaluation of house prices relative to fundamentals stagnated in 2023. In 2023 Q4, the overvaluation of house prices relative to economic fundamentals was 12 per cent at the national level, which is significantly lower than the 24-per cent peak seen in 2022 Q2 (Chart 13). In addition to house prices, real wages also increased by the end of 2023 on a yearly basis, thus the level of overvaluation did not change substantially. Looking ahead, fundamentals are expected to improve further, which should mitigate the risk of another nominal house price decline. The Budapest housing market was not characterised by overvaluation in 2023 Q4.

Home purchases with a mortgage also contributed to the increase in the number of housing transactions. Nationally, there were 35,000 housing market transactions in 2023 Q4, up 20 per cent from the low in the same period of the previous year (Chart 14). The increase in the number of sales was supported by a pick-up in housing loan disbursements, in which falling lending rates and rising real wages played a significant role. The 12,000 housing transactions with a mortgage during the fourth quarter represent a 25-per cent year-on-year increase. In 2024 Q1, the number of loan contracts for house purchases rose 70 per cent from the very low base in the previous year, and thus the proportion of housing transactions with a mortgage increased to 39 per cent from 33 per cent in 2023.

Housing affordability has deteriorated for households which are no longer eligible for family subsidies. In January 2024, the Home Purchase Subsidy Scheme for Families, which was formerly available to all families with children, was replaced by the HPS Plus scheme. The latter is now only available to families committing to have more children, which has reduced the number of eligible beneficiaries to one third based on previous disbursements. The higher preferential loan amounts available under the HPS Plus have made it easier for households planning to buy an average used home in Budapest (or in another area with high-value housing) using a mortgage (Chart 15). That said, the availability of new housing has not improved as the impact of higher preferential loan amounts for these properties is offset by the winding up of non-repayable subsidies and the housing VAT refund. For average-income households not committing to having more children and thus no longer

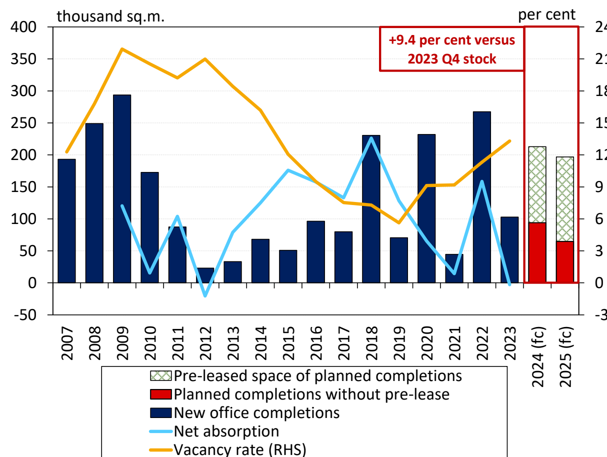
below 1, the purchase represents excessive risk and financial burden. In the case of 0-1-2-3 children, calculated with a flat of 45-55-65-75 square meters. Parameters of the loan product, except for the interest rate, are constant. LTV = 70 per cent, PTI = 30 per cent, maturity = 15 years. Source: HCSO, NTCA, MNB

Chart 16: Investment volume, composition and prime yields of the Hungarian commercial real estate market



Note: The 10-year Eurobond yield is the Q4 average of the 10-year government bond yields issued by AAA-rated euro area countries. Source: CBRE, Cushman & Wakefield, MNB

Chart 17: Development activity and vacancy rate in the Budapest office market



Note: Based on 2023 year-end data. Source: Budapest Research Forum, Cushman & Wakefield

eligible for a subsidy, the affordability of housing deteriorated significantly after the restructuring of the scheme. For such families, the purchase of a new home or an average used home in Budapest using a mortgage would represent a financial overstretch.

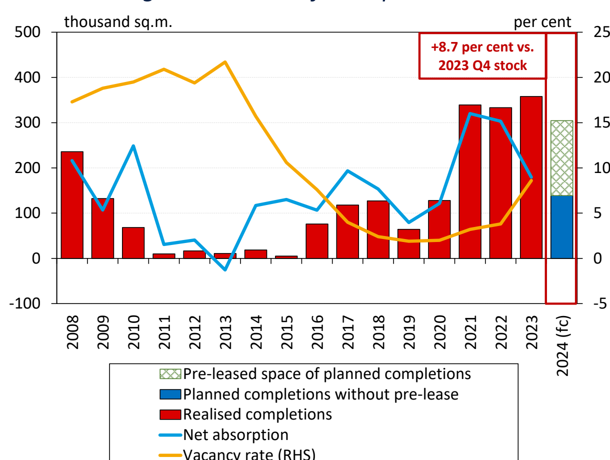
2.2. Declining commercial real estate values pose a moderate risk for the banking system

The number of transactions in the commercial real estate market has fallen, and the evolution of market valuation deserves increased attention. In 2023, investment turnover in the domestic commercial real estate market amounted to EUR 559 million, reflecting a decrease of 38 per cent compared to 2022 (Chart 16). Expected prime yields continued to rise, with the resulting office market depreciation estimated at 9 per cent year-on-year and 21 per cent compared to 2022 Q2, the period when the market trend reversed. Among the CEE capitals, a similar decrease was recorded in Warsaw, and a drop of 14–15 per cent was observed in Bratislava and Prague in the same period. According to a survey by the Royal Institution of Chartered Surveyors (RICS),[2] 84 per cent of experts included in the survey were of the opinion that the Hungarian market was in a strong downturn phase or at the bottom of the cycle at the end of 2023. Uncertainties about economic growth, rental demand and property values, as well as the higher cost of financing of EUR-denominated loans, point to low investment activity and a further rise in expected yields over the short term.

As a result of the planned completion volume and low net absorption, the vacancy rate in the office market is expected to rise further in 2024. The volume of new office space completed in the Budapest office market in 2023 was lower than in the previous year (Chart 17). As net market absorption, which measures the change in the stock of office space in use, was moderately negative (-3,000 square metres), the vacancy rate rose by 2 percentage points per year to 13.3 per cent by the end of 2023. In Budapest, 410,000 square metres of office space (9 per cent of the total stock) was under construction at the end of 2023, of which more than 200,000 square metres is expected to be completed in 2024. In the first three quarters of 2023, an average of less than 20,000 square metres of office development started per quarter, whereas more than 150,000 square metres was started

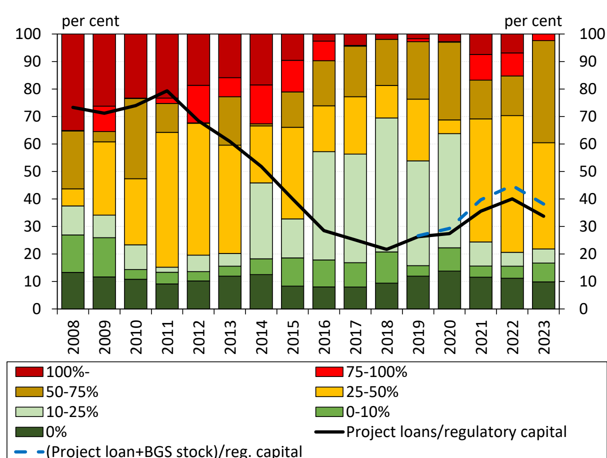
[2] Royal Institution of Chartered Surveyors, Global Commercial Property Monitor.

Chart 18: Development activity and vacancy rate in the industrial-logistics market of Budapest and its environs



Note: Based on 2023 year-end data. Source: Budapest Research Forum, Cushman & Wakefield

Chart 19: Distribution of credit institutions by project loan stock-to-regulatory capital ratio



Note: Non-consolidated data for the credit institutions sector excluding affiliates, by balance sheet total. Based on the project loan stock under the CRR definition of project loans until 2019, and based on a broader project loan definition from 2020 onwards; use of the broader definition results in a 28 per cent higher project loan stock in 2023 Q4 compared to the CRR definition. From 2019 onwards, data increased by BGS stocks include BGS bond holdings related to real estate sector in addition to project loans. Source: MNB

during the fourth quarter. The latter, however, was mainly driven by the space needs of public institutions. The completion of these developments is expected in 2025, while the office space left behind by the moving institutions may cause an increase in the vacancy rate. Based on the development completions planned for 2024 and the low net absorption level of rental demand in 2023, a further increase in the vacancy rate is expected in 2024.

The vacancy rate has also increased in the Budapest industrial-logistics market, a trend that is likely to continue. In the industrial-logistics market in Budapest and vicinity, the 358,000 square metres of new space delivered in 2023 represents a historical peak (Chart 18). The annual level of net market absorption remained 41–44 per cent below that of the previous two years (although historically it is not considered low), while only one third of newly completed properties in 2023 had a tenant at the time of completion. As a result, by the end of 2023, the vacancy rate had risen by 4.8 percentage points to 8.6 per cent within one year. In 2024, a significant new completion volume of over 300,000 square metres is expected in the Budapest industrial-logistics market, with a pre-letting rate of 54 per cent at the end of 2023. If net market absorption volumes in 2024 remain similar to those of the previous year, the volume of projected new completions suggests a further increase in the vacancy rate. In terms of new developments started in 2023, a supply-side adjustment can also be observed in the Budapest industrial-logistics market: while in 2022, an average of 120,000 square metres of new development started in each quarter, in 2023, that figure dropped to a mere 30,000 square metres.

Credit institutions' exposure to the real estate market via project lending is moderate. The stock of project loans secured by commercial real estate in the credit institutions sector (without branches) amounted to 4 per cent of the balance sheet total at the end of 2023. Exposure to regulatory capital fell by 6 percentage points year-on-year to 34 per cent (38 per cent including BGS real estate exposure) at the end of the year, less than half of the level during the period 2008–2012 (Chart 19). Over the past year, the share by balance sheet total of credit institutions with a high exposure-to-regulatory capital ratio of over 75 per cent fell from 15 per cent to 2 per cent. Overall, the increase in the amount of regulatory capital has improved institutions' resilience to potential adverse real estate market effects. In order to mitigate the mounting risks in the commercial real estate market, in October 2023 the

MNB decided to reactivate the revised Systemic Risk Capital Buffer (SyRB) for preventive purposes.[3]

BOX 1: THE BANKING SYSTEM'S COMMERCIAL PROPERTY MARKET EXPOSURE INDICATES A MANAGEABLE RISK

Structural and cyclical risks in the commercial real estate market[4] may have a material impact on the stability of the financial intermediary system, via the direct exposure of the banking system. Since 2022 Q2, investment volumes in commercial property markets have fallen significantly: in 2023, the annual decline was 47 per cent in Europe and 38 per cent in Hungary. Moreover, investors' expected yields have risen, which has had the effect of reducing property values. In addition to cyclically subdued transaction activity, higher financing costs and expected yields, and the volatility of the HUF exchange rate in recent years, structural changes such as lower tenant demand due to the spread of hybrid working and e-commerce pose challenges for both commercial real estate market participants and financing banks. In this Box, we examine the riskiness of commercial real estate-backed project loan portfolios of credit institutions from several perspectives.

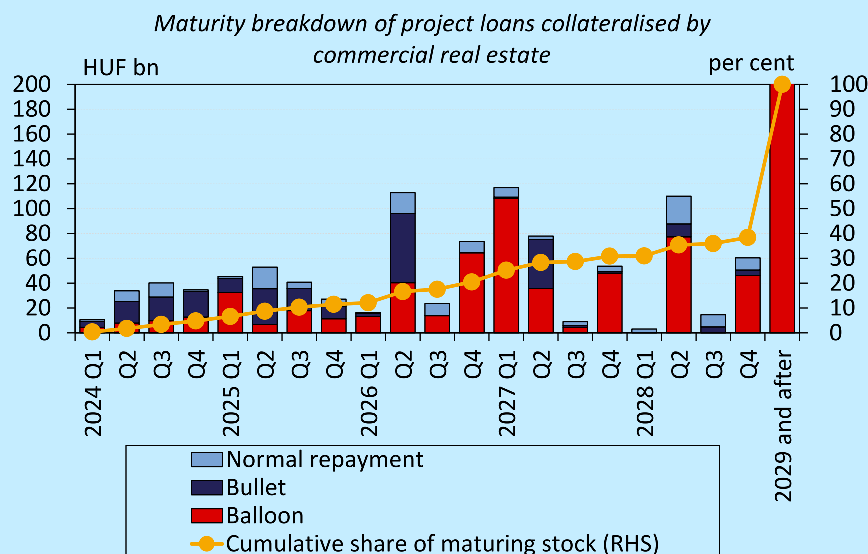
While three quarters of credit institutions' commercial real estate-backed project loan portfolio consists of foreign currency loans, exchange rate risk may only arise in certain sub-segments. In 2023 Q4, the balance sheet of credit institutions included HUF 2,600 billion of project loans financing the purchase or development of commercial real estate, of which 76 per cent was composed of foreign currency loans, denominated almost entirely in euro. The project loans of the credit institution sector are concentrated at a few large institutions: the sector's project loan portfolio was spread across 15 institutions at the end of 2023, with the three largest banks accounting for 56 per cent of the total exposure. In 2023, the three most active banks accounted for two thirds of all annual funding. While the share of FX loans in the portfolio has not changed significantly in recent years, diverging trends have been observed in each property segment. The vast majority of loans for housing development remain forint loans, but the share of foreign currency loans increased from 5 per cent to 11 per cent between 2019 and 2023. Traditionally, 80–90 per cent of loans for the purchase or development of office, retail and industrial-logistics real estate are foreign currency loans; however, the share of HUF loans has increased to a lesser degree since 2019. In the case of loans for hotel projects, the share of foreign currency loans sank from 77 per cent to 59 per cent between 2019 and the end of 2023 due to the impact of subsidised corporate loan schemes. Given that rents for commercial real estate are typically set in euro, although there is no direct exchange rate risk, this is merely superficial as the high proportion of unhedged tenants, typically with a forint income, entails higher credit risk. This applies mainly for retail properties and lower-quality Budapest office or urban logistics properties, where the tenants are mainly small or medium-sized Hungarian companies with typically domestic operations and no export revenues.

[3] For further details see the MNB's Macroprudential report - 2023.

[4] For more details, see the MNB's Commercial Real Estate Market Report, April 2024.

Based on maturities in the coming years, a low refinancing risk can be identified in the project loan portfolio. Due to lower investment volumes, increased financing costs and the changed risk tolerance of credit institutions, the refinancing of commercial real estate project loans that mature and are repayable in a bullet or balloon payment at maturity may pose a risk to borrowers. However, looking at the portfolio of domestic credit institutions, only 5 per cent of the loan portfolio outstanding at the end of 2023 will mature in 2024 and 11 per cent by 2025, of which 18 per cent is of normal repayment, i.e. the principal amount is continuously amortised over the life of the loan. Project loans maturing in 2024–2025 amount to HUF 286 billion. This amount is significantly lower than the annual disbursement volume of HUF 782 billion and HUF 458 billion in 2022 and 2023, respectively, and 4 per cent lower than total disbursements of HUF 297 billion in the two weakest years (2014 and 2012) in terms of project loan disbursements after 2008. Overall, this implies a moderate refinancing risk for the sector. Comparing the Hungarian data with the commercial real estate loan maturity data for the United States and some Western European countries, where data is available, Hungary has a substantially lower share of loans maturing in 2024–2025 within the total portfolio (Hungary: 11 per cent; United States: 27 per cent; Europe: 26 per cent as an average for the United Kingdom, France and Germany).

Maturity breakdown of project loans collateralised by commercial real estate



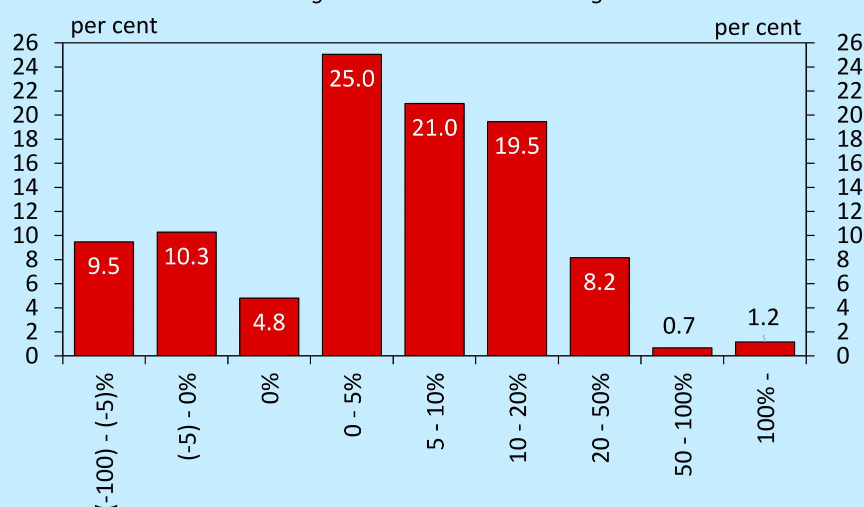
Note: Loans of the credit institution sector based on the outstanding capital amount. The amount of the stock expiring in 2029 is HUF 1,537 billion. Repayment categories: Bullet - loans for which the ratio of installments due in a lump sum at the maturity date reaches 100 per cent; Balloon - loans for which the ratio of installments due in a lump sum at the maturity date reaches 20 per cent, but is less than 100 per cent; Normal repayment - loans for which the ratio of installments due in a lump sum at the maturity date is less than 20 percent. Source: MNB

Compared to the end of 2021, while the interest rate on commercial real estate-backed project loans rose significantly, this did not result in an increase in the NPL ratio. With falling inflation and a simultaneous normalisation of monetary conditions, interest rates on HUF-denominated market-rate project loans typically started to decline in 2023, falling by around 1–1.5 percentage points on average, while the interest rate on EUR-denominated loans increased by 1.5–2 percentage points over this period. In this light, in two years, the interest rate on market-based EUR-denominated project loans (73 per cent of the portfolio) rose from 2 per cent to 6 per cent, while the interest rate on HUF-denominated loans (8 per cent of the portfolio) increased from 5 per cent to 10 per cent by the end of 2023. 80 per cent of the commercial real estate project loan portfolio of credit institutions are benchmark market-priced loans, typically with a 3-month interest-rate period, which means that the interest rate on the vast majority of the portfolio has kept tracking the evolution of monetary conditions over the past two years.[5] Despite a significant increase in the interest burden and industry-specific risks, the NPL ratio of the project loan portfolio has not deteriorated so far; however, the share of the project loan portfolio with increased risk (Stage 2) grew in 2023 (see Chapter 5 for details).

[5] Borrowers may enter into interest rate hedges related to their project loans to manage interest rate risk. No information is, however, available to us regarding the existence of such hedges.

According to the banks' data, the market value of commercial real estate collateral for credit institution project loans increased in 2023. Looking at the project loan portfolio of domestic credit institutions and the market value of the related real estate collateral, between the end of 2022 and 2023, three quarters of the collateral increased in value and 5 per cent stagnated, whereas 20 per cent decreased in market value. The largest share of appreciation (46 per cent) fell into the 0–10 per cent category range, with a further 19 per cent appreciating between 10–20 per cent. While one tenth of the collaterals have increased in market value by more than 20 per cent, such excessively large increases may also be due to technical reasons and changes in the collateral register. While the trends in the commercial property market are mostly consistent with declining and stagnating market values (25 per cent of the collateral portfolio), the possibility of an increase in value at the level of individual properties cannot be excluded. At the same time, there was a **high share of collateral with increasing value** in the commercial real estate collateralised project loan portfolio of credit institutions **in 2023, and credit institutions should closely monitor the evolution of the value of collateralised real estate and only recognise an increase in value if there has been real, substantial improvement in the income-generating capacity of the real estate**. The inclusion of valuations that provide less evidence to support increases in value results in a lower level of impairment, but increases the risk of unexpected losses and a sudden, material increase in the NPL ratio.

Distribution of project loans secured by commercial real estate according to the change in collateral value during 2023



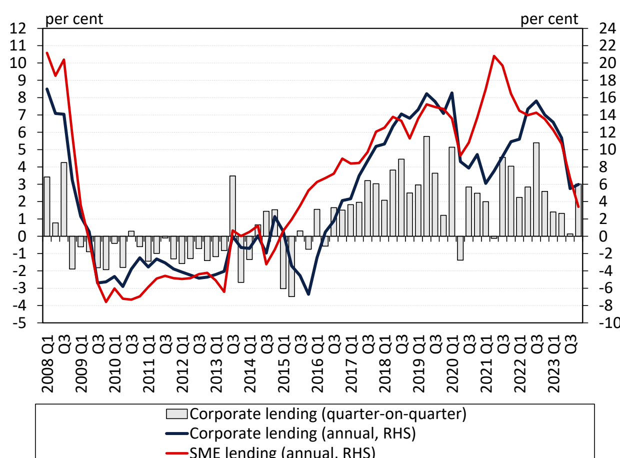
Note: In proportion to the market value at the end of 2023. Based on the real estate collateral of project loans for offices, retail and industrial-logistics properties, as well as hotels with the status completed at the end of 2022 and 2023. In some cases, the development of the value of the collateral may have been influenced by technical effects, including data errors concerning completion status of collateral properties, amendments to the collateral registry. Source: MNB

Overall, the share of FX loans of commercial real estate-backed project loans held by credit institutions is high, which implies an exchange rate risk for tenants without foreign currency income, even with rents set in euros. Over the past two years, interest rates have risen significantly and the share of project loans with higher risk has also grown, but the quality of the project loan portfolio has not deteriorated and no material renewal risk is expected for the next two years. However, credit institutions should closely monitor the evolution of collateral values, which showed a trend contrary to market trends for the majority of the collateral in the project loan portfolio under review in 2023.

3. Growth of the corporate loan portfolio has gradually slowed, in line with European trends

Credit institutions' corporate loan portfolio expanded by 6 per cent, while lending to SMEs increased by around 4 per cent in 2023. As a result, the slowdown in the growth rate of loans outstanding has continued, in line with the overall European trend. The value of new corporate loan contracts stagnated compared to the previous year. In 2023, the disbursement of new loans increased for foreign currency and large corporate loans, as opposed to HUF and SME loans, the amount of which declined. According to the Lending Survey, on the whole, banks did not change their corporate lending conditions in 2023 H2. Banks perceived low demand for corporate loans both at the end of 2023 and in the first months of 2024. Banks' lending capacity is historically high, due in part to their adequate liquidity and capital position, whereas their willingness to lend is close to the equilibrium level. In 2023, forint lending rates declined in line with the decrease in the reference interest rate. Government measures (the voluntary interest rate ceiling and the 0-percentage point interest rate spread) may have also contributed to the decline. With lower lending rates, a tighter supply of subsidised loan schemes and a high volume of liquid assets by regional standards, annual corporate loan portfolio growth is expected to be around 5 per cent in 2024.

Chart 20: Growth rate of total loans to businesses and SME loan portfolio in the credit institution sector



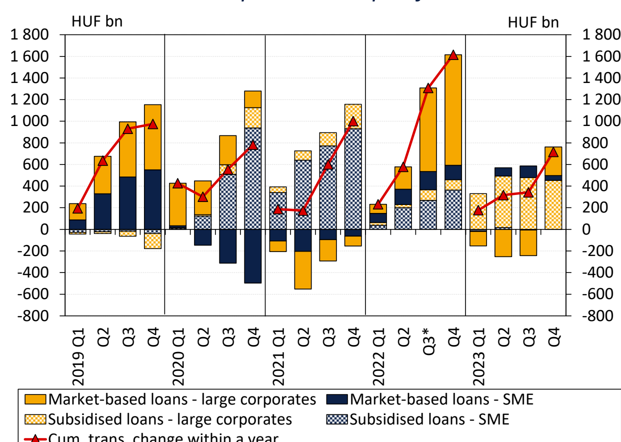
Note: Transaction growth rate, prior to 2015 Q4, data for SMEs are estimated based on banking system data. Between March 2022 and August 2022, payments to Sberbank are also taken into account. Source: MNB

3.1. Growth in the corporate loan portfolio has continued to slow down

The annual growth of outstanding corporate bank loans has continued to slow. In line with European trends, the annual transactional growth rate of non-financial corporate loans in the credit institution sector gradually declined over the past period. While the annual growth rate was 13.8 per cent in 2022, it was only 6.0 per cent in 2023 (Chart 20). At the beginning of 2024, due primarily to the base effect, corporate lending dynamics of continued to decelerate, falling to 2.0 per cent at the end of February 2024. The slowdown in the dynamics of lending to SMEs is even more prominent, as the 13.5-per cent growth rate in 2022 dropped to 3.7 per cent in 2023. The annual growth rate of the total corporate loan portfolio in February 2024 was the twelfth highest in Europe, 2.6 percentage points above the euro area average.

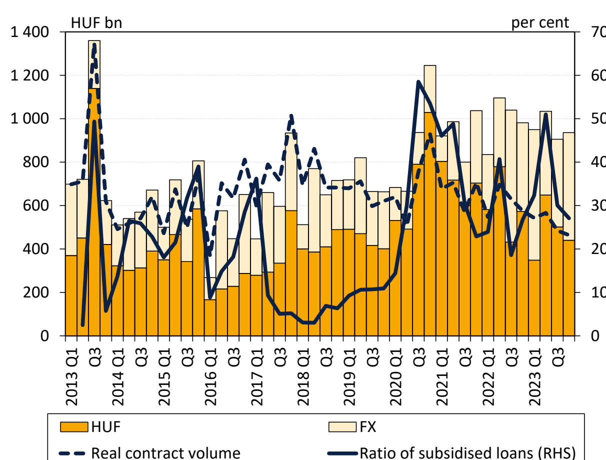
In 2023, a significant part of the transactional growth was related to large individual transactions. Compared with the years after 2020, the corporate loan portfolio grew more moderately, expanding by around HUF 720 billion in 2023. The largest increases could be observed in the information, communication and the financial and insurance activities sectors, with the latter including holding companies due mainly to large individual transactions, while the amount of loans outstanding in other sectors remained essentially the same. In 2023, the amount of subsidised loans increased by HUF 410 billion on a transactional basis due primarily to large individual corporate transactions, while market-based loans

Chart 21: Cumulated intra-year transaction growth in the corporate loan portfolio



Note: Cumulative transaction data within a year adjusted for exchange rate effects; other stock changes were filtered out. *The sectoral reclassification of Sberbank's portfolio is not eliminated from the 2022 Q3 transaction data. Source: MNB

Chart 22: New corporate loans in the credit institution sector



Note: Data not adjusted for exchange rate effects and exclude money market deals. The GDP deflator was used to calculate the real value of the new contract volume (2013 = 100 per cent). From 2017, in calculating the share of market-based loans, we examine the share of non-current account loans classified as 'Normal market' in the bank data reporting within the overall new contract volume of credit institutions, excluding the Hungarian Development Bank (Magyar Fejlesztési Bank) and the Eximbank. New corporate loan issuance is shown by contract date, which differs from the methodology used for the MNB Interest Rate Statistics. This latter is aggregated by reference date. The difference is caused by the appearance of credit facilities (where interest rates are not known) and multi-currency loans in the statistics. Source: MNB

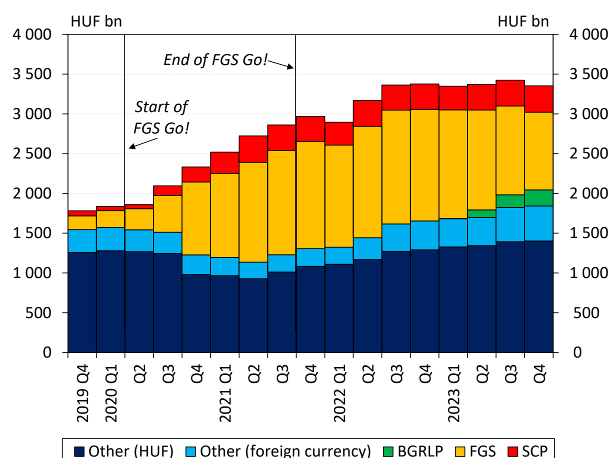
increased by HUF 310 billion (Chart 21). The pattern of expansion is thus very different from that seen in previous years: subsidised SME loans accounted for most of the growth in transactions in 2020 and 2021, while it was large corporate loans that did so in 2022. The change in the amount of loans outstanding in 2023 was disparate in terms of company size, denomination and interest rate: large corporate, foreign currency and fixed-rate loans increased significantly, while SME, HUF and variable-rate loans remained stable or decreased to a small extent.

The value of new contracts stagnated in nominal terms, while their value declined in real terms. The value of new contracts signed in 2023 was only 1 per cent lower than one year earlier.[6] However, the inflation-adjusted value of new contracts has been on a downward trend for several quarters in the corporate sector as a whole. In parallel with the significant narrowing of the spread between forint and euro interest rates, the dynamic increase in foreign currency loan disbursement observed from mid-2022 onwards slowed down significantly by 2023 H2. In 2023, the disbursement of foreign currency loans grew by 22 per cent, while that of forint loans decreased by 17 per cent compared to the previous year (Chart 22). In the small and medium-sized enterprise segment, the volume of new contracts fell by 16 per cent, while there was a 17-per cent increase in the large corporate segment. As subsidised loan schemes had been phased out by the end of the year, their share of new disbursements dropped substantially, from 46 per cent in the first half of the year to 28 per cent in the second half. These proportions, however, are still higher than the levels of 10–15 per cent seen in the months prior to the outbreak of the coronavirus epidemic in Hungary.

Since the winding up of the programme, businesses participating in the FGS Go! Scheme have also raised financing through both market-based and subsidised loans. In order to prevent a general crisis of confidence and liquidity after the start of the coronavirus epidemic in March 2020, the MNB launched its FGS Go! loan scheme. With an initial budget of HUF 1,500 billion and a total of HUF 3,000 billion, the programme quickly became a major factor in corporate financing. The impact of the maturity of these loans continues to be a key factor in corporate funding. The amount of loans outstanding to businesses involved in the FGS Go! Scheme increased following the closure of the programme in September 2021 until 2022

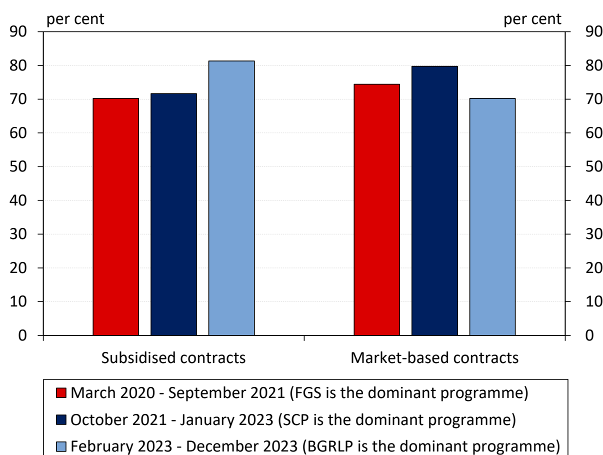
[6] However, new contracts should be assessed with caution, as they can be significantly affected by changes in maturity. An increase in the average maturity of loans may result in an expansion of the corporate loan portfolio despite the decrease in new loan disbursements.

Chart 23: Loan portfolio of corporations participating in FGS Go!



Note: BGRLP = Baross Gábor Reindustrialisation Loan Program; FGS = Funding for Growth Scheme; SCP = Széchenyi Card Programme. The 'Other' category includes subsidised loan schemes and market-based loans in addition to the above. Loans classified as 'Other' are mainly market-based loans. Source: MNB

Chart 24: Share of borrowers with credit market experience in the disbursement of new loans over the period of each central bank and government lending programme

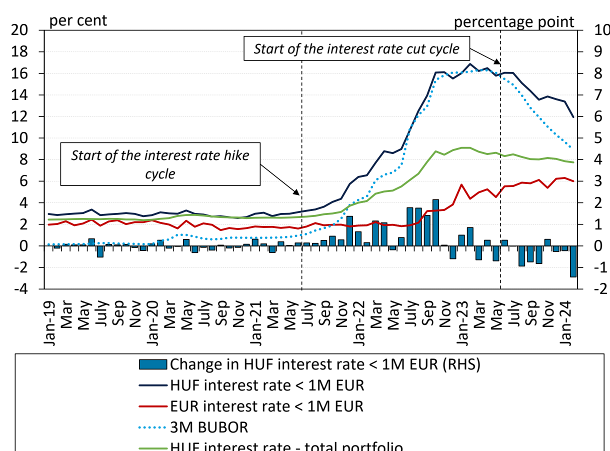


Note: Borrowers with credit market experience were identified as businesses that have taken out a loan in the three years preceding the month in question. Source: MNB

Q2, and stagnated afterwards (Chart 23). This suggests that the companies used other financing sources to replace maturing FGS loans. After the end of the programme, market-based loans were the main contributor to the loan expansion, i.e. the share of market HUF loans among FGS Go! beneficiaries increased from 35 to 42 per cent, while the share of foreign currency loans with lower interest rates grew from 8 to 13 per cent. The Baross Gábor Reindustrialisation Loan Program, which started in early 2023, also contributed to the refinancing of businesses participating in the FGS Go!, accounting for around 6 per cent of their outstanding loans at the end of the year.

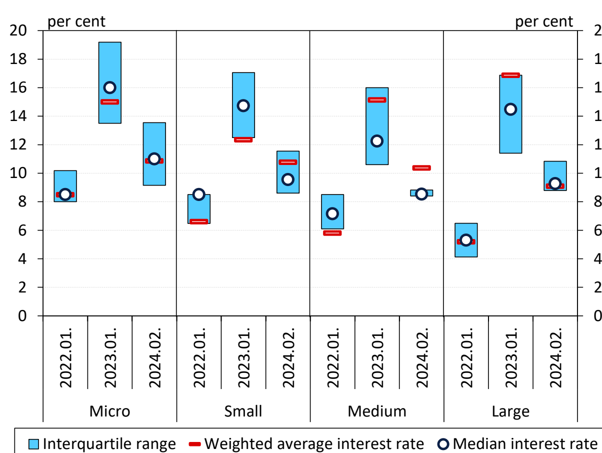
Subsidised loan schemes have been increasingly financing businesses that have taken out a loan in the last three years. One third of corporate loans issued since 2020 were disbursed to Hungarian businesses as subsidised loans. In the period when the Funding for Growth Scheme and the Széchenyi Card Programme were the dominant subsidised loan products on the market, 71 per cent of these funds went to enterprises that had taken out a loan in the previous three years, i.e. companies that had some experience of the credit market (Chart 24). However, since the launch of the Baross Gábor Reindustrialisation Loan Program, there has been a significant increase in the credit market presence of these enterprises: 81 per cent of newly disbursed subsidised corporate loans were granted to enterprises with some credit market experience. This was due mainly to the fact that the programme also provided access to funding for medium and large corporates.

Chart 25: Interest rates on the outstanding corporate loan portfolio and on new loans



Note: Volume weighted interest rates. Categories below EUR 1 million include loans with variable interest rates or with interest rates fixed for up to one year. Monthly averages are shown for the 3-month BUBOR. Source: MNB

Chart 26: Distribution of newly disbursed, market-based HUF corporate loans by contractual interest rates



Note: For the 2024 data, the most recent data, i.e. data for February 2024, are shown. Source: MNB

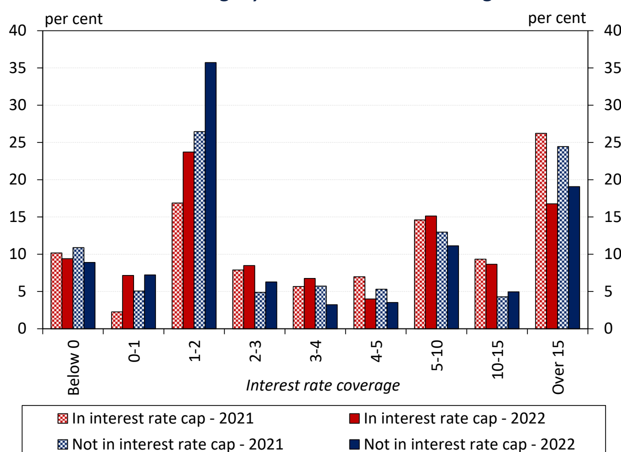
3.2. HUF lending rates fell as interbank interest rates eased

The average interest rate on new, market-priced HUF loans declined, while spreads increased significantly. The average interest rate on low-amount (less than 1M EUR) market-priced HUF loans with variable interest rates within one year fell by 2.5 percentage points between June and December 2023, reaching 11.9 per cent in February 2024 (Chart 25). The decline in interest rate levels was observed for all company sizes, and heterogeneity within each size category also decreased substantially (Chart 26). In addition to the reduction in the 3-month interbank interest rate, the voluntary interest rate ceiling introduced on market-priced HUF working capital loans from 9 October 2023 may have contributed to the reduction. The latter was 12 per cent at the time it was first introduced, then dropped to 11.5 per cent from November 2023 and further to 9.9 per cent from January 2024. However, the voluntary interest rate ceiling has not been fully effective in the corporate segment, as a significant proportion of the relevant contracts have been concluded at higher interest rates. The spread over the 3-month BUBOR[7] in the low-amount HUF loan category moved significantly from its historical low of around 0 per cent in 2023 H1 to reach 3 percentage points in February 2024, which corresponds to the pre-COVID levels in 2018–2019. Looking ahead, the reduction of corporate interest rates may be supported by an additional agreement between the government and the banking sector, which temporarily reduces the spreads above the BUBOR to 0 per cent at banks participating in the agreement. At the same time, the impact of this may remain moderate as the preferential period lasts for six months and due to the market spread after the end of the six-month period.[8] As a result of falling HUF and rising foreign currency loan interest rate levels, the interest rate spread on low-amount, market-priced foreign currency loans narrowed from 11 percentage points in six months to 6 percentage points by February 2024. At the same time, there was no significant shift in the issuance of low-amount market-priced loans by currency denomination over the same period due to changes in interest rates.

[7] It is important to note that the cost of funding for banks is influenced by a number of factors in addition to the BUBOR (e.g. deposit rates), therefore the spread over the effective cost of funding may differ from the estimation above.

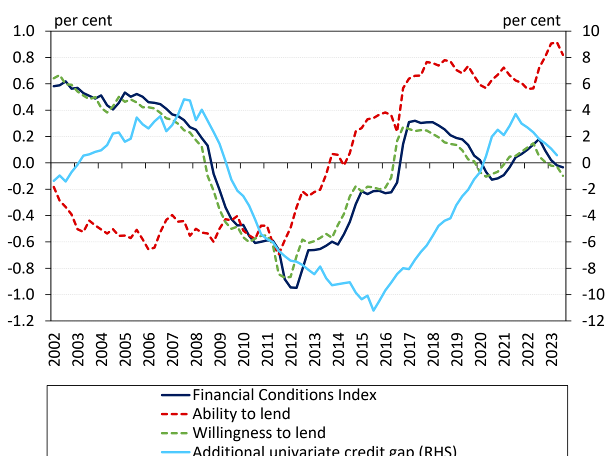
[8] According to the government's announcement at the end of January 2024, the spread above BUBOR will be reduced to 0 per cent for six months for corporate loan contracts concluded between 1 February 2024 and 1 May 2024. After that period, it will revert to the 'normal' level.

Chart 27: Distribution of corporations' bank loans outstanding by interest rate coverage



Note: Interest rate coverage = (Profit before tax + Interest and similar charges paid) / Interest and similar charges paid. If the value is negative, the company with the loan has a negative pre-tax result for the year. Source: NTCA, MNB

Chart 28: Evolution of the Financial Conditions Index and the credit gap



Note: Positive values represent a larger contribution to economic growth compared to the cyclical position of the economy, while negative values represent a smaller contribution. Source: MNB

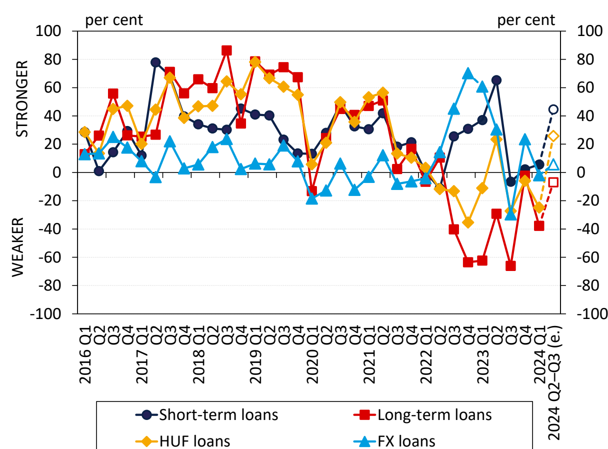
The interest rate coverage of companies deteriorated in 2022, regardless of whether they were included in or excluded from the interest rate cap. The interest rate coverage ratio, calculated as the ratio of earnings before interest payments to interest expenses, dropped significantly for companies with loans that were not subject to the interest rate cap in 2022. While companies with a low interest rate coverage ratio between 0 and 2 accounted for 31 per cent of the loans outstanding in 2021 only, this figure rose to 42 per cent in 2022 (Chart 27). A similar increase was observed among SMEs with interest rate caps, but starting from a significantly lower base: 19 per cent of loans outstanding in 2021 belonged to companies with a lower interest rate coverage ratio between 0 and 2, as opposed to 31 per cent in 2022. The lower values observed for companies participating in the SME interest rate cap may be explained by the wide availability of subsidised loan schemes offering low interest rates and the more conservative credit market presence of these companies. In 2024, approximately HUF 1,400 billion of loans may mature, which may lead to a further decline in interest rate coverage ratios due to refinancing at higher interest rates.

3.3. Lending capacity of the banking system remains stable

The lending activity of the banking system is consistent with the cyclical position of the economy. Despite some minor deterioration at the end of 2023, the Financial Conditions Index (FCI) has not departed significantly from the equilibrium level (Chart 28). This implies that the impact of the banking system on the real economy is neutral, corresponding to the cyclical position, neither underfinancing nor overfinancing the economy. Of the two factors in the FCI, the ability to lend remained high at the end of 2023, close to its historical peak in the third quarter. The other FCI factor, willingness to lend, deteriorated further at the end of 2023, but it remained close to the equilibrium level. Due to the slower lending dynamics and high GDP deflator, the domestic corporate loan portfolio as a ratio of GDP continued to decline and stood at 16 per cent at the end of 2023, a level last seen before the outbreak of the pandemic.

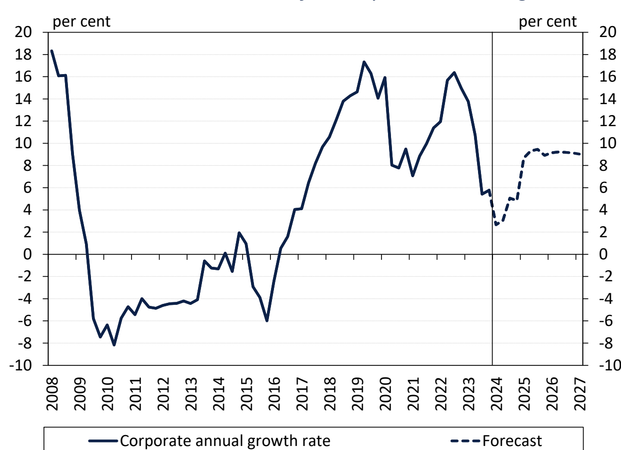
Banks mainly expect demand for HUF and investment loans to pick up in the corporate sector. In 2023 H2 and the first quarter of 2024, institutions responding to the Lending Survey left their credit conditions unchanged across all company size categories overall and have no intention to make any changes in the second and third

Chart 29: Changes in corporate loan demand



Note: Net percentage balance of respondent banks indicating stronger/weaker demands, weighted by market share. Source: MNB, based on banks' responses

Chart 30: Forecast for corporate lending



Note: Transaction-based annual growth rate based on data from the financial intermediary system. Source: MNB

quarter of 2024. While in the last quarter of 2023 - in conjunction with stronger demand for foreign currency loans - , a net 6 per cent of the banks reported diminishing loan demand, , in the first quarter of 2024 about a net 25 per cent of the banks reported a net decrease in demand for corporate loans. In the second and third quarter of 2024, 14 per cent of the respondents expect a rebound in demand for loans. However, no change is visible for long term loans, where 7 per cent of the banks expect demand reduction. Due to the general improvement in interest rate levels and increasing needs for inventory- and accounts receivable financing, 45 per cent of the banks expect demand for short term loans, and 26 per cent for HUF loans to pick up (Chart 29). Around one fifth of the respondent banks tightened commercial real estate lending standards in 2023 H2, further tightening is foreseen in case of office and logistics properties by 24 and 13 per cent of the banks respectively for the second and third quarter of 2024 as a result of the banks' changing risk tolerance.

Growth in corporate loan portfolio is expected to moderate in the coming years. Due to the high level of corporate liquid assets by regional standards[9] (Box 2) and the narrower availability of subsidised schemes, corporate loan portfolio growth is expected to be more subdued in the coming years (Chart 30). In 2024, the facility amount of the Baross Gábor Reindustrialisation Loan Program will be one fifth of the 2023 amount, allocated for more specific purposes, mainly investment and green investment projects, while the crisis-related support framework of the Széchenyi Card Programme[10] may continue in a significantly reduced form in 2024 H2. As the economy recovers and the interest rate environment returns to normal, demand for loans may pick up again from 2024 H1; however, due to more moderate growth in outstanding loans compared to previous years, corporate debt-to-GDP may continue to decline during the year. We estimate annual transaction growth in corporate loan portfolio to be 4–5 per cent in 2024 and 8–9 per cent from 2025 onwards.

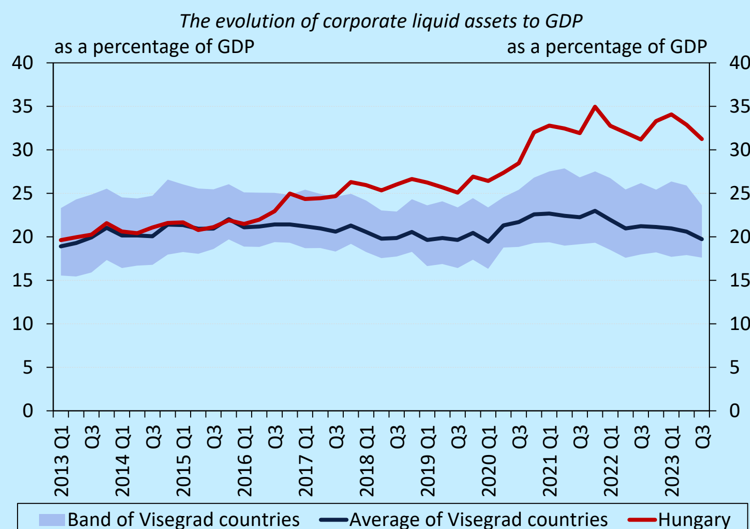
[9] The low demand for investment loans, together with a substantial stock of liquid assets, confirms what the business surveys also show, namely that the main obstacle to investment is currently the lack of domestic demand due primarily to high inflation, rather than a lack of funds. For more information, see the highlighted topic 6.1 in the MNB's December 2023 Inflation Report.

[10] Communication 2022/C 131 from the Commission 'Temporary Crisis Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia' and its current version allow companies to receive significantly higher subsidised interest rates as a deviation from the 'de minimis rule'.

BOX 2: DEVELOPMENT OF CORPORATE LIQUID ASSETS ACCORDING TO COMPANY SIZE AND CREDIT MARKET PARTICIPATION

The stock of liquid assets in the Hungarian corporate sector is exceptionally high by regional standards, about 10 percentage points higher than the average for the Visegrad countries as a share of GDP. The accumulation of funds, bonds and deposits in the non-financial corporate sector has been rising in recent years, in contrast to the regional trend. While the value of corporate liquid assets as a share of GDP has been around 20 per cent in the Visegrad countries over the past decade, in Hungary it has diverged from the region since mid-2016. Since the end of 2020, it has fluctuated between 30 and 35 per cent, reaching 31 per cent at the end of 2023 Q3. In this box, we examine how the growth of financial assets evolved by firm size (SME or large corporate)[11] and by the participation of businesses in the credit market.

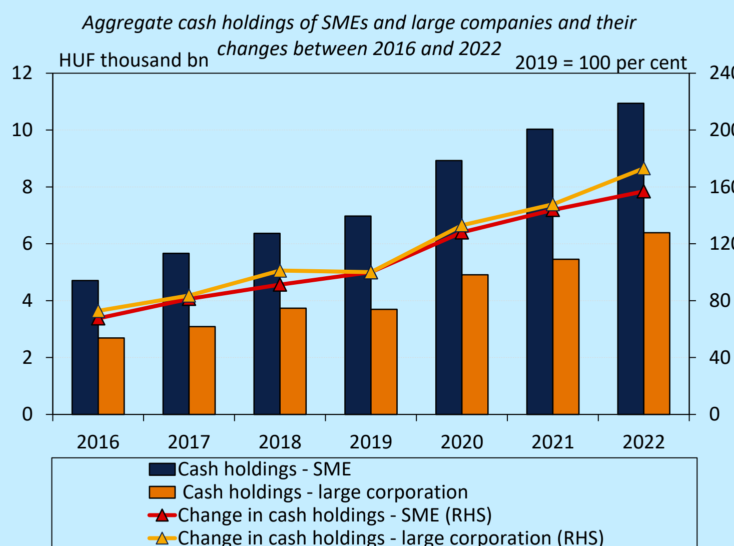
The evolution of corporate liquid assets to GDP



Source: ECB, Eurostat, MNB

The cash holdings of both SMEs and large corporates[12] have grown significantly in recent years. At the end of 2022, the cash holdings of SMEs amounted to HUF 10,900 billion, while those of large corporates amounted to HUF 6,400 billion. Between 2016 and 2022, the value of financial assets of SMEs and large corporates grew at a similar pace, by more than 130 per cent in total. Between 2019 and 2022, the increase amounted to 57 per cent and 73 per cent, respectively. The growth was particularly high for the 50 companies with the largest cash holdings: their cash holdings tripled from 2016 to 2022, and thus they held one quarter of the total amount of cash at the end of the period.

Aggregate cash holdings of SMEs and large companies and their changes between 2016 and 2022



Source: MNB, NTCA

Large corporates using a subsidised product have seen the largest increase in their cash holdings. In addition to company size, we also looked at companies by their participation in the credit market:

Group 1: companies that have not taken out any loan since 2020;

Group 2: companies that have only taken out market-based loans since 2020;

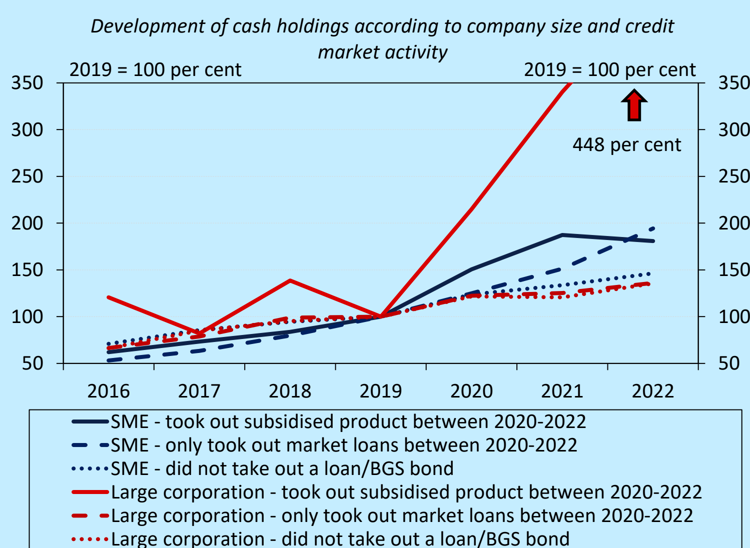
[11] In the analysis, the SME and large corporate classifications for each company are recorded on a first-occurrence basis, and the results are interpreted accordingly.

[12] According to financial accounts data, in 2022, 86 per cent of the aggregate stock of corporate liquid assets was held in cash holdings (cash and deposits), for which the MNB keeps a company-level database. In this box, we looked at the data on financial assets.

Group 3: companies that have taken out at least one subsidised product[13] since 2020.

Subsidised loan schemes may have also played a role in the increase in the liquid assets of SMEs. The cash holdings of SMEs and large corporates using a subsidised product increased by 181 per cent and 448 per cent, respectively, between 2019 and 2022, the years with the most significant subsidised programmes. Growth in the cash holdings of large corporates was concentrated and was largely associated with the largest companies in Hungary. Thus, the cash holdings of SMEs using a subsidised product increased at a higher rate in 2020 and 2021 compared to both market borrowers and non-borrowers. The cash holdings of large corporates and SMEs borrowing only on the market in 2022 reached 136 per cent and 194 per cent of their 2019 levels, respectively. In comparison, the growth in the cash holdings of SMEs that did not borrow on the market, did not take out subsidised loans and did not participate in the BGS was much more subdued, at only 46 per cent compared to 2019, while in the case of large companies, an increase of only 35 per cent was observed.

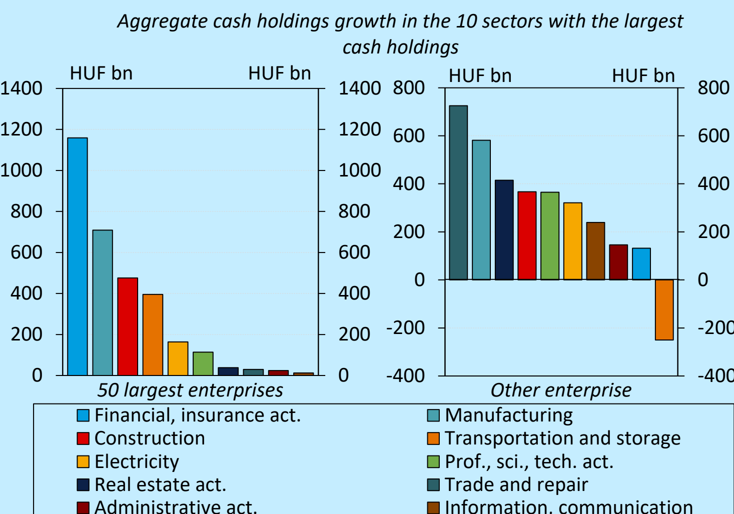
Development of cash holdings according to company size and credit market activity



Source: MNB, NTCA

In recent years, the financial and insurance activities sector has seen the fastest growth in its cash holdings, as assets increased nearly five-fold.[14] Significant growth was also observed in construction (+223 per cent) and in transportation and storage (+209 per cent) for larger companies. In terms of stock size, the manufacturing sector, with the largest amount of loans outstanding, also has the largest stock of cash holdings, followed by trade and repair and construction.

Aggregate cash holdings growth in the 10 sectors with the largest cash holdings



Note: The figure shows the increase in cash between 2019 and 2022, the 50 companies with the largest cash holdings in 2022 are on the left, and the other companies are on the right. Source: MNB, NTCA

The high level of liquid assets held by Hungarian companies compared to the rest of the region may significantly reduce their future borrowing needs. The dynamic growth in the stock of cash holdings among beneficiaries of subsidised schemes in recent years suggests that companies participating in such schemes have sufficient liquidity to meet their working capital and investment needs, and that a shift away from extensive credit support towards more targeted schemes that focus on investment and sustainability would be beneficial in the future.

[13] A company was included in this group if it has taken out at least one subsidised loan since 2020 (e.g. Funding for Growth Scheme, Széchenyi Card Programme, Eximbank and Hungarian Development Bank subsidised loan products) or participated in the Bond Funding for Growth Scheme (BGS).

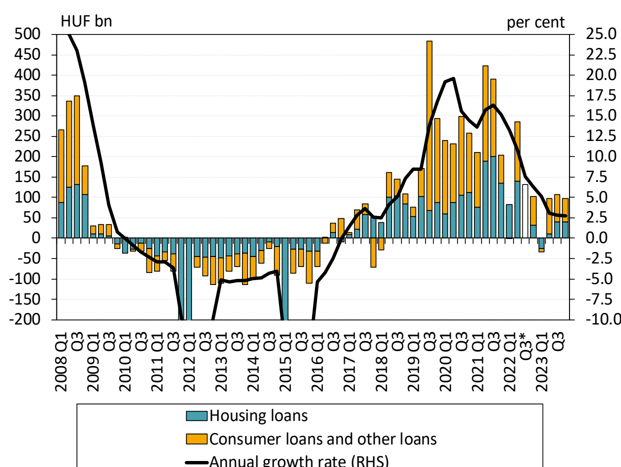
[14] The financial, insurance activities sector also includes holding companies.

4. Household lending picks up with moderate risks

Overall, growth in household loans outstanding remained moderate, at a rate of less than 3 per cent in 2023. However, at the end of last year, together with normalising interest rate conditions and a more favourable outlook, demand brought forward due to the restructuring of family subsidies already had a stimulating effect on new disbursements. The declining interest rate environment (long yields in particular), the recovery in the real economy, improving consumer confidence, the HPS Plus scheme launched at the beginning of the year will support household demand for loans in the future as well, meaning that the annual growth rate of loans outstanding may rise to 8 per cent in 2024. Government measures affecting the interest rates on newly disbursed housing loans, i.e. the introduction of the voluntary APR ceiling and the restructuring of the pricing of HPS Plus, have contributed to the decline in interest rates. The narrowing of risk-based pricing due to the APR ceiling permanently reduces the profitability of these products. With lower interest rates, the average contract amount of new housing loans increased. However, this was not accompanied by a significant increase in indebtedness for borrowers. The low level of client risk for new housing loan borrowers is also due to the favourable income situation of debtors.

4.1. Household loans outstanding grew moderately in 2023

Chart 31: Household loan transactions of credit institution

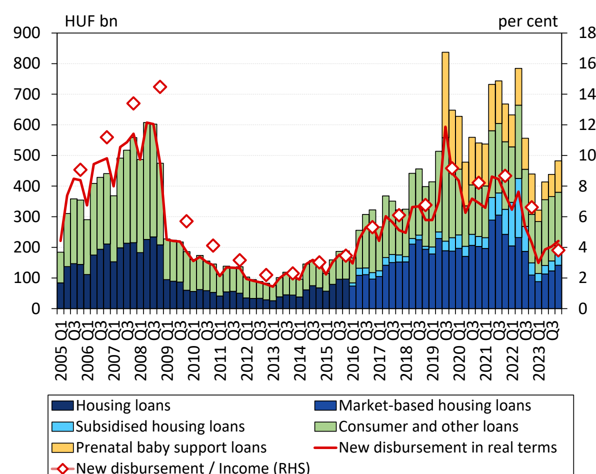


Note: In order to calculate the annual growth rate, we also took the repayments on the Sberbank portfolio into account between March 2022 and June 2022. * The loan portfolio purchase of Sberbank was excluded from the 2022 Q3 transaction data. Source: MNB

Household loans outstanding in the credit institution sector increased at a moderate pace in 2023. Last year, we saw a moderate annual increase of 2.7 per cent in the stock of household loans outstanding (Chart 31). In the second half of the year, transaction-based growth was mainly supported by housing loans, personal loans and by the brought-forward demand of prenatal baby support loans, available under modified terms from 2024. Annual credit dynamics accelerated in the first months of 2024, reaching 3.8 per cent in February. While household loans outstanding expanded significantly between 2018 and 2022, with growth in Hungary substantially outpacing the relevant indicators for both the euro area and the Visegrad countries, credit penetration in Hungary remains low by European standards. Based on credit institution sector data, at the end of 2023, the ratio of household loans outstanding to GDP was 14 per cent, amounting to less than one third of the EU average and less than one half of the average for the Visegrad countries (Czechia, Poland, Slovakia). Hungary thus has the second lowest ratio in the EU following Romania, which leaves ample room for further financial deepening.

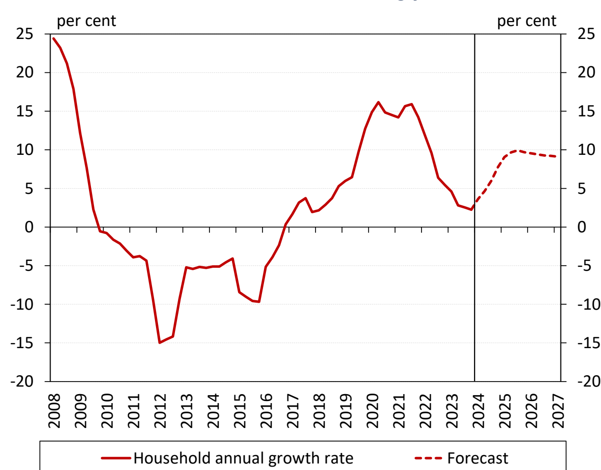
The disbursement of new loans increased mainly for housing loans and prenatal baby support loans. In 2023, the value of new contracts concluded between credit institutions and households dropped by 30 per cent compared to the previous year, while in real terms, it remained below the 2016 level (Chart 32). In 2023 Q4, however, the volume of new loans rose 10 per cent year-on-year, mainly due to the increase in housing loans and

Chart 32: New household loans in the credit institution sector



Note: Without FGS loans and early repayment scheme. The disbursement/income figure shows the sum of the annual nominal loan disbursement as a ratio of the household sector's total annual disposable income. From 2016 Q1, the housing loan disbursement has been divided to market-based and subsidised housing loans. Source: HCSO, MNB

Chart 33: Household lending forecast



Note: Transaction-based annual growth rate based on data from the financial intermediary system. Source: MNB

prenatal baby support loans. On the one hand, this was due to the market-based loan-demand stimulating effect of the voluntary APR ceiling, which entered into force on 9 October 2023 and has been adopted by most banks, and on the other hand, due to the family subsidies available since 1 January 2024 in a different form and subject to different conditions.[15] As a result of the latter, at the end of 2023, brought-forward demand by those potential clients who were eligible for the former family subsidies but are no longer eligible for the modified schemes also appeared in the new disbursement of the products concerned (prenatal baby support loans and subsidised housing loans). The share of subsidised loans thus increased to 29 per cent in the last quarter of 2023, up from an average of 20 per cent in the first half of 2023. The increase in new household loan disbursement continued in early 2024, supported by the restructured family support schemes. However, the significant year-on-year increase in new volumes was driven by the base effect of the drop in new disbursements in early 2023.

Household loans outstanding may increase by 8 per cent in 2024. Based on the responses to the Lending Survey, banks observed a pick-up in demand for both housing and consumer loans in 2023 H2 and the beginning of 2024, and they expect further strengthening in expanding circle in the next six months. Overall, the changes to the terms of the family support system from 2024 will be conducive to the growth of loans outstanding this year.[16] According to our forecast, household credit dynamics will gradually accelerate from early 2024, supported by lower interest rates, a recovery in the real economy and improving consumer confidence, in addition to the restructured family support system[17]. Annual growth of household loans outstanding may reach 8 per cent in 2024 and may be around 9–10 per cent from 2025 onwards (Chart 33).

[15] Since 1 January 2024, women under the age of 30 will be eligible for prenatal baby support loans, while the maximum loan amount available has increased to HUF 11 million (as a transitional measure, women aged 31–41 can still apply for a prenatal baby support loan in 2024 if they can prove they are pregnant). As far as the HPS is concerned, the rural HPS is available at increased subsidy amounts, while the urban HPS was phased out and the HPS Plus scheme has been introduced for married couples committing to have more children. While the urban HPS has no longer been available since 1 January 2024, pending loan transactions may still appear in the statistics until 30 June 2024.

[16] For details on the estimated credit market impact of the HPS Plus scheme, see Subsection 1.2 of the December 2023 Inflation Report.

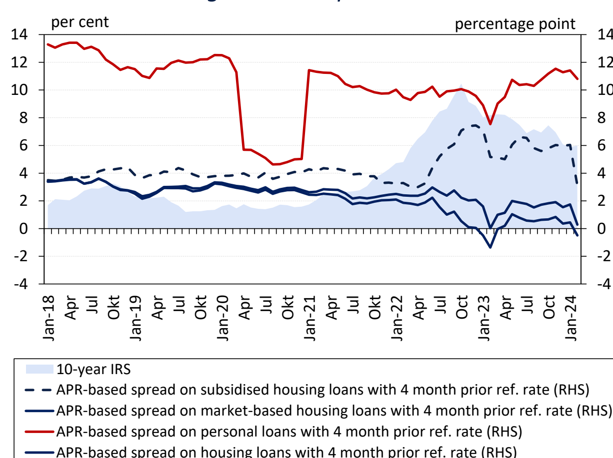
[17] From June 3, 2024, with a budget of HUF 108 billion the home renovation support can be used for the energy modernisation of one- or multi-apartment family houses built before December 31, 1990. The maximum eligible investment amount is HUF 7 million, out of which the minimum amount of the own contribution should be HUF 1 million. Out of the HUF 6 million beyond the own contribution, HUF 2.5-3.5 million is a non-refundable state subsidy, depending on the district, and the remaining amount is a 0-per cent interest rate loan. As the source of the program is REPowerEU, the loans related to the support are not shown as loans provided by the financial intermediary system.

Table 1: Main risk indicators of newly disbursed housing loans

Risk indicator	2022	2023 H1	2023 H2
Housing loan transactions			
Average volume-weighted LTV (%)	51.5	50.7	52.8
Average volume-weighted DSTI (%)	34.3	35.0	33.5
Share of volume of contracts with above 40% PTI and above 70% LTV (%)	10.2	11.1	10.1
Average contract size (M HUF)	11.3	10.2	12.0
Median loan-to-income ratio of debtors (how many times the annual income)	1.8	1.6	1.9
Loan-accumulating transactions			
Share of transactions (%)	20.9	23.1	27.1
Average contract size of transactions (M HUF)	25.4	24.9	26.7
Median loan-to-income ratio of debtors (how many times the annual income)	3.4	3.1	3.0

Note: DSTI: debt-service-to-income ratio. LTV: loan-to-value ratio. The FGS Green Home Programme has been excluded from the data. Share of loan-accumulating transactions: Loan-accumulating transactions as a share of those transactions that involve taking out a *minimum of one* housing loan. Loan-accumulating debtors: debtors, who take out either *more than one* housing loan at a given point in time or *supplement* their housing loan(s) with a prenatal baby support loan/personal loan as an 'own contribution' (we consider these loans as an 'own contribution' if they preceed taking out the housing loan by a maximum of 180 days). Loan-to-income ratio: the total sum of the housing loan(s) or in the case of loan-accumulating debtors, the total sum of housing loan(s) and/or personal loans and/or prenatal baby support loan as a share of the yearly reported total income of debtor and co-debtor(s). Source: HCSO, MNB

Chart 34: Evolution of spreads on newly disbursed housing loans and personal loans



Note: Subsidised loans cover FGS GHP loans, the subsidised HPS constructions, the subsidised bridging loans and the subsidised housing loans. Averages weighed by contractual amount. The spreads were calculated on the basis of relevant BIRS data observed 4 months prior according to interest rate periods, except for the new HPS Plus, available since January 2024; in this case we used the 4 month prior 5-year IRS as the reference rate. Source: MNB

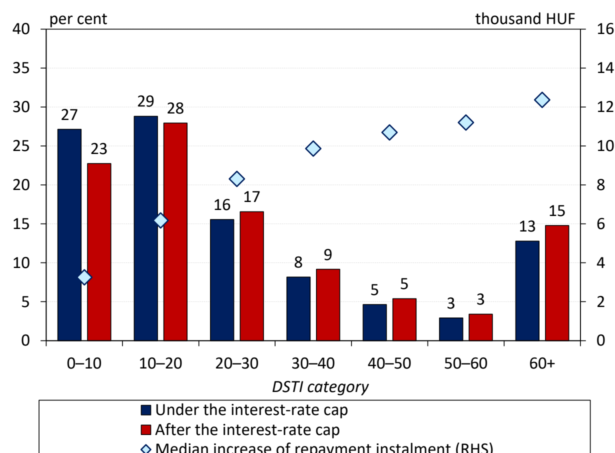
4.2. While borrower indebtedness is low in general, the proportion of borrowers with more than one loan has increased

Newly disbursed housing loans feature moderate risk. In line with the normalising interest rate environment and a more favourable macroeconomic outlook, the average amount of newly disbursed housing loans increased by nearly HUF 2 million to HUF 12 million in the second half of 2023 (Table 1). The average debt-service-to-income ratio (DSTI) fell in the second half of the year, in which the declining interest rate environment and the slight increase in the maturity also played a role. At the same time, the more moderate house price dynamics led to a slight increase in the average loan-to-value ratio (LTV). The restructuring of family subsidies, which entered into force in January 2024, may have increased the share of 'credit-accumulating' transactions in 2023 H2, through brought-forward demand, with borrowers taking out several housing loans at the same time or supplementing their housing loan(s) with personal and/or prenatal baby support loans. The share of such customers rose from 23.1 per cent in the first half to 27.1 per cent in the second half of the year. As the income position of new credit-accumulating customers is favourable, notwithstanding the larger loan amounts, their median loan-to-income ratio (LTI) remained moderate amounting to only three times their annual income.

Banks' spreads on housing loans have fallen due to changes in interest rate subsidy schemes and the voluntary APR ceiling agreed to by banks. The voluntary APR ceiling,[18] which was introduced in October 2023, has contributed to the reduction of the APR for market-based housing loans, from 9.3 per cent in February 2023 to 7 per cent over a year (a detailed analysis of the effects of the measure can be found in Box 3). At the same time, the APR ceiling introduced by the majority of banks is leading to near-zero spreads on market-based housing loans through a narrowing of risk-based pricing (Chart 34), as the banks are unable to account for the riskiness of the clients in the pricing of the loans due to the APR limit. By reducing the maximum loan interest rate, the HPS Plus, which has been available since January 2024, may result in a decrease in the spreads on subsidised housing loans in 2024, which were previously much

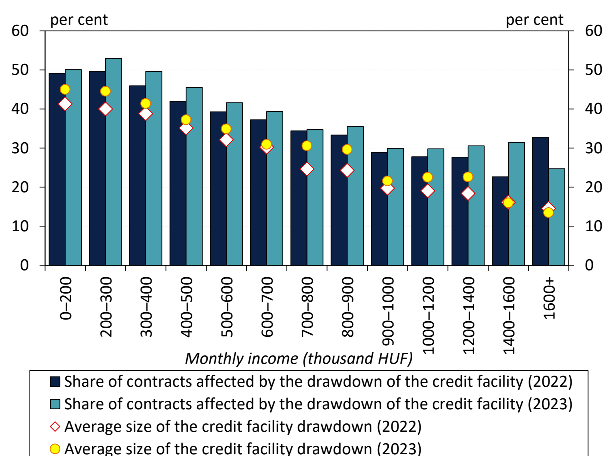
[18] The voluntary APR ceiling limited the annual percentage rate of charge for market-based housing loans at 8.5 per cent in 2023 and at 7.3 per cent from January 2024.

Chart 35: Distribution of interest-rate cap debtors' by DSTI categories and the median instalment increase



Note: The evolution of instalments is calculated based on the sum of the total outstanding loans of the interest-rate cap debtors. Calculation is based on the forward interest rates of 28 March 2024 and the reported income of the debtors in 2021. Source: MNB

Chart 36: Share of contracts affected by the drawdown of the credit facility and the average size of the credit facility drawdown, by income category



Note Only credit card loans, card loans, revolving loans and overdrafts disbursed in 2022 and 2023. Contracts concluded in 2022 were only taken into consideration in 2022. The average drawdown of the credit facility was only calculated for contracts, in which the credit facility was drawn down. We used the income data of the credit register (total reported net income of debtor and co-debtor(s)). Source: MNB

higher[19] than those on market loans. Overall, banks may see a substantial drop in their profitability rates on housing loans this year. The pricing caps raise the risk that borrowers who do not fit into the capped pricing from a credit risk point of view will be priced out of the credit market. However, there are no signs of this happening so far.

The possible phasing out of the interest rate cap may only lead to a substantial increase in the repayment burden for a small group of clients. The mortgage interest rate cap, which is in force until 1 July 2024 under the current regulation, affects nearly 273,000 debtors. The repayment burden of borrowers affected (taking into account all their other loans) increases only to a lesser degree as a result of the measure (Chart 35), which means that the removal of the interest rate cap does not lead to a significant increase in overall indebtedness. However, the burden may increase more sharply for some customers: nearly 26,000 customers subject to the interest rate cap (9 per cent of fixed-rate customers, 17 per cent of fixed-rate mortgages, less than 4 per cent of total mortgages) are considered vulnerable in terms of their ability to repay (i.e. their monthly repayment instalments would increase by at least HUF 5,000 if the measure is discontinued; moreover, their DSTI will reach 50 per cent or higher, or they have reached retirement age, resulting in a negative income shock, since the measure was introduced).

Lower-income new borrowers were more likely to draw down their credit lines in 2023. Last year, all outstanding credit card, revolving credit, overdraft and card loans increased moderately: it amounted to HUF 354 billion on average in 2022 and HUF 375 billion on average in 2023. The rate of available credit line drawdowns slightly increased during this period on a volume basis, 22 per cent of the total budget was drawn down in 2022, as opposed to 25 per cent in 2023. Looking only at newly concluded contracts signed in the last two years, a moderate increase is observed in drawdowns: on a volume basis, 32 per cent of all contracts signed in 2022

[19] The higher loan interest rate and higher spreads on subsidised housing loans linked to the earlier HPS were caused by overpricing rather than a composition effect. This was due essentially to the lack of competition between banks in the subsidised loans market, which was a result of the specificity of the legal framework, where customers paid a fixed interest rate in any case and had no interest in comparing banks' offers. Bálint Dancsik – Anna Marosi – Beáta Szabó: *Túl drága az olcsó hitel – a családi otthonteremtési kedvezmény támogatott hitelkamatainak vizsgálata.* [The high price of cheap loans – An analysis of the subsidised interest rates of the Home Purchase Subsidy Scheme for Families] In: Közgazdasági Szemle, Vol. LXIX, December 2022 (pp. 1493–1506). The maximum loan interest rate for subsidised housing loans linked to the previous HPS was 130 per cent + 3 percentage points of the 5-year ÁKK reference rate; in the case of the HPS Plus, however, the maximum loan interest rate is 110 per cent + 1 percentage point of the 5-year ÁKK reference rate.

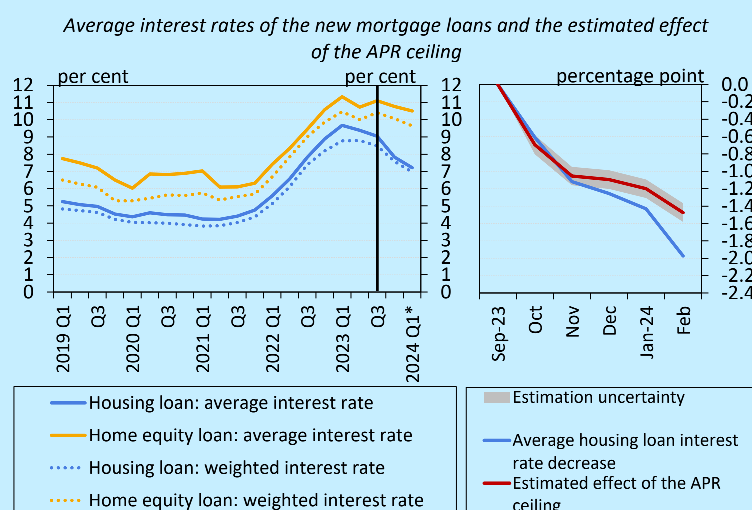
were drawn down in 2022, whereas 34 per cent of contracts signed in 2023 were drawn down in the same year. In terms of income, however, there are significant differences in credit line drawdowns. Compared to higher-income segments, lower-income segments used credit card, revolving credit, overdraft and card loans relatively more often (in a higher proportion of contracts) and to a relatively greater degree (in terms of their credit limit) in both years (Chart 36). While no information is available on the loan purpose, this trend also raises the possibility that people in the lower income segment have been using their loans to supplement their tight liquidity.[20]

BOX 3: EFFECTS OF THE APR CEILING FOR NEW MARKET-BASED HOUSING LOANS

From 9 October 2023, the annual percentage rate of charge (APR) of newly contracted market-based housing loans will be subject to a voluntary cap imposed by banks on the basis of a request by the government. On 3 October 2023, the Ministry of Economic Development,[21] with the support of the Hungarian Banking Association, proposed that from 9 October 2023 Hungarian commercial banks should offer their non-subsidised housing loans at a maximum APR of 8.5 per cent. The recommended APR ceiling was reduced to 7.3 per cent from 1 January 2024. The banking system has largely adapted to the agreement, and accordingly 78 per cent of the loan amount contracted between October 2023 and February 2024 fell below the APR ceiling for the respective period. The loan amount-weighted average APR fell from 8.7 per cent in September 2023 to 7 per cent in February 2024. In this Box, we examine (1) how much of this reduction is explained by the introduction of the APR ceiling; (2) whether it has made access to housing loans more difficult; and (3) what other consequences it may have.

We estimate that the application of the APR ceiling reduced interest rates on new market-based housing loans by 1.1 percentage points on average between October 2023 and February 2024. To estimate the development of the interest rates on new market-based housing loans without the APR ceiling, we used the evolution of interest rates on newly issued home equity loans. Indeed, we can assume that the roughly constant difference observed over the years between the average interest rates of the two groups would have persisted even after September 2023, in a hypothetical situation where the APR ceiling was not introduced.[22] The estimation based on interest data alone has essentially the same results as

Average interest rates of the new mortgage loans and the estimated effect of the APR ceiling



*Note: *Until February 2024. For housing loans, non-subsidised, market-based loans only. Loan amounts used as weights. The blue line in the right panel shows the cumulative average decline relative to September 2023.*
Source: MNB calculation

[20] See also Chapter 4.3 of the November 2023 Report on Financial Stability.

[21] Ministry of National Economy since 1 January 2024.

[22] This is a precondition for the *difference-in-differences* estimation method using new home equity loans as a control group to show the causal effect of the APR ceiling on the average interest rate of new market-based housing loans.

the estimation made when taking into account a wide range of individual characteristics of all debtor and loan contracts (Columns 1 and 2 of the table). In the first five months of the programme, the average housing loan interest rate fell by a total of 2 percentage points, most of which was estimated to be due to the APR ceiling. The interest rate-reducing effect of the measure strengthened month after month, reaching 1.5 percentage points by February. However, without the 1.2-percentage point cut in the ceiling in early January, the downward impact on interest rates would likely have been less marked in 2024, as the yield environment declined steadily until February during the intervention.[23]

Estimated interest rate reduction effect of the APR ceiling on average and within specific customer groups

	(1) Baseline	(2) With expl. variables	(3) High income	(4) Low income	(5) High risk	(6) Low risk
Progr. per. x Hous. l.	-1.12***	-1.13***	-0.92***	-1.65***	-2.16***	-0.65***
	(-0.121)	(-0.117)	(-0.106)	(-0.136)	(-0.155)	(-0.100)
Program period	0.36***	0.37***	0.51***	0.26**	0.42***	0.49***
	(0.100)	(0.097)	(0.093)	(0.108)	(0.123)	(0.090)
Housing loan	-1.95***	-1.75***	-1.39***	-1.56***	-1.80***	-1.08***
	(0.055)	(0.052)	(0.042)	(0.059)	(0.087)	(0.045)
No. of observations	192 836	192 835	48 206	48 207	48 204	48 204
R^2	0.70	0.87	0.89	0.88	0.85	0.92
Explanatory variables	No	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effects	No	Yes	Yes	Yes	Yes	Yes
Product fixed effects	No	Yes	Yes	Yes	Yes	Yes

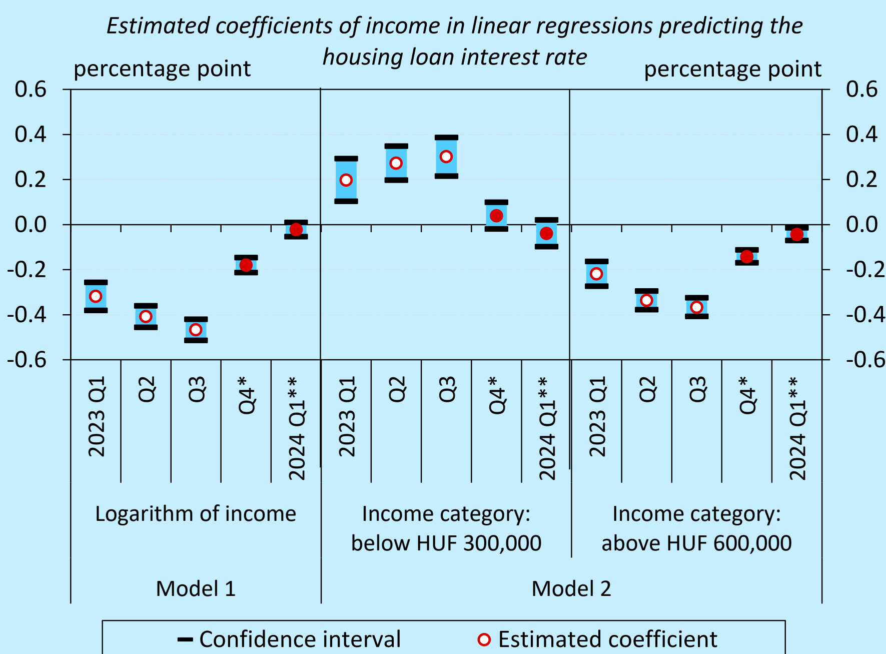
Note: Coefficients: the red ones indicate the effect of the APR ceiling on the average interest rate of non-subsidised new housing loans between 9 October 2023 and 29 February 2024 in percentage points, *p<0.10, **p<0.05, ***p<0.01. Data: individual characteristics of all non-subsidised new housing loans and home equity loans for the months between January 2019 and February 2024. Dependent variable: annualised contractual interest rate. Explanatory variables: number, age and income of debtors, loan amount, maturity, interest-rate period, purpose of use, DSTI and LTI values. Sub-samples: loans with debtors in the bottom and top quartile of the income distribution for a given year and type of loan. Loans with predicted interest rate spreads below the first quartile and above the third quartile of the predicted spreads, where the prediction uses the sample of the given year and a model with the explanatory variables estimated on the 2019 data. Standard errors: clustered at month level, shown in brackets. Source: MNB calculation

The APR ceiling is unlikely to have made access to housing loans significantly more difficult. In theory, a restriction on lending rates may reduce average interest rates due to a composition effect, if customers who borrow at rates below the ceiling receive loans at roughly unchanged rates, while those above the ceiling do not have access to loans. However, based on our estimates, it was found that the APR ceiling has reduced interest rates for a wide range of customers. Since low-income and riskier customers tend to have access to higher interest rates, many of them may have been directly affected by the introduction of the APR ceiling. Accordingly, there were significant estimated interest rate cuts of 1.7 and 2.2 percentage points (columns 4 and 5 in the table). For the subsamples of high-income and less risky customers, we obtained lower-than-average but still significant estimates of 0.9 and 0.7 percentage point (columns 3 and 6 in the table). A more direct indication that the crowding-out effect was probably not strong during the period under review is that while the increase in the disbursement of housing loans did not slow down over time (see Chapter 4, Chart 32), the income distribution of borrowers hardly changed after the introduction of the APR ceiling. On average, 7.8 per cent of the loan volume that was contracted in the three months before the introduction of the

[23] It is important to emphasise that any impact that affected the interest rates of the two loan products only during the period of the APR ceiling may distort our estimate of the interest rate effect of the APR ceiling.

APR ceiling fell into the category of co-debtors who earned aggregate net monthly income below HUF 400,000, while the same proportion was 7.4 per cent on average in the first five months of the APR ceiling. For incomes above HUF 1 million, the 34.3-per cent share before the intervention increased to only 35.8 per cent during the period under review.

Following the introduction of the APR ceiling, the correlation between credit risk factors and housing loan rates weakened significantly. While roughly the same client base was able to access credit after the introduction of the cap as before, the distribution of interest rates on newly contracted market-based housing loans narrowed considerably. Accordingly, the absolute values of a significant majority of the estimated coefficients in the linear regression between interest rates and the risk characteristics of credit transactions decreased substantially. The quarterly repeated estimates show that before the introduction of the APR ceiling, there was a markedly negative correlation between the logarithm of income (Model 1) and the interest rate, even after including a number of control variables, which disappeared completely by the beginning of 2024. According to the estimates by income category (Model 2), co-debtors with an aggregate net monthly income below HUF 300,000 (above HUF 600,000) obtained housing loans with an average interest rate 0.2–0.4 percentage points higher (lower) than those with an income between HUF 300,000 and HUF 600,000. These differences were minimised by the second quarter of the APR ceiling.



*Note: *From 9 October 2023. **Until February 2024. Coefficients in the APR ceiling period are indicated by red dots. Reference income category: aggregate net monthly income of co-debtors that is between HUF 300,000 and HUF 600,000. Dependent variable: annualised contractual interest rate. Explanatory variables: those included in the note of the table, supplemented with the lending bank and the cost of funding (BUBOR, BIRS). Source: MNB calculation*

The APR ceiling may also have significant negative side effects, in particular if it stays in effect over the longer term. Interest rate spreads on housing loans above the appropriate benchmark rates typically declined after the introduction of the APR ceiling, which raises the financial stability question as to whether interest rate spreads adequately cover risk costs for riskier borrowers, such as lower-income borrowers. For this reason, an effective APR ceiling maintained for a long period of time may also threaten to drive riskier customers out of housing loans over time.[24] More generally, due to the fact that banks offer a wide range of financial products, many of which are complex and complicated, they may have a number of opportunities to compensate for the loss of interest revenue on housing loans through other products, which is a difficult problem to deal with.

[24] The risks of the programme are increased by the fact that, following the period discussed in the box, long-term interbank reference rates, which partly determine the pricing of housing loans, rose to around 7 per cent, i.e. just below the current level of the APR ceiling, by the end of April 2024.

5. The quality of loan portfolios is currently good, but surrounded by risks

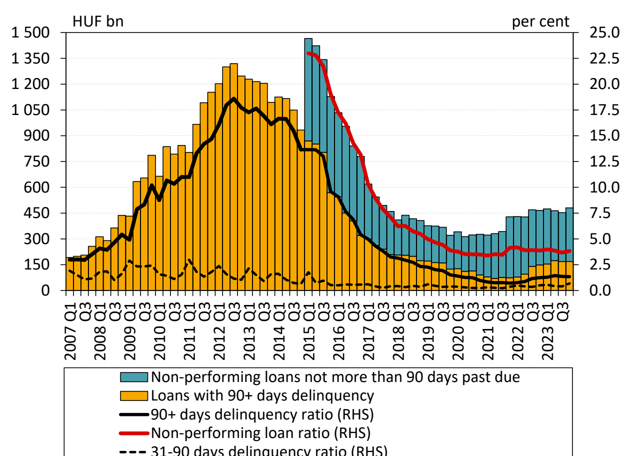
The quality of the corporate loan portfolio did not change significantly in 2023: the share of non-performing loans and, in particular, the share of loans over 90 days past due are at a historical low, while the loan loss coverage of loans with increased credit risk and Stage 3 loans increased. While the SME interest rate cap has been phased out since April 2024, the ensuing risks are moderate as the market interest rate is already close to the level set by the measure, which means that the phase-out will not result a significant increase in the repayment burden. While the NPL ratio of project loans covered by commercial real estate fell in 2023, the share of Stage 2 loans, which indicates increased credit risk, increased; this indicates that banks are preparing for risks stemming from the cyclical situation and structural changes in the real estate market. At the beginning of 2024, the number of termination proceedings in the corporate sector increased. However, their impact on the stability of the financial intermediary system is limited, as the companies concerned have a low level of bank loans outstanding.

The household NPL ratio dropped significantly in 2023. On the one hand, this was due to the reclassification, in June for the most part, of loans previously benefiting from a payment moratorium as performing loans. On the other hand, throughout 2023 credit institutions were actively and increasingly cleaning their portfolios, especially with regard to unsecured consumer loans. The average impairment on Stage 3 loans in this loan segment also increased during the year. A stable labour market is important for the future sustainability of the historically low NPL ratio. With the interest rate environment returning to normal, the possible lifting of the mortgage interest rate cap in July 2024 will result in payment difficulties for a small group of debtors. However, non-compliance with the child-related conditions of subsidised loan schemes is identified as a risk in the customer segments concerned.

5.1. The quality of the corporate portfolio has not changed materially, while loan loss coverage has increased

The share of non-performing corporate loan portfolios remains low. The share of the non-performing corporate loan portfolio remained stable in 2023, at 3.8 per cent both at the end of the year and at the beginning of 2024 (Chart 37). The non-performing loan portfolio, including the over 90 days overdue portfolio, increased to a lesser degree during 2023. The share of loans over 90 days past due thus stood at 1.3 per cent in December. The share of loans outstanding not past due more than 90 days but classified as non-performing increased by 0.1 percentage point to 2.5 per cent by the end of 2023. By company size, the NPL ratio of SME loans decreased, while that of large corporate loans increased. The stock of restructured loans dropped by one third over the past year, as transactions previously participating in the payment moratorium steadily dropped out of the two-year observation window.[25] On the whole, the share of non-performing loans in the corporate sector is at a historically low level,

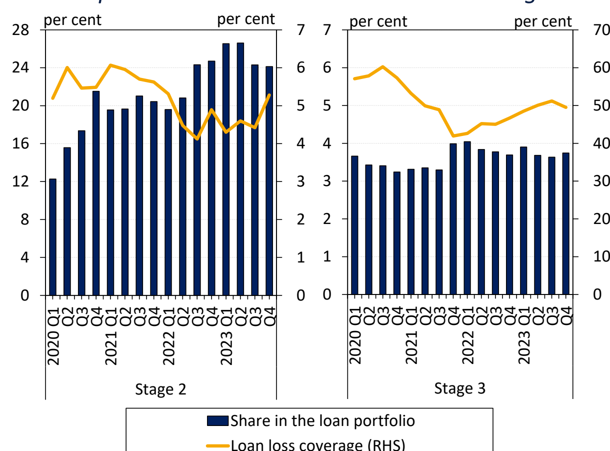
Chart 37: Non-performing corporate loans outstanding in the credit institution sector



Note: The definition of non-performing loans changed in 2015. From then on, in addition to loans over 90 days past due, loans less than 90 days past due where non-payment is likely are also classified as non-performing. Calculated by clients until 2010 and by contracts from 2010. Source: MNB

[25] In the case of performing restructured loans, the restructured rating can be terminated after a two-year observation period. In the case of non-performing restructured loans, the loan can become performing again after a two-phase, three-year monitoring period.

Chart 38: Share of Stage 2 and Stage 3 loans of the corporate sector and their loan loss coverage



Note: Credit institution sector. Loans valued at amortised cost. Source: MNB

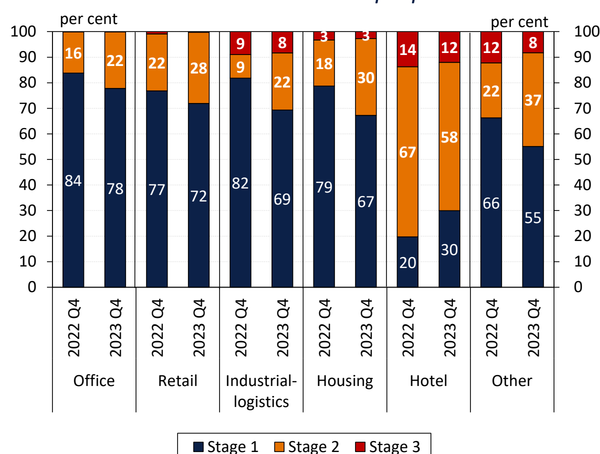
while portfolio quality did not deteriorate, despite recent uncertainties in the economic environment. We do not expect the phasing out of the SME interest rate cap in April 2024 to pose a risk to the quality of the portfolio concerned, as there is no longer a sharp divergence between the market interest rate and the interest rate levels set by the measure. In the corporate sector, while the number of liquidation proceedings increased in early 2024, this does not foreshadow any serious deterioration in portfolio quality for the time being (Box 4).

The loan loss coverage of both Stage 2 and Stage 3 loans increased in the corporate segment in 2023. The share of loans in the Stage 2 and Stage 3 impairment categories did not change significantly from the end of 2022, standing at 24 per cent and 4 per cent, respectively, at the end of 2023 (Chart 38).[26] Compared to the levels in 2021 Q3, before the phasing out of the general moratorium, the share of Stage 2 loans increased by 3 percentage points, while the share of Stage 3 loans increased by 0.4 percentage point. It is a positive development, however, that loan loss coverage, which had been reduced due to major reclassifications between 2020 and 2022, started to increase in both categories. The loan loss coverage of Stage 2 loans, which indicates increased risk, increased by 0.4 percentage points in 2023 and by 1.2 percentage points from the low in 2022. For the Stage 3 category, which is characterised by high credit risk, there was a more significant increase of 3 percentage points in 2023 and 8 percentage points compared to the end of 2021. This brought the loan loss coverage to 5 per cent and 49 per cent, respectively, close to the levels seen before the general moratorium was phased out. Overall, impairment losses in the corporate sector increased by 12 per cent in 2023, outpacing the increase in loans valued at amortised cost, which resulted in a 0.3-percentage point increase in loan loss coverage. As a result, the loan loss coverage of the corporate portfolio was 3.7 per cent at the end of 2023.

For project loans secured by CRE properties, the share of Stage 2 loans indicating increased risk has risen. The NPL ratio for project loans secured by CRE properties stood at 3.9 per cent at the end of 2023, down 0.7 percentage point year-on-year. The NPL ratio for office-related project loans stagnated, while the NPL ratio for retail and industrial/logistics and residential property loans

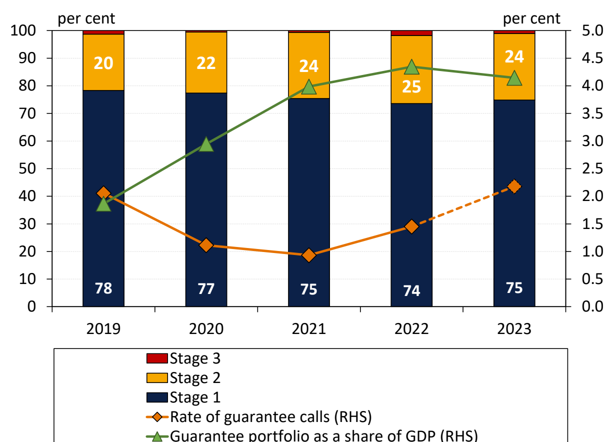
[26] Stage 1: recognition of impairment on financial assets with no significant increase in credit risk since their initial recognition. Stage 2: recognition of impairment on financial assets for which the credit risk has increased significantly since their initial recognition, yet there has been no event that would objectively lead to a credit loss. Stage 3: impairment recognised for non-performing financial assets.

Chart 39: Quality of the project loan portfolio secured by commercial real estate properties



Note: Credit institution sector. The data include loans to financial intermediaries (including investment funds) in addition to non-financial corporations. Source: MNB

Chart 40: The quality of the guarantee portfolio of majority state-owned guarantee institutions



Note: Composition of off-balance sheet items of AVHGA and GHG by Stage category. AVHGA's guarantees do not include guarantees for sole proprietors and family farmers. The redemption rate for 2023 is provisional. Guarantees as a share of GDP together with data from Start Garancia Ltd. Source: MNB

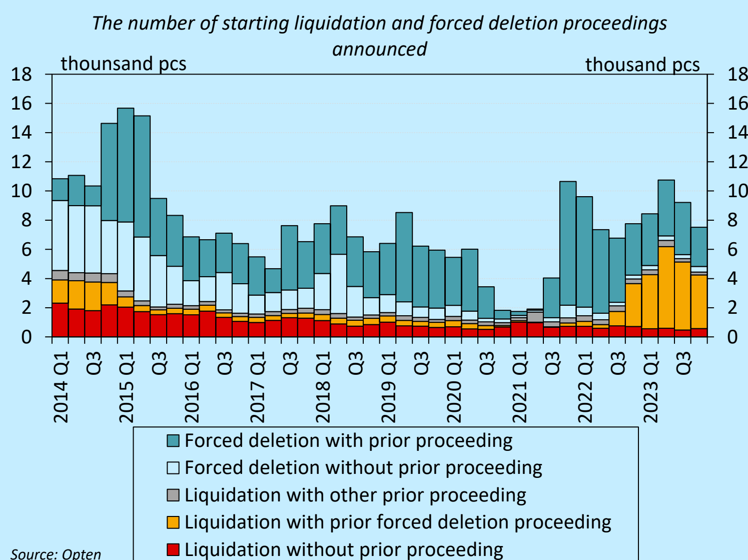
decreased by 0.6–0.7 percentage point. The rate remained the highest for hotels, at 12 per cent at the end of 2023, following an annual decline of 1.7 percentage points. In terms of impairment categories, broken down by property type, the share of loans with no material increase in risk since initial recognition (Stage 1) decreased in all segments other than hotels in 2023. However, the share of Stage 3 loans did not increase in any segment (Chart 39). This indicates that banks are preparing for the risks arising from the cyclical situation and structural changes in the real estate market which, however, do not yet lead to actual delays, by reclassifying Stage 1 loans to a higher credit risk category (Stage 2). A detailed analysis of the commercial property portfolio is presented in Box 1 of this Report.

At the end of 2023, one third of the total corporate loan portfolio had an underlying guarantee. In recent years, the guarantee portfolio of majority state-owned guarantee institutions assisting corporations in obtaining loans, i.e. Garantiqa Hitelgarancia Zrt. ('GHG'), the Agricultural Business Credit Guarantee Foundation ('AVHGA') and Start Garancia Zrt. ('Start'), has grown dynamically. The largest increase occurred in 2020–2021 (supported by the large volume of subsidised loan programmes), followed by a 30-per cent increase in 2022 and an 8-per cent increase in 2023, when the guarantee portfolio of the three institutions reached more than HUF 3,000 billion. This is an outstanding level even by international standards, at 4.1 per cent of GDP. At the end of 2023, one third of the total corporate loan portfolio was backed by a guarantee. Three quarters of the guarantee portfolio was problem-free, 24 per cent was exposed to increased credit risk, while 1 per cent was in Stage 3 in December 2023, which means that the quality of the portfolio was somewhat better than that of the total corporate loan portfolio (Chart 40). The rate of guarantee calls has been on the rise since 2021, advancing to over 2 per cent in 2023, close to levels seen in 2019, according to preliminary data. In the case of SMEs, that are more sensitive to weaker domestic demand, the latter may be related to the unfavourable economic environment and increased operating and financing costs.

BOX 4: THE INCREASE IN LIQUIDATION PROCEEDINGS IS DUE TO TECHNICAL EFFECTS, FINANCIAL STABILITY RISKS ARE LOW

Over the past two years, there has been a significant increase in the number of termination proceedings in the corporate sector. In conjunction with adverse changes in the macroeconomic environment (declining GDP, uncertain economic outlook, industry-specific problems, higher operating costs), the number of termination proceedings has also increased in Hungary. This may entail an increased credit risk if such proceedings are based on actual liquidity and operational problems. Therefore, we have examined the factors behind the increase in the number of proceedings. Following the coronavirus crisis, the number of reorganisation and termination proceedings (including bankruptcy, liquidation, forced deletion and voluntary liquidation proceedings) announced (and subsequently initiated) against economic entities rose substantially: while approximately 30,000 proceedings a year were initiated in 2020 and 2021, more than 50,000 proceedings were initiated in both 2022 and 2023. In 2022, a significant increase was observed in forced deletion proceedings and voluntary liquidation proceedings,[27] while in 2023, liquidation proceedings showed a sharp increase.

The number of starting liquidation and forced deletion proceedings announced



Source: Opten

The increase in the number of proceedings is largely due to technical legal changes, i.e. the increase in the number of liquidation proceedings was due primarily to reasons outside the real economy. From 2022 H2, the majority – around 80 per cent – of liquidation proceedings were preceded by forced deletion proceedings, while the number of liquidations without prior proceedings did not increase during this period. A significant portion of the increase in the number of liquidation proceedings preceded by forced deletion has been due to technical reasons. On the one hand, the forced deletion proceedings were suspended between 28 May 2020 and 30 June 2021 due to the emergency caused by the coronavirus pandemic, which postponed the start of these procedures. On the other hand, since the expiry of the suspension period, entities subject to forced deletion proceedings have automatically been subject to liquidation proceedings when they meet certain conditions.[28] The quarterly average of the combined number of liquidation proceedings (both with and without a prior proceeding) and forced deletion proceedings from 2022 H2 is 22 per cent higher than the average for the period before the outbreak of the coronavirus pandemic (2015 Q3 – 2020 Q1).

The number of termination proceedings announced against businesses in the given year

	Bankruptcy proceeding	Liquidation proceeding	Forced deletion proceeding	Voluntary liquidation proceeding	Total
2019	91	5 702	21 706	11 338	**38 837**
2020	42	4 779	12 500	13 443	**30 764**
2021	48	5 450	13 069	11 394	**29 961**
2022	55	8 764	22 844	25 526	**57 189**
2023	64	21 037	14 914	14 381	**50 396**

Source: Opten

Corporates that have undergone a proceeding have relatively low amounts of loans outstanding. The financial stability implications of firms that are subject to reorganisation and termination proceedings were examined for the period

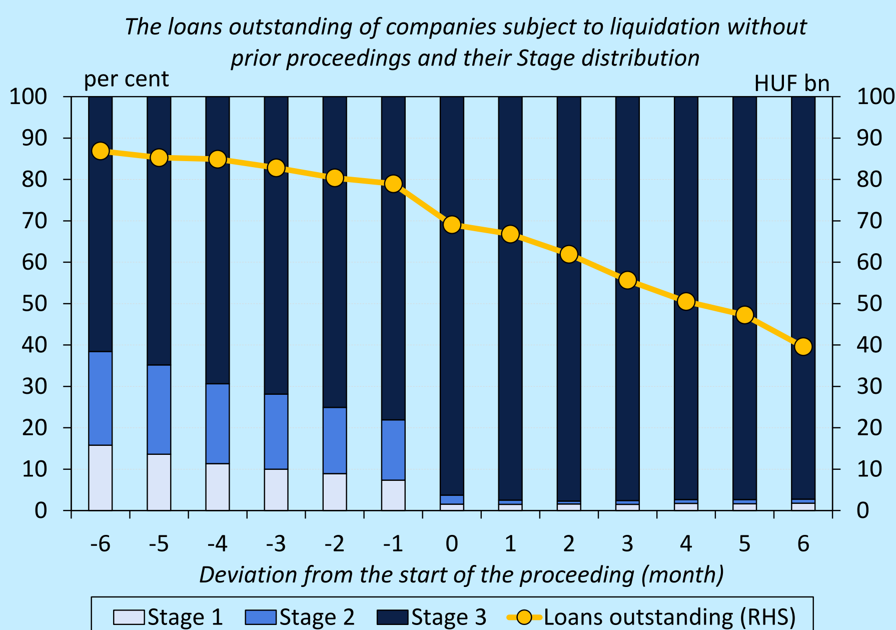
[27] The surge in the number of voluntary liquidation proceedings is mainly linked to the reform of the KATA tax regime (flat-rate tax for small taxpayers) in September 2022, as a result of which many self-employed persons voluntary liquidated their businesses.

[28] If any of the following three conditions are met: 1) the organisation has assets in excess of HUF 400,000; 2) the amount of the claims against the entity exceeds HUF 400,000; 3) ownership of the assets is in doubt.

December 2019 to December 2023. Of the businesses subject to legal proceedings without a prior proceeding, the outstanding loans of companies subject to liquidation proceedings amounted to a total of HUF 70 billion, the loans outstanding of companies subject to bankruptcy proceedings amounted to HUF 58 billion and the outstanding loans of companies subject to voluntary liquidation proceedings amounted to HUF 4 billion, while the outstanding loans of companies subject to forced deletion proceedings amounted to less than HUF 1 billion at the time of the announcement of the proceedings over the 4-year period under review. In terms of loans outstanding per company, the very low number of bankruptcy proceedings, involving only 106 companies, reflects an outstanding average value of HUF 544 million (which was caused by one or two significant transactions worth up to several billion forints). Of the proceedings affecting a broader range of companies, firms in liquidation proceedings had the highest average amount of loans outstanding of HUF 6.3 million, while the loans outstanding for companies subject to forced deletion and voluntary liquidation proceedings were minimal, amounting to HUF 100,000. If liquidations preceded by other legal proceedings are also taken into account, a significant part of the total amount of loans outstanding of HUF 90 billion at the time of the announcement belongs to entities in liquidation that were previously subject to bankruptcy proceedings (HUF 52 billion) or were previously subject to liquidation (HUF 33 billion), while companies subject to liquidation proceedings preceded by forced deletion, which are of a significant number, had a total amount of outstanding loans of HUF 5 billion, i.e. a mere HUF 200,000 per company.

The loans outstanding of companies subject to a proceeding are classified as risky by banks before the start of the proceeding. The loans outstanding of corporates subject to reorganisation and termination proceedings between December 2019 and December 2023 have also been subject to a credit risk assessment for the six months before and after the announcement. Nearly the entire amount of loans of companies in liquidation proceeding, which were previously subject to other proceedings, were prudently accounted for under Stage 3 before the start of the proceedings, regardless of the type of previous proceedings. Regarding the proceedings without a prior proceeding, in the case of loans of companies subject to liquidation, the share of Stage 3 loans rose from 62 per cent to 96 per cent in the six months prior to the announcement of the proceeding. The share of Stage 3 loans for companies in forced deletion proceedings rose from around 40 per cent before the announcement to between 80 and 90 per cent over the 6 months following the announcement; this share increased from between 15 and 20 per cent to 65 per cent for companies in voluntary liquidation and from between 85 and 90 per cent to 100 per cent for companies subject to bankruptcy proceedings. Liquidations without prior a proceedings were typically accompanied by delinquency: while in the fifth and sixth month prior to the announcement, around 50 per cent of loans outstanding were delinquent, this rate increased significantly after the announcement of liquidation, reaching over 90 per cent from the third month onwards, while delinquency of six months or more reached almost 90 per cent at the end of the sixth month

The loans outstanding of companies subject to liquidation without prior proceedings and their Stage distribution

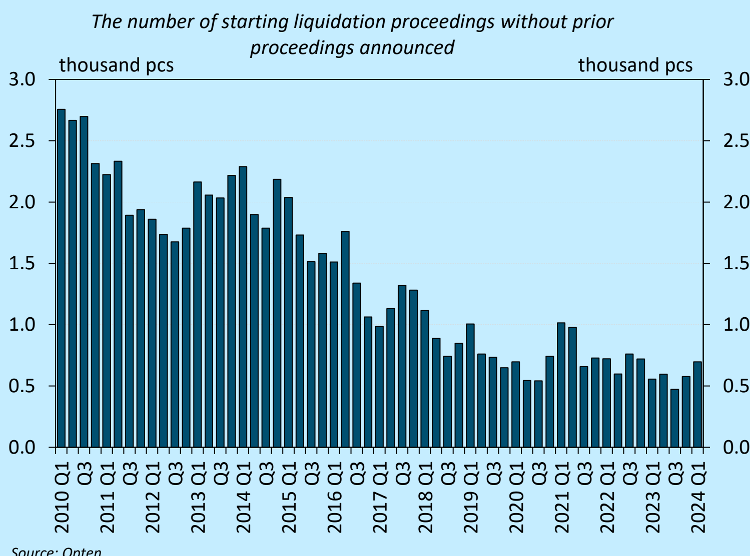


Source: Opten, MNB

after the announcement. Over the one-year period around the announcement, the amount of loans outstanding concerned dropped by more than half, from HUF 87 billion to HUF 40 billion.[29]

The number of liquidations without prior proceedings has not increased and is low by historical standards. It is clear from the above that the trend in liquidations without prior proceedings is the most relevant for the stability of the financial system, both because of the size of the related loans outstanding and the number of firms involved. The number of these proceedings has been gradually falling in recent years. According to the most recent data, there were around 700 such proceedings in 2024 Q1, associated with a total of HUF 9 billion in loans outstanding at the end of 2023. Consequently, the processes of reorganisation and termination proceedings against companies (and the underlying causes, such as insolvency) are not currently assessed as a significant risk to stability

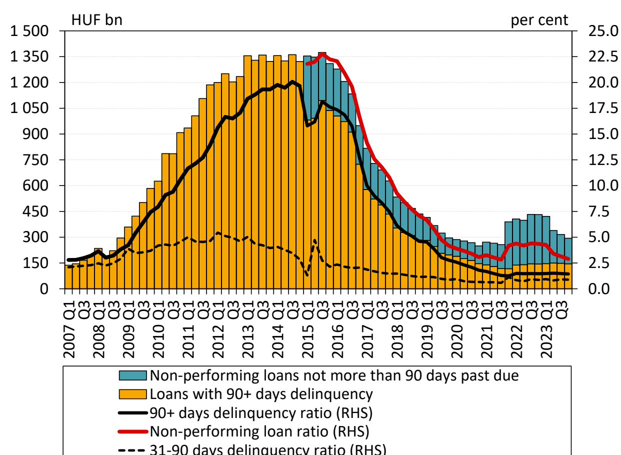
The number of starting liquidation proceedings without prior proceedings announced



Source: Opten

5.2. The household NPL ratio has returned to levels from before the phasing out of the moratorium

Chart 41: Non-performing household loans outstanding in the credit institution sector

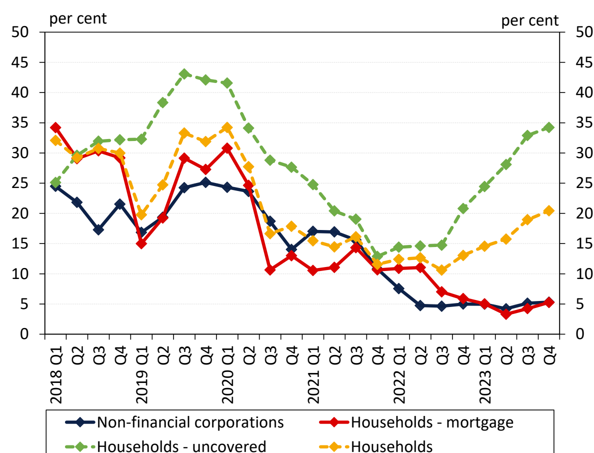


Note: The definition of non-performing loans changed in 2015. From then on, in addition to loans over 90 days past due, loans less than 90 days past due where non-payment is likely are also classified as non-performing. Calculated by clients until 2010 and by contracts from 2010. Source: MNB

The household NPL ratio has declined due to the technical effect of the moratorium and portfolio cleaning. The household NPL ratio dropped from 4.4 per cent at the end of 2022 to 2.9 per cent at the end of 2023 (Chart 41). This decline was due to a reduction in loans not past due more than 90 days, but classified as non-performing. The volume of loans outstanding over 90 days overdue did not change in 2023, with the ratio remaining at 1.4 per cent, a historical low, at the end of the year. The improvement in portfolio quality during the first half of the year was mainly supported by the reclassification of clients previously participating in the payment moratorium to the performing category after a 6-month observation period, complemented by banks' active portfolio cleaning activities throughout the year. The NPL ratio continued to fall at the beginning of 2024, reaching 2.4 per cent at the end of February. The stable labour market is an important factor supporting the good quality

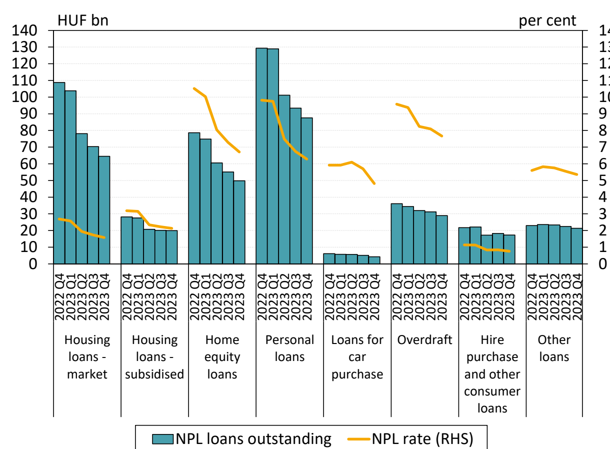
[29] Apart from the amortisation of loans, it was the result of other debt-reducing processes, which accounted for HUF 16 billion of the total reduction. In the period under review, the most typical types of these included repayment, which accounted for a share of almost 60 per cent, delinquent payment, accounting for 11 per cent, early repayment scheme, accounting for 7 per cent, settlement by collection, accounting for 6 per cent, reclassification and sale of receivables, each accounting for 4 per cent, and other termination, accounting for 10 per cent.

Chart 42: Development of the portfolio cleaning rate



Note: The portfolio cleaning rate is the ratio of the volume sold in the given quarter to the average NPL stock of the past year. Source: MNB

Chart 43: Non-performing household loans by product type



Source: MNB

of the household loan portfolio.[30] Under the current legislation, the mortgage interest rate cap will be phased out in mid-2024, but this is likely to cause payment difficulties for a small group of debtors only as the interest rate environment returns to normal. However, non-compliance with the child-related requirements of subsidised loan schemes may pose a substantial risk to the client segments concerned (Box 5).

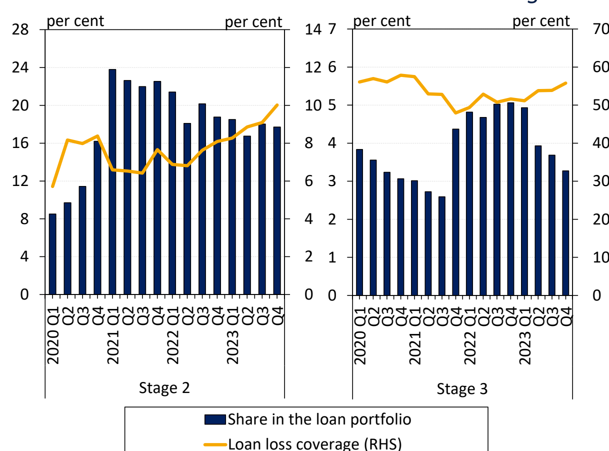
Banks' portfolio cleaning mainly affected unsecured consumer loans. In the household segment, the improvement of 1.5 percentage points in the NPL ratio in 2023 was driven by a 0.7-percentage point contribution from the reclassification of customers previously participating in the payment moratorium (the effect was observed in June), while a similar overall reduction in the NPL ratio resulted from banks' portfolio cleaning efforts during the year. The sale of non-performing portfolios took place primarily in the unsecured consumer loans sub-market, a volume equivalent to one third of the average non-performing portfolio in 2023 was sold in the fourth quarter (Chart 42). Meanwhile, the portfolio cleaning rate for mortgage loans remained unchanged at only 5 per cent. Sales mostly affected personal loans, contracts previously in moratorium, but not overdue for more than 90 days.

There was a decline in non-performing loans outstanding and NPL ratios for all product types. In 2023, the largest improvements in portfolio quality occurred for home equity loans and personal loans (Chart 43). As a result, the NPL ratio of overdrafts was again the highest by product type at the end of the year, indicating that the pattern of portfolio quality had returned to that of the pre-moratorium period. The NPL ratios of both subsidised and market-based housing loans declined by 1.1 percentage points, remaining at relatively low levels of 2.1 and 1.6 per cent, respectively, at the end of the year. Portfolio quality continued to improve in the first two months of 2024, across all product types. The largest reductions occurred in home equity loans and overdrafts, the NPL ratios of which dropped to 5 per cent and somewhat below 7 per cent, respectively.

There is an upward trend in the loan loss coverage of Stage 2 and Stage 3 loans. In line with the decline in the NPL ratio, the share of Stage 3 loans shrank significantly,

[30] The unemployment rate rose at the beginning of 2024, which was primarily caused by the labour force returning from inactivity. The rate may fall again from the second half of 2024, due to which it may be between 4.2 and 4.3 per cent in 2024. For more details, see the March 2024 Inflation Report.

Chart 44: Share of Stage 2 and Stage 3 loans of the household sector and their loan loss coverage



Note: Credit institution sector. Loans valued at amortised cost. Source: MNB

falling by almost 2 percentage points to 3 per cent in 2023, while the share of Stage 2 loans decreased slightly to 18 per cent. In terms of loan loss coverage, an uptrend has been observed for both Stage 2 and Stage 3 loans, with the former rising by 2 percentage points to 10 per cent and the latter by 4 percentage points to 56 per cent (Chart 44). For Stage 3 loans, the composition effect (portfolio cleaning and reclassification) may have also played a role in the development of loan loss coverage, as the share of these loans decreased. Overall, impairment losses in the household sector fell by 10 per cent, which was accompanied by a 0.5-percentage point decrease in loan loss coverage. As a result, the loan loss coverage of the household portfolio, valued at amortised cost, stood at 4.4 per cent at the end of 2023.

BOX 5: ANALYSIS OF COMPLIANCE WITH THE CONDITIONS ON HAVING CHILDREN LINKED TO FAMILY SUBSIDIES

In many cases, access to benefits under state family subsidy and home purchase schemes is conditional on having more children, and failure to meet this condition leads to increased credit risks for the households concerned. Since 2016, the majority of family and housing subsidy programmes have been implemented at least partly through the credit market, which means that they have had a significant impact on both credit and housing market developments. Numerous grants are conditional on having children, and failure to meet this condition entails significant costs, as in general those who do not fully comply by the deadline must repay the amount of the subsidy plus interest on arrears in a lump sum.[31] This may significantly increase the current and future payment obligations of the households concerned. It is common to use subsidies and subsidised loans in combination with each other or with market-based loan,[32] so the increased payment burden and higher probability of default due to the failure to have children may also affect the household's other credit market products and participation. Failure to meet debt servicing obligations may also have an impact on property prices through the sale of collateral.

The focus of this analysis is on those advance family subsidy contracts for which the deadline for childbearing has expired or is reached in 2024.[33] The fulfilment rates of commitments to have children are available from the Hungarian State Treasury's contract-level data,[34] which include:

- HPS grant and loan contracts concluded between January 2016, when the HPS rules were amended, and the end of June 2023;

[31] Details of exceptions and partial fulfilment can be found in Government Decree No 16/2016 (II. 10.) on housing subsidies for buying or building a new home, Government Decree 17/2016 (II. 10.) on Family Housing Allowance for buying or extending pre-owned homes, and Government Decree 44/2019 (III. 12.) on the prenatal baby support loan.

[32] The magnitude of the combined demand is illustrated in Table 3 of the May 2023 Financial Stability Report.

[33] While HPS and rural HPS grants and related loans were available for existing children only in the period 2016–2023, these contracts do not carry the risk of non-compliance and are therefore not included in our analysis.

[34] In the database, fulfilment of a commitment to have children is indicated if the date of birth of a child is later than the date of the contract. Calculated fulfilment rates may be somewhat worse than the actual rates due to the time needed to notify the birth of a child; however, this may only materially affect the end of the period under review.

- rural HPS grant and loan contracts concluded between the start of the programme in July 2019 and the end of June 2023; and
- all prenatal baby support loan agreements signed between the start of the programme in July 2019 and the end of June 2023.

The 'fulfilment' deadline[35] depends both on the type of subsidy and the number of additional children. In the case of HPS and rural HPS subsidies and the interest-subsidised loans available alongside them, borrowers have 4 years from the date of the loan to have 1 child and 8 years for 2 children, while in the case of prenatal baby support loans they have 5 years from the date of the loan to have a new child, a new foetus of at least 12 weeks or adopt a child.

Characteristics of contracts that do not meet the condition on having children (based on June 2023 data)

	1 additional child						2 additional children		
	Contracts of 2016-2018 Deadline: 2020-2022			Contracts of 2019 Deadline: HPS: 2023 Prenatal baby support loan: 2024			Contracts of 2016 Deadline: 2024		
	per cent	pcs	HUF bn	per cent	pcs	HUF bn	per cent	pcs	HUF bn
HPS - max. 2 children altogether	33	4 195	8	38	1 579	2.8	57	705	1.3
HPS - min. 3 children altogether	27	787	8	34	342	3.4	42	45	0.4
Interest-subsidised HPS-loan	29	679	6	35	1 012	10.5	48	38	0.3
Rural HPS	-	-	-	27	179	1.1	-	-	-
Prenatal baby support loan	-	-	-	25	11 921	114.5	-	-	-

Source: MNB, Hungarian State Treasury

In the case of HPS subsidy and loan contracts taken out between 2016 and 2018 with a commitment to have one child, non-fulfilment rates for having a child can now be calculated, which are considered definitive due to the expiry of the deadline.[36] Depending on the type of subsidy, they range between 27 and 33 per cent. The amount of HPS grants available for up to 2 children ranged between HUF 600,000 and HUF 2.6 million, while the HPS for at least 3 children was HUF 10 million. Such grants were available, however, even if 1 child or 2 children were committed to. The interest-subsidised HPS loan was available until 2018 for at least 3 children, with a maximum loan amount of HUF 10 million. In the case of contracts concluded during this period, the contract amount where borrowers failed to meet the childbearing condition was HUF 8 billion altogether in each of the two categories of subsidies under review, while for HPS loans it was HUF 6 billion. The lowest childbearing default rate of 27 per cent is seen in the category of HPS subsidies of HUF 10 million, while in the much broader HPS category of contracts for up to 2 children, 33 per cent of borrowers failed to have the required number of children within the agreed deadline for contracts signed between 2016 and 2018. Among the interest-subsidised loans disbursed in the first three years of the HPS scheme, 29 per cent failed to fulfil the contractual childbearing obligation.

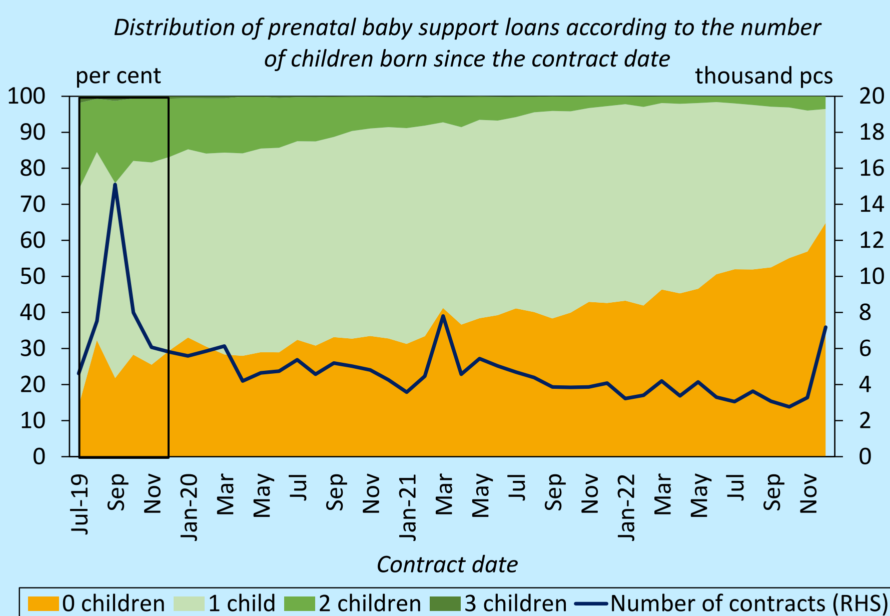
For HPS subsidies and loans contracted for a single child in 2019 and 2 children in 2016, complete and final data are still unavailable. However, the data available as at June 2023 may be indicative of the expected fulfilment rates. Depending on the type of subsidy, between 34 per cent and 38 per cent of the HPS grant and loan contracts taken out in 2019 for 1 additional child did not fulfil the condition by the end of June 2023. In terms of magnitude, the picture is

[35] 10 years are available to have three children. However, as even the first contracts signed in 2016 have a childbearing deadline after 2024, contracts with three children are outside the focus of this analysis.

[36] Definitive fulfilment rates are available for subsidies related to pre-owned homes. In the case of HPS contracts required for building a new home or expanding an existing one, the period available for childbearing begins on the day of the issuance of the occupancy permit, for this reason, in the case of subsidies for new homes, there may still be a small change in the fulfilment rate due to contracts for which the deadline for childbearing did not expire until June 2023. However, according to our expectation, there may be few such contracts, because for the relevant reference period of June 2023, the 4-year deadline for having 1 child have expired in the case of properties that obtained occupancy permits by June 2019, and the period of 2.5-3.5 years from the conclusion of the contract in 2016 to June 2019 significantly exceeds the typical construction time.

therefore similar to the 2016–2018 contracts, as these ratios will continue to fall with the arrival of data for 2023 H2. For 2019, the first year of the rural HPS scheme, the commitment to have a child has not yet been fulfilled for 27 per cent of subsidy contracts for 1 additional child, i.e. about 180 contracts. A relatively small group of family subsidies, in terms of both number and volume, are contracts with the commitment to have 2 additional children. In the case of those contracts, the number of children born since the contract date is currently the most relevant (due to the 8-year time limit) for contracts concluded in 2016. In that group, the share of contracts where borrowers have not yet fully fulfilled their commitment was between 42 and 57 per cent in June 2023. This share, however, may fall substantially over the remaining year and a half.

Distribution of prenatal baby support loans according to the number of children born since the contract date



Note: The date of reference for the birth data is June 2023. The distribution is based on contract number.
Source: MNB, Hungarian State Treasury

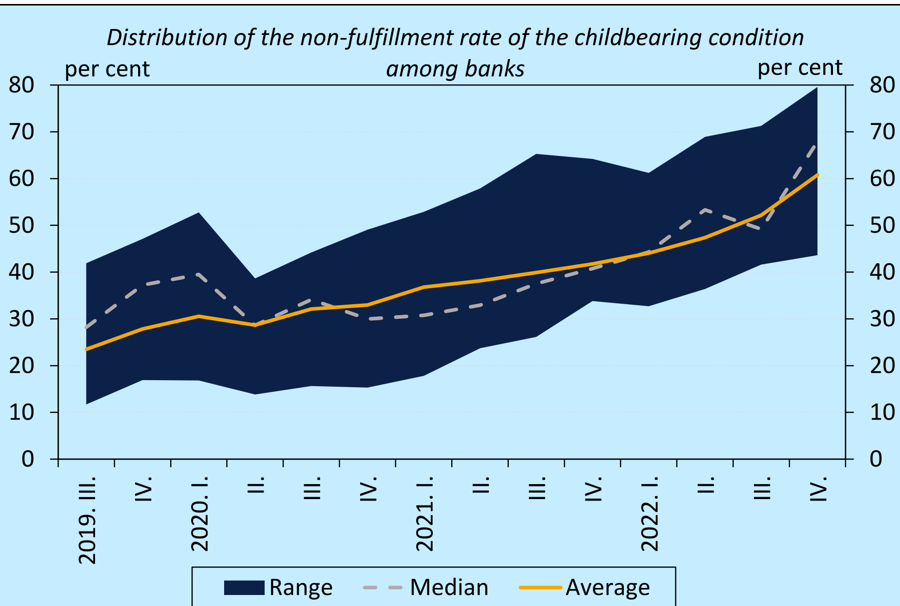
25 per cent of married couples who signed a prenatal baby support loan agreement in 2019 did not have a child by June 2023. Prenatal baby support loans deserve special attention as they constitute the largest portfolio of family subsidies conditional on having children, both in terms of the volume of loans issued and the number of beneficiaries. In the case of prenatal baby support loans, the increase in credit risk may be due to the fact that if the childbearing condition is not met[37] within the first 5 years of the maturity, the interest rate subsidy is no longer granted. As a result, the subsidised loan, which was interest-free, is converted into a market-based loan with a much higher interest rate, and the interest subsidy must be repaid in a lump sum.[38] Among prenatal baby support loans, the focus of our analysis is on contracts signed in the first half of the programme launch, i.e. between July and December 2019, as the childbearing period is due to expire in the second half of 2024. These contracts, with a total contract amount exceeding HUF 450 billion, represent a significant part of the prenatal baby support loan portfolio, accounting for nearly 20 per cent of all prenatal baby support loans disbursed in the period 2019–2023. Based on data as at June 2023, for 55 per cent of these contracts 1 child was born, for 19 per cent there have been 2 children, while for 1 per cent there have been 3 children, i.e. 25 per cent of these contracts have not yet met the childbearing condition, which represent nearly 12,000 contracts with a total contract volume of HUF 115 billion.

Failure to meet the childbearing condition of the prenatal baby support loan affects banks to a varying degree, and the risks are mitigated by a number of factors. The average childbearing default rate on the prenatal baby support loan condition shows minor regional variations, ranging from 22 to 28 per cent by county, with the highest rates found in Heves, Nógrád and Komárom-Esztergom counties. There is a much larger difference than the spatial dimension in the distribution of the fulfilment rate across banks. For 2019 Q3 and Q4 contracts, the default rate of childbearing varies between 12–42 per cent and 17–47 per cent, respectively. However, the risks for these contracts, based on the data available until June 2023, are mitigated by the fact that (i) there is still 1 – 1.5 years after the reference date of the

[37] In our analysis, we focus on the fulfilment of the childbearing condition. However, the interest rate subsidy can also be discontinued if other conditions are not fulfilled (including a divorce or moving abroad).

[38] Borrowers may be exempted from the consequences of not having additional children in certain cases, as set out in detail in Government Decree No 44/2019 (III.12.).

database for the childbearing condition to be fulfilled, and (ii) there is a 100-per cent government guarantee attached to the contracts, (iii) some households may have used at least part of the prenatal baby support loan for savings,[39] and (iv) for loans disbursed in 2019, since the borrowers were among the higher income groups,[40] they may be more resilient to the costs of not fulfilling the condition of having children.



Note: The 7 main credit institutions providing prenatal baby support loans, which together had a share of 99.6 per cent of the 2019 disbursement. The rates are not final, they reflect the situation in June 2023. Source: MNB, Hungarian State Treasury

Overall, for those HPS grant and loan contracts for which the childbearing condition expired in 2022 and for which definitive default rates are available, the stability risks to the financial system are limited. However, the monitoring of credit risk of a group of households with a prenatal baby support loan deserves particular attention in the near future, as there are around 12,000 contracts for which the childbearing deadline will expire in 2024 and, according to June 2023 data, this condition has not yet been fulfilled.

[39] According to a questionnaire survey among debtors who took out a prenatal baby support loan during the first year of the scheme, 13 per cent of borrowers invested at least part of the loan amount, see Zita Fellner – Anna Marosi – Beáta Szabó (2021): Credit market and real economic effects of the prenatal baby support loan. Közgazdasági Szemle, Vol. LXVIII, February 2021 (pp. 150—177) Table F8.

[40] Ibid, Table F6.

6. Exceptional, but decreasing profitability looking forward with adequate capital position

Based on stand-alone, non-consolidated data, the credit institution sector achieved a record profit after tax of HUF 1,441 billion in 2023, which was HUF 952 billion higher than the profit in 2022. The main contributor to the increase in profit after tax was the surge in interest income, which was driven by interest revenue on liquidity deposited with the central bank. High profitability was also supported by the positive impact of other specific factors, such as the reversal of impairment losses on Russian and Ukrainian exposures, the revaluation of prenatal baby support loans and HPS loans due to the reduction in the yield environment and an increase in dividend income from subsidiaries. Rising operating expenses and the impact of the extended interest rate cap measures can be highlighted as factors that reduced the results. The sector's return on equity (RoE) rose to a historical high, from 9 per cent at the end of 2022 to nearly 24 per cent at the end of 2023, while its return on assets (RoA) increased from 0.7 per cent to nearly 2 per cent.

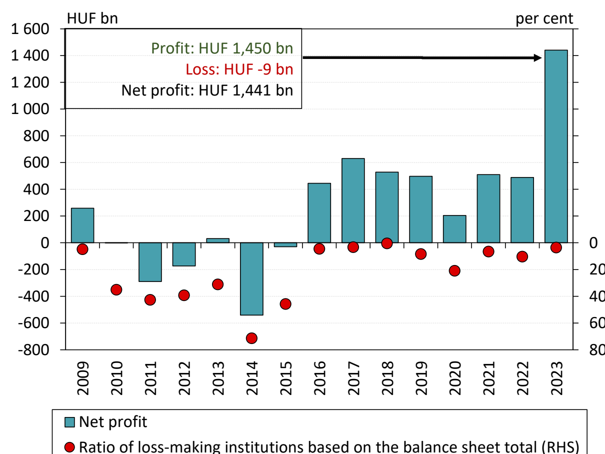
Looking ahead, there are a number of downside risks to banks' profitability, as a result of which the 2023 level of profitability is not sustainable. The increase in banks' net interest revenue peaked and the base rate started to fall in line with disinflationary developments. Various government measures (interest rate cap and a reduction in the maximum transaction interest rate on newly contracted subsidised housing loans) and voluntary commitments (interest rate ceiling, APR ceiling, preferential spreads) by banks, which have primarily affected the pricing of loans, have also had a negative impact on banks' profitability. Profitability will also be tempered by the slow growth in loans outstanding and the expected increase in credit risks. In the period ahead, efficiency gains, a recovery in market lending and hence a deepening of credit penetration, may again become the main driver of profitability for the sector.

The consolidated capital adequacy ratio of the banking system rose by 0.4 percentage point to 19.3 per cent in 2023, while the CET1 ratio stood at 16.7 per cent at the end of December. The free capital of the credit institution sector in excess of the total capital adequacy ratio, net of the non-recognised part of interim profit, amounted to nearly HUF 2,000 billion at the end of the year, corresponding to 4.9 per cent of the total risk exposure amount (TREA). Taking into account the increasing capital requirements in 2024, the free capital as a share of TREA ratio at the end of 2023 would drop to 3.9 per cent, while it would drop to 1.7 per cent if the minimum requirement for own funds and eligible liabilities (MREL) were taken into consideration.

6.1. Profitability in 2023 is outstanding, but not sustainable

The credit institution sector achieved historically high after-tax profits in 2023. The credit institution sector achieved a record high annual profit after tax of HUF 1,441 billion based on stand-alone, non-consolidated data, which is HUF 952 billion higher than the 2022 result (Chart 45). On a stand-alone basis, credit institutions with a negative result accounted for only 0.5 per cent of the sector (in terms of balance sheet total). Together, these credit institutions recorded losses of only HUF 9 billion for the year. Consolidated profit, including both domestic and foreign affiliates, increased by HUF 1,070 billion year-on-year to HUF 1,887 billion in 2023. On a consolidated basis, only 0.2 per cent of the sector recorded a loss on the basis of total assets.

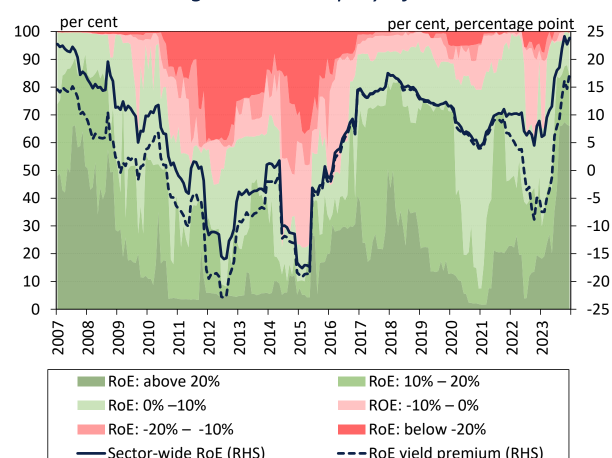
Chart 45: After-tax profit and loss of the credit institution sector



Note: Based on non-consolidated data. Source: MNB

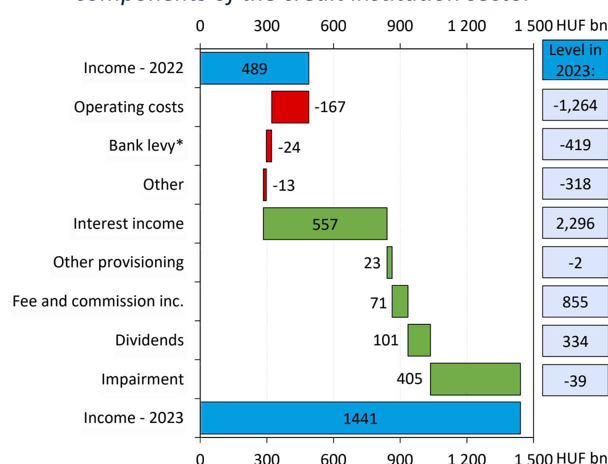
Return-on-equity (RoE) increased significantly in 2023. Return-on-equity rose significantly in the banking system,

Chart 46: Distribution of credit institutions by 12-month rolling return on equity after-tax



Note: Distribution weighted by total assets. Monthly time series based on non-consolidated data. Return on equity is calculated on the basis of profit after-tax, with 12-month average equity calculated without the current year's profit. The yield premium is the difference between the yield on the 12-month rolling RoE and the yield on the one-year Discount Treasury Bill. Backward-looking yield for the RoE, forward-looking yield for the Discount Treasury Bill. Source: MNB

Chart 47: Annual changes in the after-tax profit components of the credit institution sector



Note: Nominal values of income components for end-year 2023 are shown on the right-hand side. The bank levy* line includes the combined change in the special tax on financial institutions ('normal' bank levy) and the extra profit tax. Source: MNB

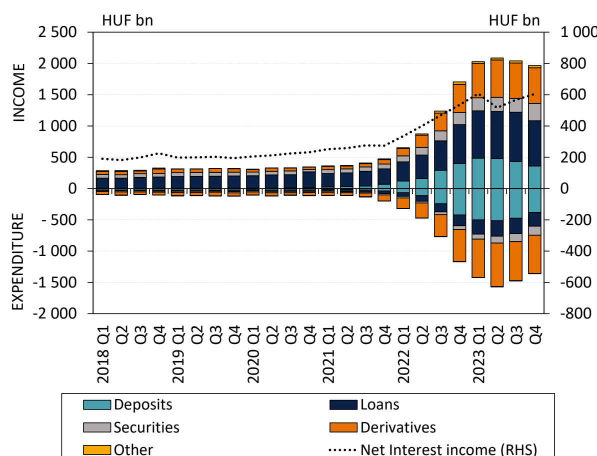
by 14.9 percentage points compared to 2022, to 23.8 per cent at the end of 2023, even accounting for the growth in equity, due to a substantial increase in profit after tax. At the same time, the share of banks with a profitability rate above 20 per cent increased to 66 per cent, a significant year-on-year increase of almost 50 percentage points (Chart 46). In terms of ownership structure, privately-owned commercial banks have, on average, a higher RoE than the sector-wide profitability, while the RoE of state-owned special purpose (non-profit) credit institutions is lower. The profitability of domestic banks was exceptionally high in an international comparison in 2023.[41] As profitability rose, the yield on the 1-year Discount Treasury Bill fell, bringing the premium in excess of the risk-free rate of return-on-equity back to a positive 17.4 percentage points, after rising 22.3 percentage points year-on-year.

The increase in profit after tax was mainly supported by rising net interest income and lower impairment losses compared to the previous year. The net interest income of the domestic banking system amounted to HUF 2,296 billion in 2023, an increase of HUF 557 billion compared to the previous year (Chart 47). The year-on-year increase in interest income in 2023 was driven by a sharp increase in interest income from the MNB, while interest income from other sectors declined and worsened due to rising interest expenses. In 2023, net impairment loss resulting from the difference between impairment charges and reversals was HUF 405 billion lower than in 2022, which was a year characterised by high net impairment, which means that this item reduced the banks' profitability substantially less. In addition, a significant increase in dividend income, mainly from foreign subsidiaries, boosted the banking system's profit by HUF 101 billion. The HUF 167 billion rise in operating expenses reduced banks' profit, due primarily to higher staff-related expenses. We estimate that the interest rate cap measures for 2023, which reduced both interest income and other income, resulted in a loss of HUF 213 billion for the banking sector, and these measures announced for 2024 reduce profit by HUF 50 billion in 2024.[42] Taxes levied on the banking sector reduced profit by an additional HUF 24 billion in 2023 compared to the previous year. In 2024, however, banks will be able to reduce their extra profit tax expenditure (up to 50 per cent

[41] Hungary's consolidated 12-month rolling RoE of 25.1 per cent at the end of 2023 Q3 is the second highest in the European Union.

[42] However, the timing of the loss effect of the interest rate cap may differ from this, as a significant number of banks calculate the estimated profit effect at the time of the announcement or the extension of the programs.

Chart 48: Changes in components of quarterly interest income in the credit institutions sector



Note: Based on non-consolidated data. Source: MNB

of the total) in proportion to their increased long-term government bond holdings, which will have a positive impact on their profit.[43]

While net interest income rose significantly in 2023, it is expected to decline in the future. The rise in net interest revenue was due primarily to an increase in interest income from deposits held by banks, mainly at the central bank, and from loans disbursed. The former increased by HUF 782 billion year-on-year, while the latter increased by HUF 1,250 billion (Chart 48). In terms of deposits on the liabilities side, interest expenditure increased by HUF 1,028 billion, while interest expense on loans on the liabilities side increased by HUF 492 billion compared to 2022. Interest revenue on securities was HUF 365 billion higher year-on-year. Interest revenue started to increase at the end of the year, due to the increase in the stock of central bank discount bonds and the interest income earned on them. Since the base rate of the central bank will normalise in line with the disinflationary process, the interest revenue earned on the liquidity deposited with the central bank is also expected to decline. Consequently, downside risks to net interest income and hence profitability can be identified (see Box 6).

BOX 6: WHAT TRENDS WILL POSSIBLY DETERMINE THE PROFITABILITY OF THE BANKING SYSTEM IN 2024?

Following an outstanding performance by banks in 2023, the sustainability of high profitability levels in a normalising interest rate environment is worth examining. In addition to identifying the downside risks of the current economic cycle, it is also worth drawing on historical lessons from past periods of similar interest rate normalisation. Indeed, international literature shows that a declining interest rate environment is typically associated with a decline in banks' earnings.[44] In this Box, we compare the current interest rate cut cycle with previous easing cycles, in terms of the crucial factors for profits and, in particular, interest income. We examine the lessons that can be drawn from previous interest rate cutting cycles and, in particular, the factors that distinguish them from the current period. This is followed by a breakdown of the main trends affecting profitability in 2024.

Over the past 20 years, three cycles of interest rate cuts have preceded the current one: (1) between 2003 and 2005, (2) between 2008 and 2010, and (3) between 2012 and 2016.

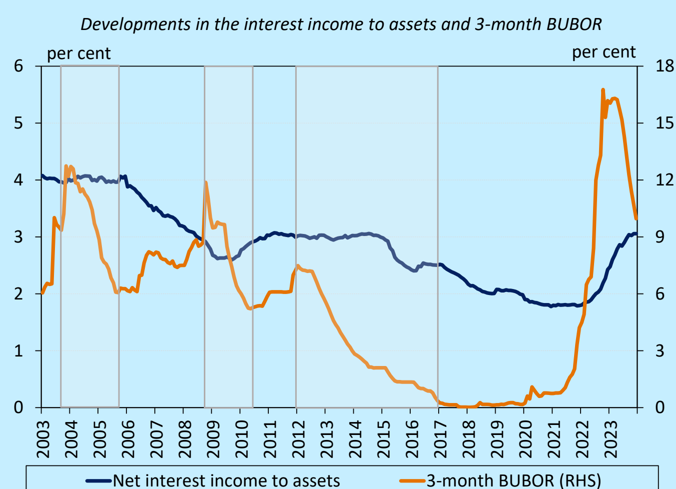
- **2003–2005:** At the end of 2003, the 3-month BUBOR[45] peaked at a high of 12.7 per cent before declining by more than 6 percentage points to 6.1 per cent by October 2005. At the same time, RoE rose from 18 to 23 per cent,

[43] According to legislation promulgated on 31 May 2023 (Government Decree 206/2023. (V.31.)), if the average daily stock of Hungarian government securities maturing after 1 January 2027 during the period between 1 January and 30 November 2024 increases compared to the average daily stock during the period between 1 January and 30 April 2023, 10 per cent of the increase, up to 50 per cent of the 2024 extra profit tax, can be deducted from taxes payable.

[44] Borio, C. – Gambacorta, L. – Hofmann, B. (2017): The influence of monetary policy on bank profitability. *International Finance, 20*(1), pp. 48-63

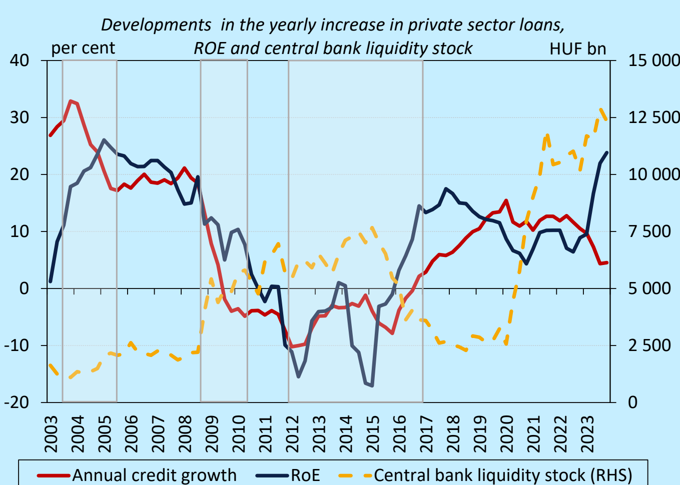
[45] In the analysis, the evolution and change in the 3-month BUBOR was used to approximate the change in monetary conditions, given that it reflects monetary conditions better than the evolution of the base rate in each period.

and there was only a slight change in the interest income on assets (from 4 per cent to 3.8 per cent). One key factor in maintaining high profitability over this cycle was a substantial increase in credit penetration, including higher spreads on household foreign currency loans, while private sector loans outstanding growth averaged around 20 per cent per year.



Note: 12-month net interest income to assets. Monthly frequency data. Source: MNB

- **2008–2010:** In October 2008, the 3-month BUBOR stood at 11.9 per cent, before declining to 5.2 per cent in less than two years (by May 2010). At the same time, RoE fell from 17 per cent to close to 12 per cent in autumn 2010 and, after a steep decline, it dropped into negative territory at the end of the year. However, the deterioration in profitability was not caused by a fall in interest rate income. The decrease in profit during this period was due primarily to impairments recognised for the realised credit risks, while the interest income on assets did not change substantially. Loans as a share of deposits were high (152 per cent in 2008), limiting the ability of institutions to reduce their deposit interest expense because of the high funding requirements. At the same time, banks offset the loss of income from the fall in the interest rate environment and some of the credit losses by unilaterally raising interest rates on Swiss franc mortgages. Between 2008 and 2010, the central bank's liquidity increased significantly, by around HUF 3,000 billion, thus increasing its contribution to interest rate income, while it was still significantly below the level of recent years (2022–2023).



Note: MNB deposits and bonds are defined as central bank liquidity. Quarterly frequency data. Source: MNB

- **2012–2016:** Between 2012 and 2016, a longer, gradual reduction in interest rates took place, with the 3-month BUBOR falling from 7.5 per cent to 0.4 per cent, and then remaining close to zero until 2020. RoE remained negative for most of 2015, before starting to increase significantly in 2016 and reaching 14 per cent during that year. As a ratio of total assets, interest income fell from 3 per cent to around 2.5 per cent in the second half of the period, partly due to the reversal of unilateral interest rate hikes. This, together with high recognition of impairment, the immediate impact on profit of the settlement of foreign currency loans and fiscal charges, contributed to the deterioration in profit. Moreover, the decline in lending also played a role in the low profitability of banks. Furthermore, the share of faster repricing loans was high at that time (at the end of the period, the share of loans with an interest-rate period of less than a year was around 60 per cent, which fell to around 50 per cent and close to 10 per cent for corporate and household loans, respectively, by 2023), when the profit-reducing effect of the interest rate decline was more pronounced. In contrast to the rapidly repricing assets, funding costs fell to a lesser extent, mainly due to the downward rigidity of deposit rates. In parallel with the decrease in foreign currency reserves following the conversion of household foreign currency loans to forints, the banks' liquidity at the central bank has substantially decreased since 2015 (from HUF 7,500 billion to approximately HUF 3,000 billion).

In earlier periods of interest rate cuts, the determinants of bank profits – interest income in particular – were different in various respects compared to the current interest rate cycle. In the first period, RoE remained high as

lending supported the maintenance of high profitability with double-digit annual growth and, on a foreign currency basis, largely independent of the forint interest rate environment, with high margins, in contrast to the single-digit credit dynamics expected in the current period. In the second period, RoE fell into negative territory, which was, however, explained by a substantial deterioration in the portfolio, while the interest income on assets even increased due to unilateral interest rate hikes. At present, this risk is much lower due to the low NPL ratio and the recovery in lending, moreover the loan-to-deposit ratio is also significantly lower. Given the stable funding position, banks can pass on the impact of interest rate cuts to deposit rates to a greater extent. During the third period, in addition to one-off items, a substantially higher share of variable-rate loans was the difference compared to the current cycle. The current lower share of variable-rate loans means that in the current period, interest rate cuts have a smaller impact on the change in interest revenue on loans. However, this effect is more than compensated for by the fact that the amount of liquidity deposited with the MNB in the current interest rate cycle is much larger than in the previous period, so that the interest revenue earned on it can be quickly and substantially reduced and will considerably determine the profitability of the current cycle. In 2024 Q1, interest revenue on deposits with the MNB fell to around HUF 250 billion due to the reduction in the central bank base rate, while in the high interest rate quarters of last year banks realised amounts between HUF 430–480 billion.

Banks' profitability may be significantly lower at the sectoral level in 2024, at around 12–14 per cent of equity, in line with the interest rate normalisation. In 2024, the declining interest rate path may lead to a significant reduction in banks' interest income from the MNB, which is a key contributor to the expected decline in banks' profitability. We expect a moderate increase in interest rate income from other sectors, due to a relative recovery in market-based lending. Fee and commission income may continue to grow in line with previous years (due to the growth in payments and proliferation of digital banking), with some of the impact of inflation in 2023 built into pricing.[46] Due to specific profit improvement items recognised in 2023 (impairment reversal for foreign subsidiaries) and credit risk-increasing items detailed in the report, a higher net impairment is expected for 2024. Operating expenses may continue to increase in line with the dynamics of previous years, driven by a continued rise in staff costs. For the calculation, we assumed moderately higher dividend income from foreign subsidiary banks due to high profitability in 2023. The results of our calculations are approximately the same as the banking expectations regarding the RoE of the banking system in 2024 shown in the MNB Market Intelligence Report and the MNB Bank Sentiment Survey.

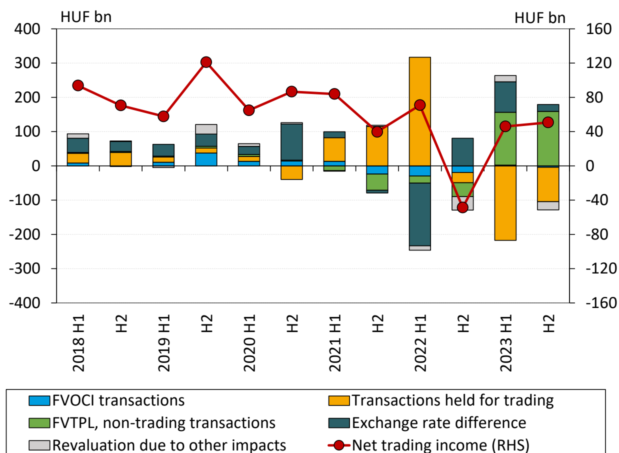
In the coming years, the sustainability of banks' profitability may be determined by new factors, such as the temporary rise in interest rate income and the phasing out of specific profit-increasing items. These include the cost-efficiency improvements, where there is still room for development in a European comparison, and a substantial pick-up in market lending, which may become a source of profitability for the sector via deepening credit penetration.

Trading income that includes revaluations contributed positively to the net result of the banking system. Trading income in 2023 was HUF 97 billion higher than in the previous year,[47] mainly due to a positive net revaluation effect of HUF 309 billion on non-trading transactions at fair value through profit or loss (FVTPL) (most of which are prenatal baby support loans and HPS loans), explained by a substantial reduction in the yield spread (Chart 49). The

[46] In early 2024, several institutions of the seven major banks announced that they will raise their banking fees by less than the rate of inflation in 2023.

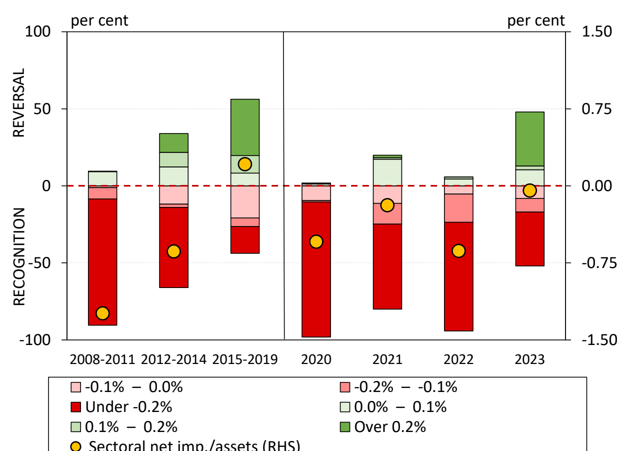
[47] While the impact of the revaluation of the government securities portfolio at fair value through other comprehensive income (FVOCI) is not directly recognised in profit or loss, it may reduce/increase the capital of the banking system. In 2023, the revaluation of these bonds increased the banks' equity by HUF 162 billion, while the change in the hedging reserve added another HUF 99 billion to the banks' equity.

Chart 49: Net trading income for portfolio revaluations and its components



Note: Based on non-consolidated data. Based on portfolio revaluation under IFRS. Source: MNB

Chart 50: Distribution of credit institutions by net impairment to assets ratio



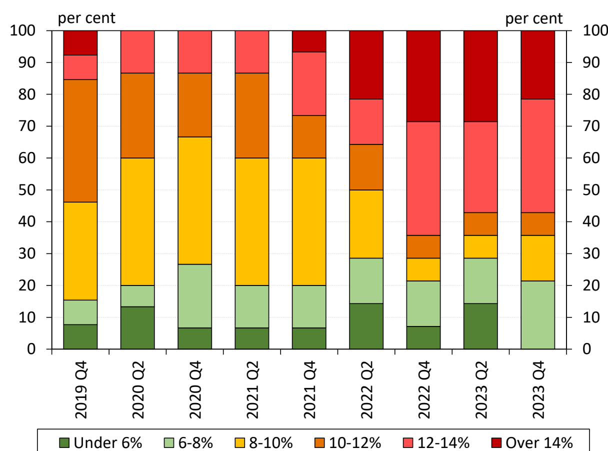
Note: Distribution on the basis of total assets. Green categories represent net reversal of impairment, while red categories represent net recognition of impairment. Source: MNB

positive revaluation of prenatal baby support loans and HPS loans in 2023 had a specific accounting impact on the result due to the decrease in yields, which means that the profit from this component is not sustainable in the long term. The net effect of the exchange rate difference also improved the result in 2023. In 2023, the value of transactions for trading purposes fell significantly, reducing profits by HUF 318 billion. Part of this can be accounted for by the revaluation loss on the stock of derivative transactions held to hedge subsidized loans (prenatal baby support loans, HPS loan).

Impairment charges had a much smaller negative impact on the results of the banking system than in the previous year. In 2023, net impairment charges amounted to HUF 39 billion, compared to HUF 444 billion in the previous year, when banks recognised significantly higher impairment for Russian and Ukrainian exposures. Moreover, in 2023, there was a material reversal of impairment related to foreign subsidiary bank exposures (net of that effect, impairment would be approximately HUF 90 billion, which is still significantly lower than the HUF 350 billion in 2022, a one-time adjustment due the foreign subsidiary exposures). At the sector level, lower impairments were also driven by the reclassification of counterparties granted a payment moratorium and a reduction in macroeconomic risks. As a ratio of total assets, net impairment was -0.04 per cent, the lowest annualised net impairment recognition since 2019 (Chart 50). One half of banks as a ratio of total assets reversed net impairments in 2023, a proportion significantly higher than in any other year recently. At the same time, the specific characteristics of some special loan portfolios are expected to lead to an increase in credit risks and hence in the recognition of impairment in 2024, foreshadowing a decline in profitability.

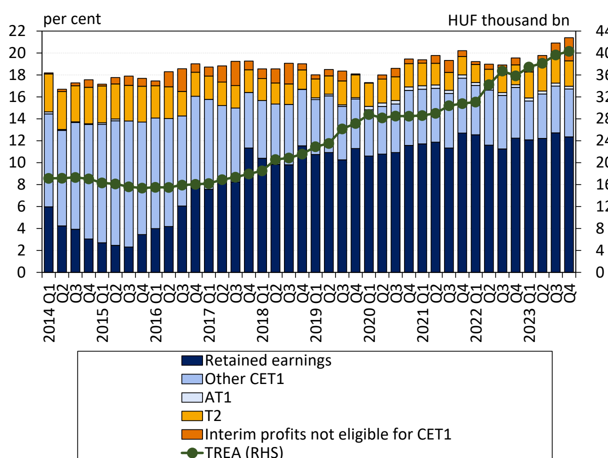
As risk-free rates have risen in recent years, equity costs of banks also increased. Since the end of 2021, the share of banks with a higher expected cost of equity has increased in line with the interest rate hike cycle in Hungary. According to the MNB Bank Sentiment Survey, 13 per cent of credit institutions reported a cost of equity above 12 per cent in 2021 Q2, before the start of the central bank rate hikes (Chart 51). This ratio rose to 64 per cent at the peak of the interest rate environment at the end of 2022, and after a minor decline, it reached 57 per cent at the end of 2023. Based on the survey results for January 2024, one third of banks expect a cost of equity of 12–14 per cent, while one fifth of them expect a cost of equity above 14 per cent. For 86 per cent of the institutions

Chart 51: Distribution of domestic banks by cost of equity



Note: The unweighted distribution of institutions in the domestic credit institution sector (13–15 banks per quarter), excluding branch offices and Eximbank, MFB and Keler, which have individual banking activities. Source: MNB Bank Sentiment Survey

Chart 52: Consolidated capital adequacy and total risk exposure amount of the banking system



Note: TREA: Total Risk Exposure Amount, CET1: Common Equity Tier 1 capital, AT1: Additional Tier 1 capital, T2: Tier 2 capital. Source: MNB

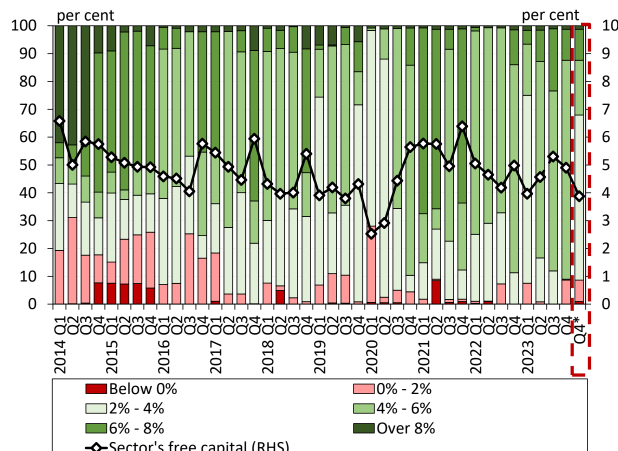
surveyed, RoE in 2023 exceeded the bank's cost of equity. At the same time, the majority of banks expect a lower RoE in the longer term after the outstanding profitability in 2023. Almost two thirds of banks expect a return-on-equity of 10 to 14 per cent, while around 30 per cent expect a RoE figure of above 14 per cent. Looking ahead, the sustainable level of profitability will also be affected by the expected rate of decline in the cost of equity, in line with the moderation in the interest rate environment.

6.2. Stronger capital position and a moderate dividend payment ratio

The capital position of the banking system is sound and has been further strengthened by strong profits. The banking sector's consolidated capital adequacy ratio (CAR) increased by 0.4 percentage point to 19.3 per cent in 2023, just slightly below the 19.7 per cent CAR at the end of 2021, which was also affected by the dividend payout restriction (Chart 52). The CET1 ratio was 16.7 per cent at the end of December, following a drop of 0.2 percentage point. While the part of the mid-year profit that cannot be taken into account may improve the value of the CAR by 2.1 percentage points, that profit will not fully strengthen the capital position of the sector, given the dividend payment plans of banks. In 2023, own funds increased by 15 per cent and the total risk exposure amount (TREA) by 12 per cent. The increase in TREA was largely due to the rise in credit risk exposure, while the increase in own funds was mainly due to the rise in the retained earnings. The leverage ratio (LR) of the credit institution sector increased by 0.4 percentage point to 8.5 per cent in 2023, significantly above the regulatory minimum requirement of 3 per cent.

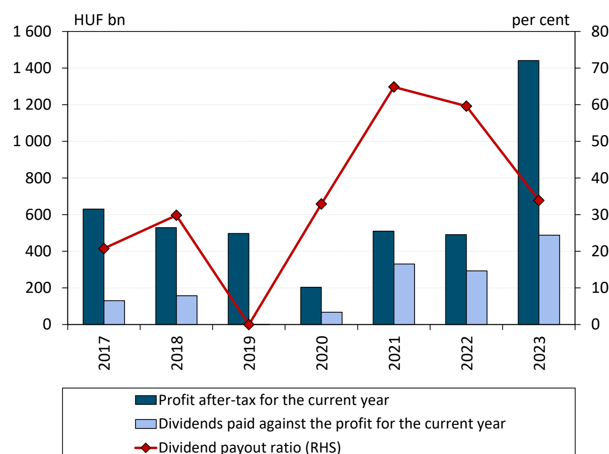
The decrease in 2024 in the level of free capital can be compensated by the reinvestment of the non-audited profit. The free capital of the banking sector (excluding the unaudited part of interim profit) amounted to 4.9 per cent in TREA terms and nearly HUF 2,000 billion in nominal terms at the end of 2023 Q4 (Chart 53). On a TREA basis, 91 per cent of the banking system had a free buffer of more than 4 per cent at the end of 2023. The rebuilding of capital buffer requirements released due to the coronavirus epidemic continued in 2023 and will be completed in 2024. The 50-per cent (1.25 per cent) usability of the capital conservation buffer (CCoB) was available until the end of 2022, while the capital buffer for systemically important institutions (O-SIIs) was doubled in January 2023 for the seven institutions concerned. The former reduced the free capital buffer by HUF 468 billion and the latter by HUF 145 billion at the beginning of 2023. Taking into account the full

Chart 53: Distribution of banks by level of free capital over the overall capital requirement



Note: Weighted by the total risk exposure amount. Free capital does not include the unaudited part of interim profit. 2023 Q4* free capital calculated with the currently known level of the combined capital buffer requirement applicable in 2024 and the TREA at the end of December 2023. The categories indicate the level of own funds above the overall capital requirement as a ratio of the total risk exposure amount. Source: MNB

Chart 54: Evolution of the dividend payment ratio



Note: Dividend payment ratio: the dividend paid in the following year against the current year's result divided by the current year's result. In 2020 and 2021, dividend payment restrictions were in place due to the coronavirus epidemic in relation to the profit for 2019 and 2020. The dividends to be paid in 2024 in relation to the profit for 2023 are based on the dividend payment plans currently available for nine institutions. Source: MNB

rebuilding of the O-SII in 2024 and the activation of the countercyclical capital buffer (CCyB) in July 2024[48] (which tie up additional capital of HUF 300 billion and HUF 112 billion, respectively), the free capital would be 3.9 per cent based on TREA at end-December 2023. Moreover, the Minimum Requirement for Own Funds and Eligible Liabilities (MREL) came into force at the beginning of 2024 and taking into account its part covered by own funds, free capital would reduce to 1.7 per cent. The non-audited part of the interim profit in 2023 that cannot be taken into account in the capital can increase the free capital by 2.1 percentage points, but this depends on the banks' dividend payment plans.

The increased dividend payment ratio due to the dividend payout restriction has been reduced in 2024. Looking at the last six years, it can be observed that from the results gained in 2021 and 2022, partly due to the restrictions on dividend payments imposed in the years of the coronavirus epidemic (2020, 2021),[49] credit institutions paid out nearly two thirds in dividends, which is significantly higher than the payout ratio in the previous four years (Chart 54).[50] By contrast, based on the banks' plans the dividend payable in 2024 may amount to 32 per cent of the 2023 profit, a payout ratio similar to the trends seen in the years before the restriction. The latter is a positive development for the stability of the credit institution system, given that the 2023 profit is unsustainable. The importance of the conservative dividend payout in 2024 was also highlighted by the MNB in the Financial Stability Report published in November 2023 and in a management circular to banks (see Box 7). The importance of a prudent dividend payment policy is underpinned by factors such as rising buffer requirements in 2024 and as a determinant of long-term profitability, the increase in lending activity, which also requires higher nominal capital levels. The potential increase in credit risks related to specific portfolios also underlines the importance of capital accumulation.

[48] In July 2024, the Systemic Risk Buffer (SyRB) will also be activated on a preventive basis, which would expectedly impose an additional requirement on none of the banks, based on its outstanding project loan portfolio and its capital position at the end of March 2024.

[49] Credit institutions were not allowed to pay dividends in 2020 and 2021 for the financial years 2019 and 2020, or to the debit of the profits of previous years. However, some dividend payments occurred in 2021, as credit institutions could be exempted from the dividend limitation provided that they met certain strict conditions according to the relevant legislation. (Reference only in Hungarian.)

[50] In the past, the MNB considered a dividend payment ratio of 50 per cent for a well-functioning banking system as good practice. For a presentation of the characteristics of a well-functioning banking system, see 'Hungarian banking system in transition', a special issue of MNB studies.

BOX 7: THE MNB'S EXPECTATIONS IN RELATION TO DIVIDEND PAYMENTS

The exceptionally strong performance of domestic banks in 2023 and subdued lending activity have led to significant liquidity and capital buffers in the sector. With profitability expected to fall, their use will need to be monitored closely, as the buffer, which now looks substantial, may quickly become tight in the event of higher lending activity or an uncertain economic environment. This is justified by the risks and macroeconomic factors identified in recent years and for the near future (inflation rate, interest rate environment, energy market trends, geopolitical tensions), the trends in the credit institution sector observed earlier (for example, decline in retail deposits), expectations about the sustainability of the credit institutions sector's superior profitability, increasing regulatory expectations (compliance with liquidity and capital buffers) and credit expansion as a result of the expected impact of the economic recovery and government measures.

However, according to the dividend payment plans received by the central bank, most institutions intend to use part of their accumulated reserves to pay dividends. In response to this, after having tightened its expectations in relation to bank liquidity in a management circular[51] in summer 2023, the MNB informed banks in a management circular at the end of the year that it expects a prudent, 'self-restraining' approach regarding forthcoming dividend payments, taking into account the following:

- In determining the dividend payable, institutions should make their calculations for 2024 on the basis of annual loans outstanding growth of at least 15 per cent and stagnation in total deposits.
- In addition to the specified dividend payout, banks must also comply with liquidity (minimum LCR level of 140 per cent required by the MNB) and capital requirements, including the application of a management buffer of 1 per cent above the overall capital requirement (OCR), the current level of the supervisory capital recommendation (P2G), the applicable MREL requirements and leverage ratio requirements.
- In the calculations, it is necessary to make sufficiently conservative assumptions in relation to loan portfolio quality.

In addition to the level of free capital, dividend payments may also be subject to a liquidity constraint, which may also impose a more stringent requirement, since the total amount of dividend payments reduces reserves, as opposed to capital, where the average capital requirement per unit of credit is below 10 per cent.

The MNB has launched a consultation on the development of liquidity and capital ratios at institutions which are planning dividend payments. In addition to the 15-per cent credit growth mentioned above and the planned dividend payment, the MNB expects such plans to only include resource increases in extremely justified cases, such as the issuance of bonds needed for MREL compliance. The dialogue between the institutions and the MNB will result in a dividend level which does not hamper the healthy development of credit penetration and thus the recovery of the economy, and which ensures the stability of the banking system.

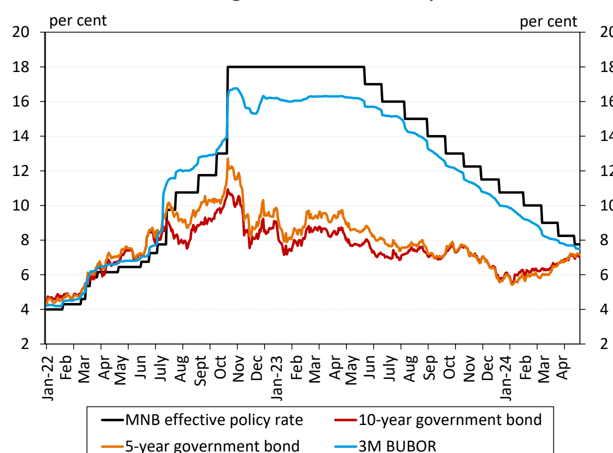
[51] Management Circular on the expectation for a liquidity buffer for credit institutions. (Only in Hungarian.)

7. Banks’ liquidity improved, despite a decline in yields

Short-term yields continued to fall, in line with the monetary policy decisions of the MNB, declining inflation expectations and improved investor sentiment. The liquidity and funding position of the banking system remains robust, with the operational liquidity buffer exceeding HUF 21,000 million, equivalent to 72 per cent of private sector deposits. The increase in the liquidity reserve was driven by the liquidity-boosting effect of interest earned on the high liquidity deposited with the central bank and by the fact that since end-September 2023 growth in bank deposits, mainly retail deposits, has exceeded growth in loans outstanding. Changes in the maturity structure of deposits and the narrowing of the spread between the central bank policy rate and the household deposit rate have reduced the probability of withdrawals, which in turn has mitigated liquidity risks. The withdrawal of the government’s interest rate cap measures, which affect financial stability and monetary transmission, is another factor that helps to reduce risks.

7.1. Liquidity in the banking system continued to rise from a high level

Chart 55: Development of the MNB's effective interest rate and government bond yields

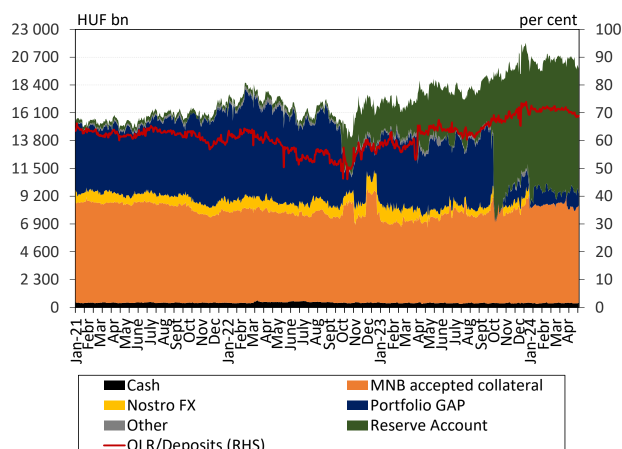


Note: Based on HUF-denominated government bond yields. Source: Bloomberg

Short yields continued to fall. As a result of the MNB’s gradual interest rate cuts, short-term yields declined significantly: the 3-month BUBOR stood at 7.5 per cent at the end of April 2024, reflecting a decline of 385 basis points since the beginning of November 2023. In the first half of 2023, domestic money market developments stabilised on the back of an improved inflation outlook and current account balance, as well as favourable global investor sentiment. In the second half of 2023, inflation trends improved rapidly and market tensions continued to ease, while Hungary’s risk perception improved, leading to a further decline in interbank and government bond yields (Chart 55). During the second half of 2023, 5-year and 10-year government bond yields fell by 111–187 basis points. In line with the overall drop in yields, the Hungarian spread to 10-year German and Polish yields also narrowed. The gradual decline until the end of the year was interrupted by a rise in yields in developed markets in 2024, driven by the extension of interest rate cut expectations for the major global central banks and rising geopolitical tensions. Among the domestic country-specific factors, the adverse change in expectations for fiscal developments from the beginning of 2024 also contributed to the rise in yields and spreads.

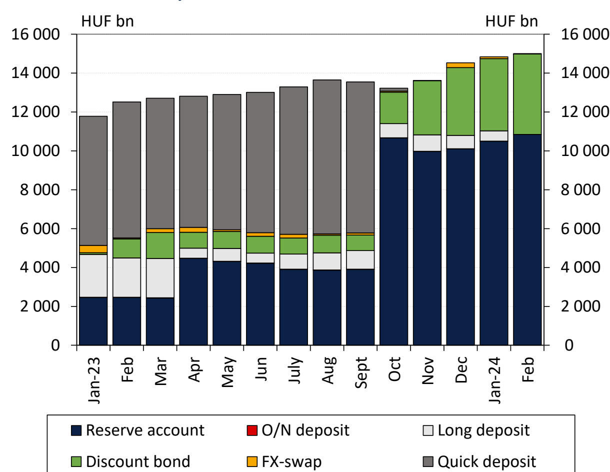
The liquidity reserve of the banking system continued to rise. The banking system’s operational liquidity reserve (OLT) continued to expand, reaching an average level of around HUF 21,000 billion in April 2024, equivalent to 72

Chart 56: Decomposition of banks' operative liquidity reserves



Note: The portfolio gap denotes the contractual net flows of treasury operations within 30 days from the date of data reporting with the following content: interbank loans and deposits, MNB deposits, repos, securities other than own issued, deposits over HUF 5 billion, derivatives. Classified into the 'other' category: ECB eligible collateral, cash flows from own securities. The reserve requirement is considered by the central bank as a liquid asset. From 1 October 2023, the MNB pays the base rate on the balance of the reserve account in excess of the required reserve (excess reserves) and therefore this instrument has taken over the role of the policy instrument. Source: MNB

Chart 57: Breakdown of the liquidity of the banking system at the central bank



Source: MNB

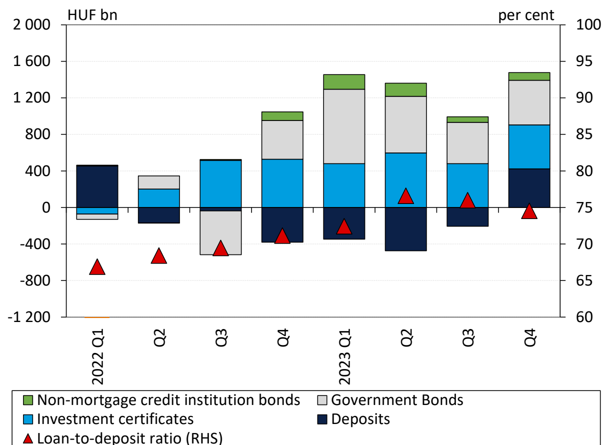
per cent of private sector[52] deposits (Chart 56). After September 2023, the level of the operational liquidity reserve began to rise as the combined result of a decline in the loan-to-deposit ratio and the liquidity-increasing effect of interest rate payments on central bank deposits. In addition to the increase in the liquidity of the banking system deposited with the central bank, which is reflected in the changes in the reserve account balance and the portfolio gap, the stock of eligible collateral increased by around HUF 300 billion between November 2023 and April 2024. The latter development was due mainly to a positive revaluation of government securities, which account for the bulk of the collateral, as yields on these securities fell.

Rising bank liquidity is mainly reflected in the growth of central bank instruments. Between October 2023 and February 2024, liquid assets held by the banking system at the central bank increased by around HUF 1,800 billion, reaching an average of HUF 15,000 billion in February 2024 (Chart 57). Deposits held in the reserve account comprise the largest part of the banking system's liquidity. Average utilisation in February was close to HUF 10,800 billion, with a reserve requirement of about HUF 3,800 billion. Following the decision of the Monetary Council in September 2023, the effective central bank interest rate returned to the base rate, and the reserve account became the main instrument for sterilising liquidity in the banking system from 1 October. The simplification of the central bank's toolkit continued at the end of January 2024 with the phasing out of the long deposit facility. This means that, from February 2024, liquidity in the banking system can be tied up in the unrestricted reserve account and central bank discount bonds (about one third of the latter is held by non-residents). The increase in the amount of discount bonds in the last quarter of 2023 also affects the reduction in the banking system's short-term external debt, which, after a 1.1-percentage point decline, amounted to 4.7 per cent of total assets.

An increase in deposits in excess of loans outstanding also supported liquidity expansion. In the last quarter of 2023, total banking system deposits grew by more than HUF 1,300 billion, outpacing the rise in loans outstanding by around HUF 800 billion. As a result, the loan-to-deposit ratio dropped from a 4-year high of 76.6 per cent in June 2023 to 74.5 per cent in February 2024 (Chart 58). Growth in deposits was driven by an increase of HUF 423 billion in retail deposits on a transaction basis in 2023 Q4, which was

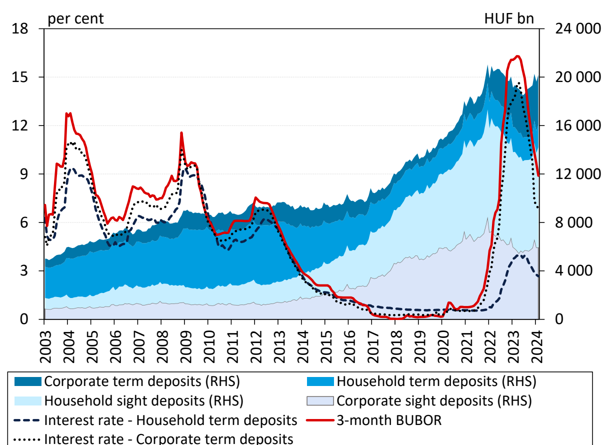
[52] In the chapter, the deposit portfolio of the private sector means the deposit portfolio of the household sector and non-financial companies.

Chart 58: Evolution of household domestic bank deposits, investment fund and government bond transactions and the loan-to-deposit ratio



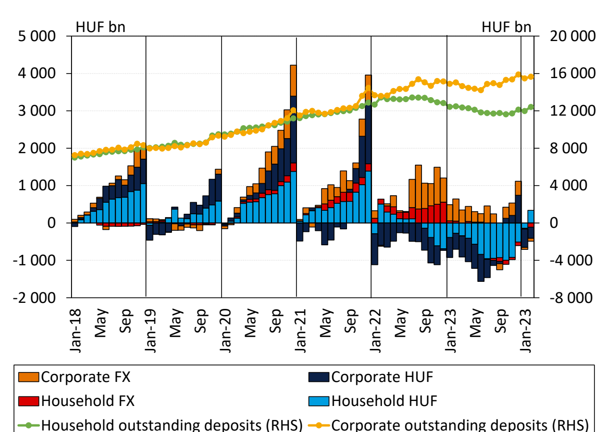
Source: MNB

Chart 59: Average annualised interest rate and maturity structure of private sector HUF deposits



Source: MNB

Chart 60: Amount and year-on-year cumulative growth of household and corporate deposits by currency



Note: Transactional change. Source: MNB

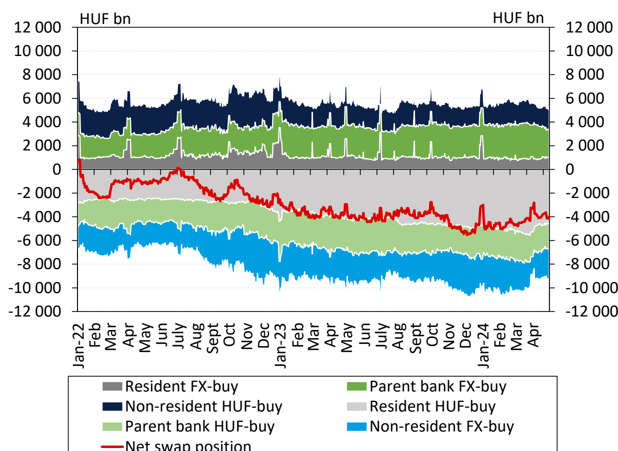
accompanied by the continued expansion of mutual funds, government securities and non-mortgage credit institution bonds (mainly MRELs). The rise in household savings (Box 8) was supported by both the increase in real wages as a result of the dropping rate of inflation and an increase in real returns on household savings. Retail government security repayments and interest payments also contributed significantly to household deposit growth in early 2024.

The difference between corporate and household forint deposit rates shrank, while structural changes in the stock slowed down. For deposits in the corporate sector, the shift from demand deposits to term deposits halted in 2023 H2, while the share of demand deposits in the household segment has remained high. As with the increases, the central bank's interest rate cuts are only partially reflected in the pricing of retail deposits. The changes have led to a convergence between the interest rates on household and corporate deposits and a narrowing of the spread between the central bank's policy rate and the household deposit rate, which reduces the possibility of withdrawals and thus liquidity risks. For corporate term deposits, the spread between fixed deposit rates and the policy rate declined between June 2023 and November 2023, as seen for households, but widened by more than 1.5 percentage points in December 2023, due to the extension of the government's deposit interest cap measure[53] introduced on 1 December 2023 in relation to non-financial corporate deposits. The measure had no material impact on corporate deposit portfolios. At the end of 2023, the corporate sector earned an average interest rate of 7.3 per cent on its term deposits, while the household sector achieved an average interest rate of 2.9 per cent (Chart 59).

Euroisation risks on deposits have eased. While the share of foreign currency deposits in both the corporate and household segments increased significantly in 2022, the rapid euroisation of household and corporate deposits halted in 2023 H2, in the context of financial market developments and stabilisation of the EUR/HUF exchange rate (Chart 60). In 2023 Q4, HUF household deposits rose by HUF 416 billion, while foreign currency deposits increased by just HUF 7 billion on a transaction basis. In the case of corporates, there was significant growth in both segments, with HUF 801 billion in HUF deposits and HUF 541 billion in foreign currency deposits. While the risks of

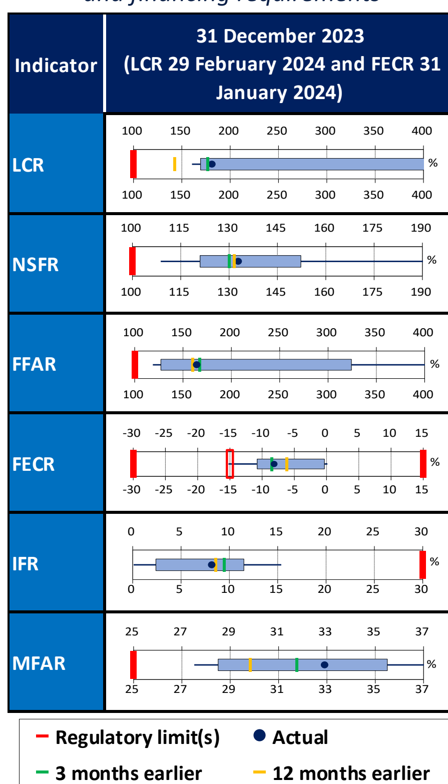
[53] The interest rate cap measure limited the interest rate level of 3-month Discount Treasury Bill yields for non-bank financial institutions, corporates and retail bank deposits above HUF 20 million until 1 April 2024.

Chart 61: Decomposition of the banking system's gross swap portfolios and net swap position



Source: MNB

Chart 62: Compliance of the banking sector with liquidity and financing requirements



Note: FFAR – Foreign exchange Funding Adequacy Ratio, FECR – Foreign Exchange Coverage Ratio, IFR – Interbank Funding Ratio, MFAR – Mortgage Funding Adequacy Ratio, LCR – Liquidity Coverage Ratio, NSFR – Net Stable Funding Ratio. The edges of the blue rectangles indicate the lower and upper quartiles of the distribution, and the ends of the dark blue lines indicate the lower and upper deciles. For LCR, excluding mortgage banks and housing savings banks, based on solo compliance data. For NSFR, including mortgage banks and housing saving banks, based on solo compliance data. Source: MNB

euroisation have eased, they are still present in the economy.

The swap market activity of the banking system supported the euroisation of deposits. In 2024 Q1, the average net swap position of credit institutions against the forint increased to HUF 4,600 billion from an average of HUF 3,500 billion in 2023 Q1 (Chart 61). The increase in gross HUF swaps was driven by an almost equal rise in domestic HUF borrowing. The latter was the result of the government's removal from the swap market of its interest rate cap on deposits, which had been introduced for non-bank financial institutions in November 2022 and extended to non-financial corporates from December 2023. Some non-bank financial institutions and non-financial corporates placed their forint liquidity in FX swaps, which offered higher interest rates than Discount Treasury Bill yields, and then deposited the foreign exchange funds received in exchange as foreign currency deposits with the account-holding bank. Government measures restricting deposit-side monetary transmission were phased out on 1 April 2024, which increased the efficiency of monetary policy.

The liquidity and funding position of the banking system is sound, based on compliance with regulatory requirements. At the end of the year, the sector-wide LCR stood at 178 per cent and it is characterised by high buffers, indicating improving short-term liquidity in the banking system, mainly due to the substantial and growing stock of liquid assets. By implementing supervisory tightening measures[54] in response to rising interest rate risks and international bankruptcy events in the spring of 2023, the MNB further strengthened the banking system's shock resilience, and emphasised concentrated deposit risks to banks' liquidity management. Banks are consistently meeting the 100-per cent net stable funding ratio (NSFR) requirement for the long-term stable funding of banks in the EU, with a system-wide sector average above 130 per cent, and there has been no significant change or risky structural reorganisation in the overall funding structure at the banking system level. The growth of the banking system's on-balance-sheet foreign exchange surplus appears to have come to a halt, and the sectoral average of the foreign exchange coverage ratio (FECR) is well above the regulatory minimum. The average level in the banking sector of the foreign exchange funding

[54] Management circular on the expectation of liquidity buffers for credit institutions, 1 August 2023 (amended on 5 October 2023). (Only in Hungarian)

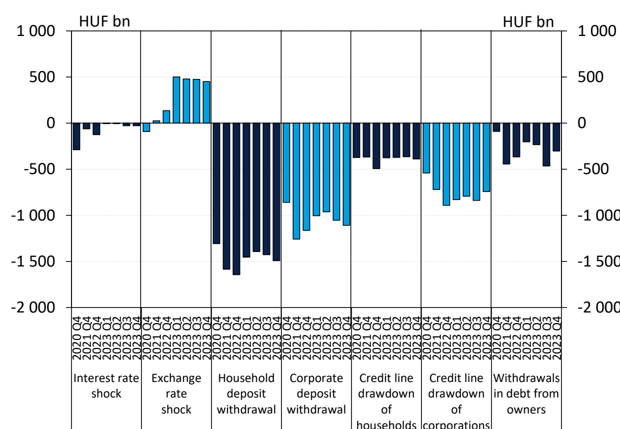
Table 2: Main parameters of the liquidity stress test

Assets		
Item	**Degree**	**Currencies affected**
Exchange rate shock on derivatives	15 per cent	FX
Interest rate shock on interest rate sensitive items	300 basis points	HUF
Calls in household lines of credit	20 per cent	HUF/FX
Calls in corporate lines of credit	30 per cent	HUF/FX

Liabilities		
Item	**Degree**	**Currencies affected**
Withdrawals in household deposits	10 per cent	HUF/FX
Withdrawals in corporate deposits	15 per cent	HUF/FX
Withdrawals in debt from owners	30 per cent	HUF/FX

Source: MNB

Chart 63: Aggregate impact of stress components at the system level



Note: The columns show the change in the LCR’s liquid assets in response to a given shock at the banking system level, adjusted for the change in net outflows. For calculating the impact of each shock, we applied the assumption that the given shock occurs individually. Therefore, the sum of the impacts of the shocks does not necessarily reflect the combined impact of the shocks. Source: MNB

adequacy ratio (FFAR) is high, partly due to the large surplus of foreign currency resources and partly due to the growing amount of foreign currency resources outstanding at maturity. The sectoral allocation to corporate funding, which is considered riskier, was well below the regulatory maximum for the interbank funding ratio (IFR). The mortgage loan funding adequacy ratio (MFAR) requirement is met by the banking sector with a substantial and increasing buffer (33 per cent), under unfavourable, but improving market and regulatory conditions, which have been relaxed by the MNB (Chart 62).[55]

7.2. Banking system liquidity is sufficient even in case of an extreme stress

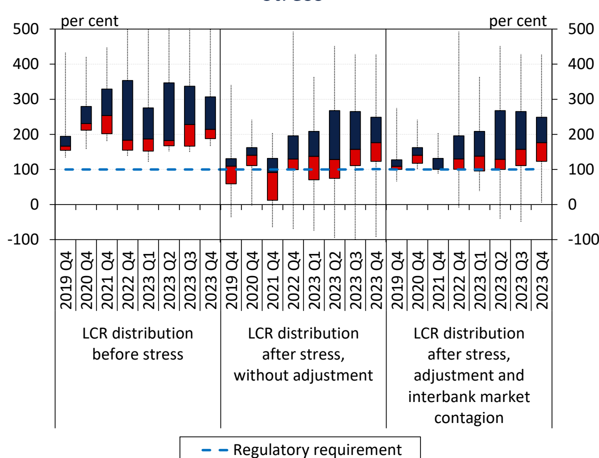
The sensitivity of banks to hypothetical shocks in the liquidity stress test did not change significantly in 2023 H2. In the liquidity stress test, we consider the hypothetical simultaneous occurrence of an exchange rate shock, an interest rate shock, deposit withdrawal, credit line drawdown and withdrawal of owners’ funds, together with possible interbank contagion effects (Table 2).[56] Of all of these shocks, the relative severity of the potential impact of deposit withdrawals remains the most significant. In the hypothetical stress scenario used in our stress test exercise, we assume a deposit withdrawal of more than HUF 3,000-3,000 billion for 2023 Q3 and Q4 for the sum of deposits of the corporate and household sector. Moreover, the credit line drawdown shocks by the corporate and household sector assumed in the scenario totaled more than HUF 1,000 billion in each quarter (Chart 63). While the liquidity impact of the interest rate shock and the shock caused by the withdrawal of owners’ funds used in the stress test remains relatively modest compared to the other items, the liquidity-enhancing value of the exchange rate depreciation on banks’ derivative holdings is historically high. Overall, the combined liquidity-reducing impact of the shocks exceeds HUF 4,500 billion in both quarters.

The liquidity stress test suggests that even in the event of a severe shock, the sector would still meet regulatory requirements. The gradual and steady decline in the median LCR ratio of banks stopped in 2023 H1 and then started to increase. Given the high level of liquid assets in the numerator of the LCR indicator, banks’ adjustment needs are marginal even in the event of a stress scenario

[55] For details, see the MNB’s Macroprudential Report 2023.

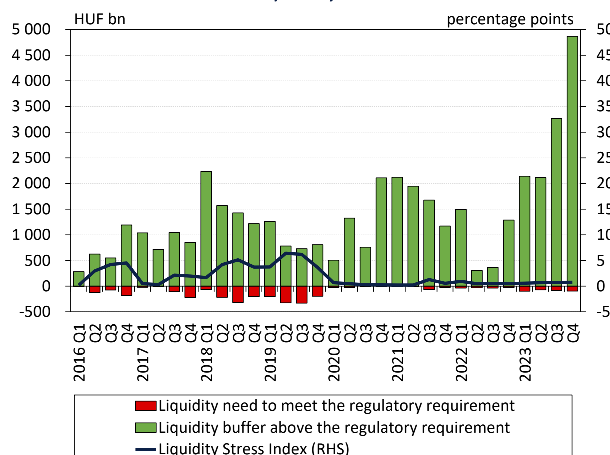
[56] For a detailed description of the methodology, see Box 9 of the MNB’s May 2016 Report on Financial Stability.

Chart 64: Distribution of the LCR before and after stress



Note: Distribution by number of banks. Boxplot of the distribution between the 10th and 90th percentiles. Institutions above the median in blue, those below the median in red. Source: MNB

Chart 65: Liquidity Stress Index



Note: The indicator is the sum of the liquidity shortfalls in percentage points (but a maximum of 100 percentage points) compared to the 100-per cent regulatory limit of the LCR, weighted by the balance sheet total in the stress scenario. The higher the value of the indicator, the greater the liquidity risk. Based on data for the nine largest institutions up to 2018 Q1 and for the whole credit institutions sector thereafter. Source: MNB

(Chart 64). The vast majority of banks would still comply with regulatory requirements after the hypothetical shocks without significant adjustment. Taking into account banks' ability to adapt, which assumes extensive use of the central bank's liquidity facilities, we estimate that even in a severe liquidity stress scenario, only two smaller institutions would face compliance problems.

The Liquidity Stress Index[57] continues to show a low level of risk. Liquidity at the sector level is in unprecedented surplus, with excess liquidity above the regulatory requirement of 100-per cent LCR increased by almost HUF 3,000 billion compared to its previous highs. The liquidity surplus of banks in excess of the requirement thus reached more than HUF 8,000 billion at the end of 2023, which is almost one third of private sector deposits, while the liquidity surplus estimated in the stress scenario (after taking into account shocks and bank adjustment possibilities) is also significant, amounting to HUF 5,000 billion in aggregate. In the stress scenario, the liquidity needs of banks facing liquidity shortages would amount to less than HUF 100 billion in 2023 Q3 and Q4 (Chart 65). The Liquidity Stress Index thus remains close to its theoretical minimum and still implies a low level of risk.

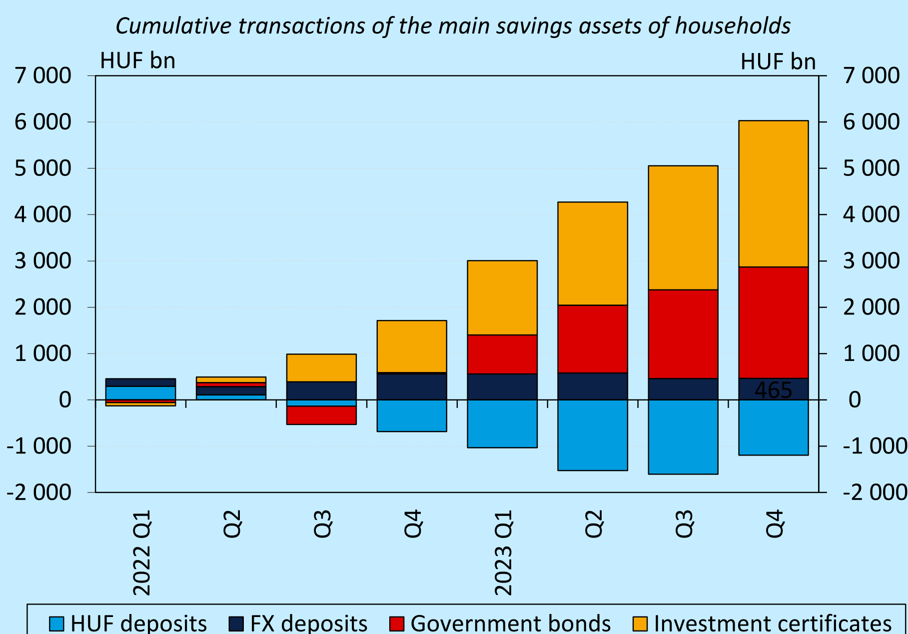
[57] The Liquidity Stress Index, which was prepared to capture the heterogeneity across institutions, aggregates (weighting by the size of bank) the post-stress liquidity shortfalls compared to the regulatory limit calculated at the level of the individual banks, expressed in percentage points. This allows us to draw conclusions with regard to the extent of a potential stress situation within the banking sector.

BOX 8: CHANGES IN CORPORATE AND HOUSEHOLD SAVINGS AND INVESTMENT FUND ASSETS AND THEIR IMPACT ON BANKS

Bank deposits from companies, households and investment funds account for around 50 per cent of the total assets of the banking system. To monitor changes in deposits, it is also worth looking at structural changes in savings in these sectors. The example of the US bank failures (Silicon Valley Bank, First Republic Bank) highlights the risks of deposit volatility and the central role of deposits in bank funding and liquidity management.

In 2023, household financing stood at 6.7 per cent of GDP, marking the highest level since 2015. A significant part of this, however, was not absorbed by the banking system. In 2022, households responded to the uncertainty caused by the outbreak of the war between Russia and Ukraine and the high inflation environment by increasing their propensity to save and restructuring their savings. They shifted their assets from sight deposits in banks with near-zero interest rates and term deposits in forint,[58] which tend to track the rising benchmark interest rate with a large gap and partially only, to government securities and investment funds offering more attractive yields. Consequently, the share of forint deposits in household financial assets fell by 4 percentage points between 2021 and the end of 2023 and now stands at 10 per cent, a historical low. While households accumulated substantial forced savings during the coronavirus epidemic, the high inflation environment has significantly reduced the real value of financial assets which, at the end of 2023, was below the level at the end of 2021.[59] As a result, after 2022 and 2023, the replenishment of real assets may continue in 2024. Demand for foreign currency deposits rose in 2022 due to the uncertainty caused by the war and substantial shifts in the EUR/HUF exchange rate. In 2023, a gradual reversal took place as risks eased, so that the share of foreign currency deposits in financial assets corrected to its end-2021 level. Overall, the household financing capacity as a share of GDP in 2022 was below the average of previous years, while 2023 was characterised by a significantly increased propensity to save.

Cumulative transactions of the main savings assets of households



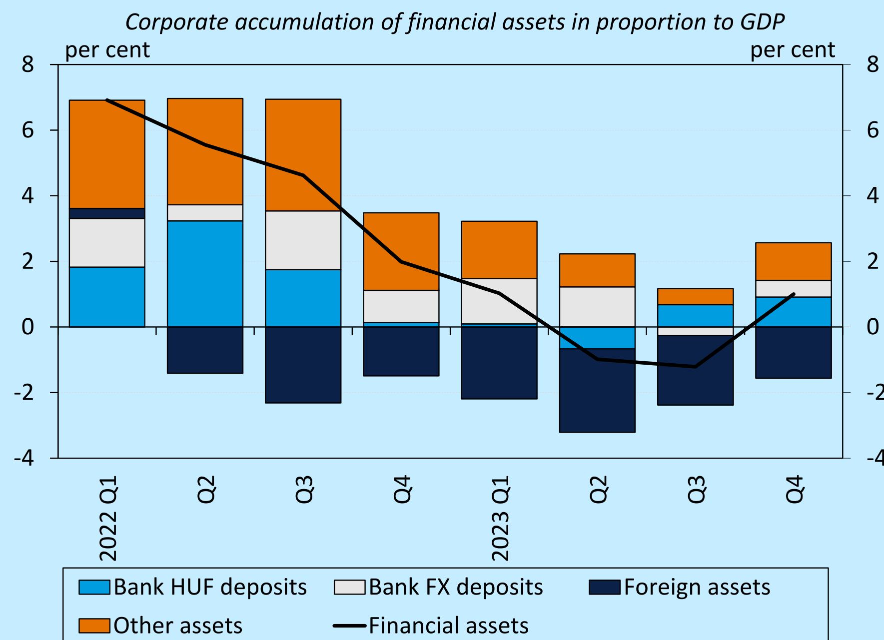
Source: MNB

[58] Hajnal Gábor – Hosszú Zsuzsanna – Ozoróczy Ákos Attila – Dancsik Bálint (2024): Estimating Deposit Interest Rate Pass-Through in Central and Eastern European Countries Using Wavelet Transform and Error Correction Model MNB Studies, 151.

[59] For more details on the evolution of the real value of household financial assets, see: Inflation Report for December 2023.

While the accumulation of financial assets by companies had steadily declined since early 2022, it started to increase at the end of last year. From January to September 2022, the bulk of financial asset accumulation in the corporate sector was tied to bank assets, with a higher share of HUF deposits and a slightly lower share of FX deposits. At the same time, the continued reduction in foreign assets was reflected in a decline in gross financial asset accumulation. The decline in the latter asset group continued in 2023, while the accumulation of bank deposits also declined, mainly affecting HUF deposits. The gross financial assets of companies fell between 2022 Q1 and 2023 Q3. This trend was probably due to the negative impact of increased operating and funding costs on financial reserves. However, in the last quarter of 2023, corporate financial asset accumulation expanded again, due mainly to an increase in bank assets, including HUF and FX sight deposits, but also to a slowdown in the decline of foreign assets.

Corporate accumulation of financial assets in proportion to GDP



Note: Consolidated transactions. Source: MNB

The net asset value of investment funds nearly doubled, primarily due to high household demand for investment fund shares. The net asset value of investment funds of around HUF 10,000 billion at the end of 2021 increased to HUF 17,500 billion by the end of 2023, as a combined effect of inflows and revaluations. A large portion of the increase – more than HUF 4 billion – was driven by households, which held one half of the net asset value of investment funds at the end of 2023. In a high interest rate environment, the asset mix of investment funds shifted towards bonds, which nearly quadrupled and increased their weight in total net asset value from 14 per cent to 30 per cent over the period. At the same time, the bank deposits of investment firms also increased by around 20 per cent, which led to a rechanneling of some household savings into the banking system.

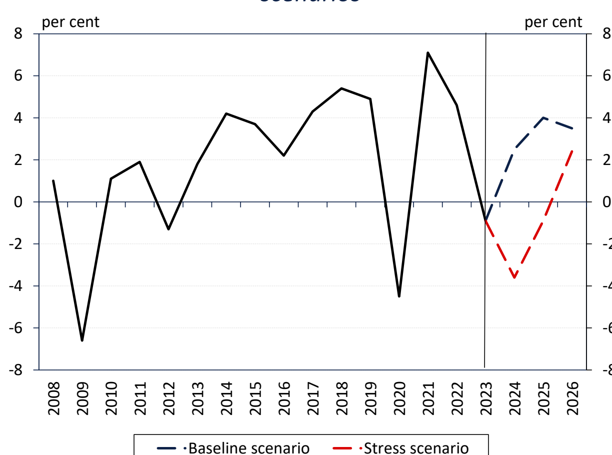
Bank deposits of the sectors under review accounted for 54 per cent of the banking system's total assets at the end of December 2021 and fell to 48 per cent at the end of December 2023. However, these changes did not pose a risk to financial stability.

8. Solvency stress tests show a robust level of available buffers even with the realisation of risks

The current macroeconomic environment features a number of risks, the potential realisation of which would have a negative impact on the functioning of the domestic banking sector. The shock resilience of the domestic banking system is examined in a negative scenario, in which heightened geopolitical tensions lead to a significant reduction in global economic activity, a delay in interest rate reduction cycles by the major global central banks and a protracted recovery in domestic consumption. In this scenario, the domestic economy faces a much less favourable outlook than in the baseline scenario; moreover, it also reflects a renewed higher inflation environment due to disruptions in supply chains and the volatility of financial and commodity markets and a much less favourable labour market situation.

While forward-looking credit risks have moderated since the last report, potential loan loss provisioning needs remain significant over the 2-year horizon of the stress scenario. Overall, other income components decrease substantially due to the continued normalisation of the interest rate environment. The positive interest rate shock in the stress path, however, continues to significantly increase the profitability of interest-bearing assets compared to the baseline scenario over the entire period of the stress test. While the ability of banks to accumulate capital will drop by about one half compared to the baseline scenario, banks will adjust to that decline in terms of the size of their actual dividend payments. The sectoral capital adequacy ratio of 21 per cent at the end of 2023 would be above 20 per cent for both the baseline and stress scenario by the end of the 2-year horizon of the stress test, but there is significant heterogeneity behind the average. In the first year of the stress test, all institutions meet the capital requirements. By the end of the 2-year period, however, some institutions experience a small capital shortage in the baseline and stress scenarios, while the level of free capital buffers of banks with capital surplus remains significant. Overall, the banking system would remain stable in the event of a severe stress event, and its lending capacity would also be maintained.

Chart 66: Annual growth rate of real GDP in the scenarios

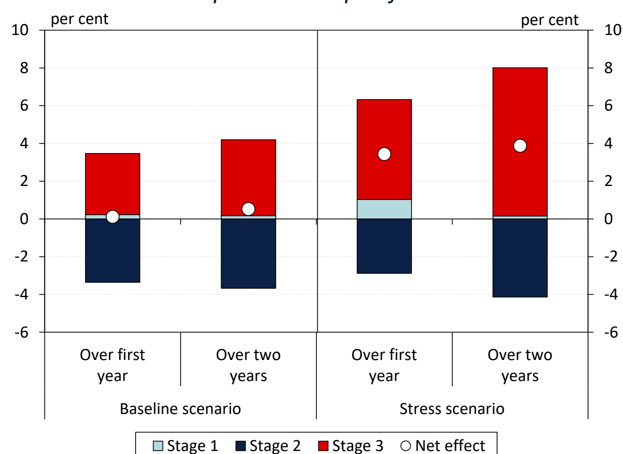


Note: The baseline scenario of the stress test is derived from the MNB's March 2024 Inflation Report, while our calculation results reflect the evolution of the mid-point of the forecast range. Source: MNB

8.1. Forward-looking risks have moderated, but significant credit losses may still materialise

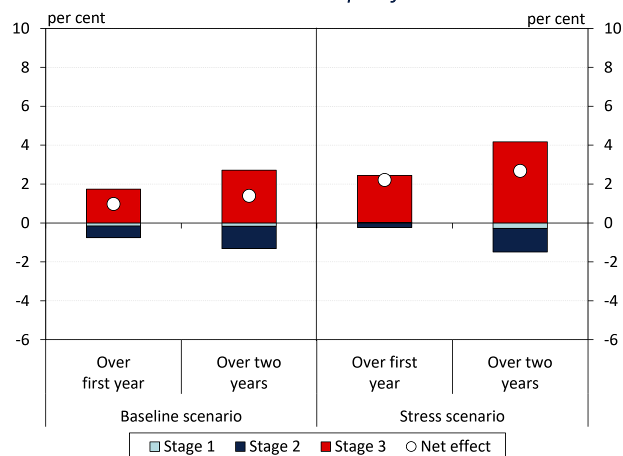
The risk narrative of the stress test is driven primarily by uncertainties in the global economy. A key element of the stress scenario is the prolonged and escalating geopolitical tensions in the international macroeconomic environment, which create significant uncertainty and thus increase volatility in financial and commodity markets. A slowdown in global disinflation may force globally important central banks to wait and delay the start of their rate-cutting cycle. As geopolitical risks intensify, disruptions in supply chains may lead to higher prices, which may also have domestic spill-over effects entailing potential upside inflation risks. The subdued performance of the relevant external markets leads to a sharp fall in exports, forcing companies to postpone investment and reduce their labour demand, which in turn results in a sharp rise in unemployment. In the adverse domestic economic environment, wage dynamics slow, and disposable incomes decline. Higher inflation and unfavourable labour market developments reinforce households' precautionary motives, leading to a rise in savings along with a simultaneous, significant fall in

Chart 67: Cumulative loan loss provision rate for the corporate loan portfolio



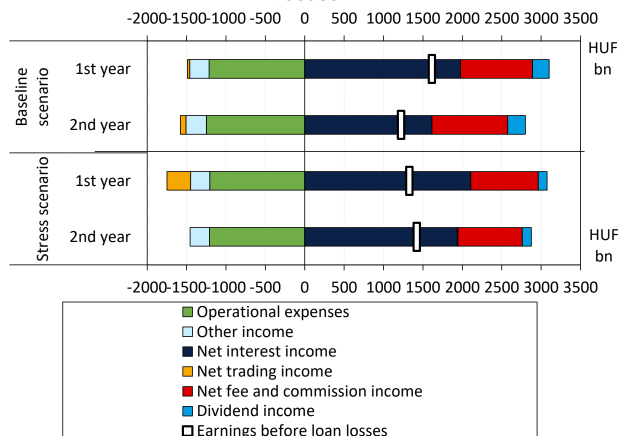
Note: Net generated loan loss provisions in proportion to the gross carrying amount of the corporate loan portfolio, grouped by end-of-period stages. Source: MNB

Chart 68: Cumulative loan loss provision rate for the household loan portfolio



Note: Net generated loan loss provisions in proportion to the gross carrying amount of the household loan portfolio, grouped by end-of-period stages. Source: MNB

Chart 69: Developments in earnings items before loan losses



Note: Earnings before loan losses do not include loan loss provisioning and the impact of bank levy and extra profit tax. Source: MNB

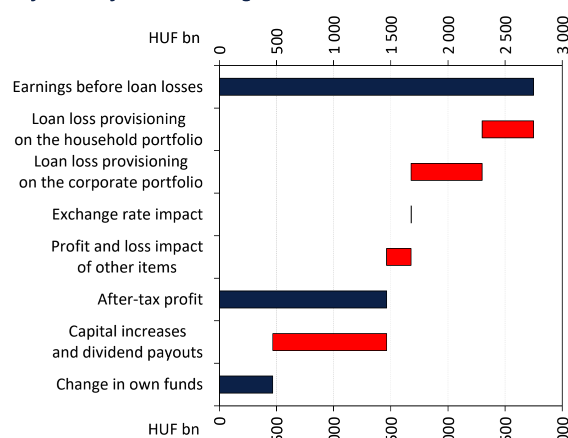
consumption. As a result, in the stress scenario, the GDP level falls by more than 11 per cent over two years, while household consumption drops even more substantially, by 12–13 per cent, compared to the baseline scenario, while employment falls by 177,000 over the two years of the stress scenario (Chart 66). Moreover, in line with financial and real shocks, we project a substantial weakening of the forint exchange rate and tighter interest rate conditions in the stress scenario.

Along with a decline in the forward-looking risks in bank portfolios, there continues to be a material increase in loan loss provisions in the stress scenario. Compared to our last report, the absolute level of expected losses has declined, primarily due to the improving composition of the initial bank portfolio. In addition, we applied the following assumptions about forward-looking risk factors for the private sector over the stress test horizon. In the corporate sector, the SME interest rate cap is phased out, which means that – in line with our previous practice – the associated risks of rising debt burden are assumed to be realised in 2024 Q2, by calculating higher loan loss provisions on the loans concerned. Based on the current regulations, the interest rate cap for the household segment is valid until 1 July 2024, while the risks arising in connection with the phase-out have been quantified as of the end of 2024. In the household segment, we considered a new risk regarding prenatal baby support loans signed in 2019 H2, the 5-year grace periods of which are due to expire at the end of 2024 and in early 2025. We quantified potential additional loan loss provisioning of around HUF 10–15 billion related to expected defaults. Overall, the total additional loan loss provisioning amounts to about 4 per cent of the aggregate gross book value over two years for the corporate portfolio (Chart 67) and less than 3 per cent for the household portfolio (Chart 68) over the entire stress scenario.

8.2. Shock resilience remains high even in a normalising interest rate environment

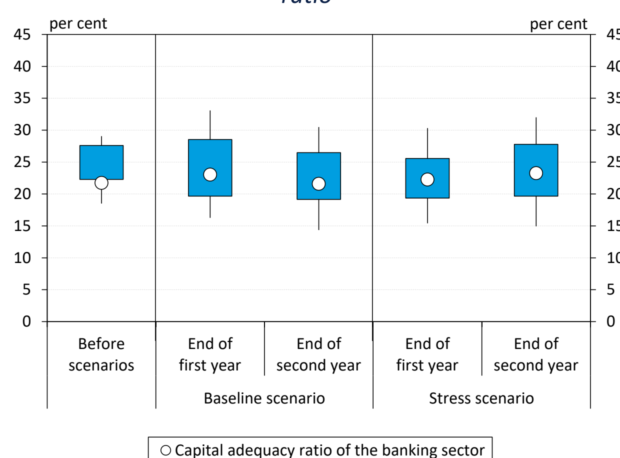
In the stress scenario, there is a significant shift in the composition of profitability. In the baseline scenario, we expect a continued decline in the yield environment, which causes a continued and significant decline in the historically high initial net interest income, while other earnings items remain generally stable over time (Chart 69). By contrast, the higher but also declining interest rate path in the stress scenario over the 2-year period results in cumulative net interest income that is higher roughly by HUF 450 billion. As in the previous stress tests, the

Chart 70: Changes in certain profit and loss items and own funds of the banking sector in the stress scenario



Note: Cumulative values over the 2-year scenario. The profit and loss impact of other items consists of the following elements: NDIF, IPF and Resolution Fund fees, bank levy, extra profit tax, capital needs of foreign subsidiaries and banking groups' tax expense. The level of dividend payments is also influenced by the profit and capital adequacy as well. Source: MNB

Chart 71: Distribution of banks by capital adequacy ratio



Note: Vertical line: 10–90 per cent range, rectangle: 25–75 per cent range. The sector-level average is weighted by the total risk exposure. Source: MNB

Table 3: Stress test results for various capital requirements

	Overall CET1 capital requirement		Overall capital requirement*	
	Baseline scenario 2025 Q2	Stress scenario 2025 Q2	Baseline scenario 2025 Q2	Stress scenario 2025 Q2
Capital need of banks (HUF bn)	0.0	1.1	9.4	14.4
Average capital need of banks** (percentage points)	0.0	1.6	1.7	3.0
Capital buffer of banks above requirement (HUF bn)	2 676	2 703	1 879	2 094
Average capital buffer of banks** (percentage points)	8.6	10.0	6.1	7.8

Note: * Transitional capital requirements for each quarter. ** TREA-weighted averages. Source: MNB

difference is mainly related to interest revenue on central bank assets, while a smaller part is related to interest revenue on securities, which is significantly reduced by higher interest expenses on deposits. Net interest income on household and corporate loans is almost identical in the two scenarios, reflecting the fact that the revenue-increasing effect of higher interest rates in the stress scenario is largely offset by the loss of interest revenue on the growing portfolio of non-performing loans and revenue losses due to lower loan growth compared to the baseline scenario. Furthermore, the interest rate shock in the stress scenario reduces trading income due to losses on assets carried at fair value, while the weaker real economic activity is associated with lower overall fee and commission income and dividend income. Each of the three components reduces the profit in the stress scenario by roughly HUF 200 billion, offsetting the higher net interest income.

Significantly lower capital accumulation can be achieved in the stress scenario. In the stress scenario, loan loss provisioning, as well as other items including corporate income tax, the regular bank levy and the extra profit tax, jointly reduce the sector's earnings by around 50 per cent over the 2-year horizon. The total after-tax profit over two years in the stress scenario would be HUF 1,400 billion, which means that banks would lose about one third of their profits compared to the baseline scenario. Shocks prevail at the beginning of the horizon, and initial losses are only partially offset by slowly improving earnings items. The sector thus suffers more significant losses in the first year of the stress scenario compared to the baseline, while over two years, the total capital accumulation is halved, even taking into account the forced adjustment of banks in dividend payments (Chart 70).

At the sector level, only a small capital shortage would arise in the case of a severe stress event, and thus the lending capacity of the banking system would not be affected. The sectoral capital adequacy ratio of 21 per cent in December 2023, including the full interim profit, would remain above 20 per cent for both the baseline and stress scenarios by the end of the two-year horizon of the stress test; there is, however, a significant heterogeneity behind the average (Chart 71). The more favourable sectoral capital adequacy in the stress scenario compared to the baseline is mainly driven by dynamic balance sheet assumptions of more subdued credit dynamics implying a smaller total risk exposure amount (TREA). Moreover, due to the dynamic development of profitability and capital adequacy, dividend payments also differ for most

institutions in the two scenarios, which means that sectoral dividend payments are around HUF 350 billion lower in the stress scenario to meet regulatory requirements. Overall, while there would be no capital shortage in the sector in the first year of the assessment horizon, by the end of the horizon, some institutions would have a small capital shortage relative to the overall capital requirement (OCR) level in both the baseline and stress scenarios (Table 3). However, for the majority of institutions, significant free buffers would remain, largely due to the fact that the total risk exposure amount would be more than 10 per cent lower compared to the baseline.

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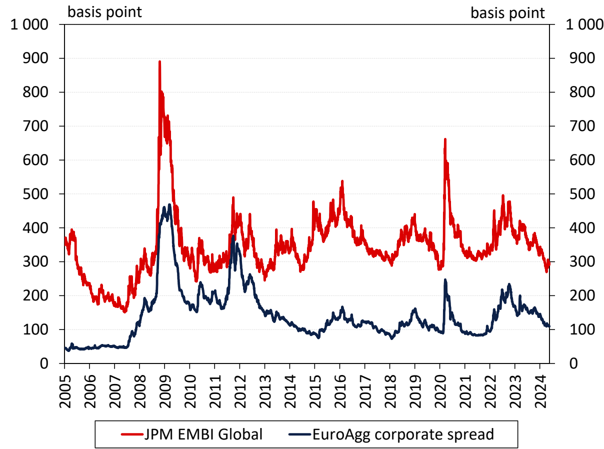
APPENDIX: MACROPRUDENTIAL INDICATORS

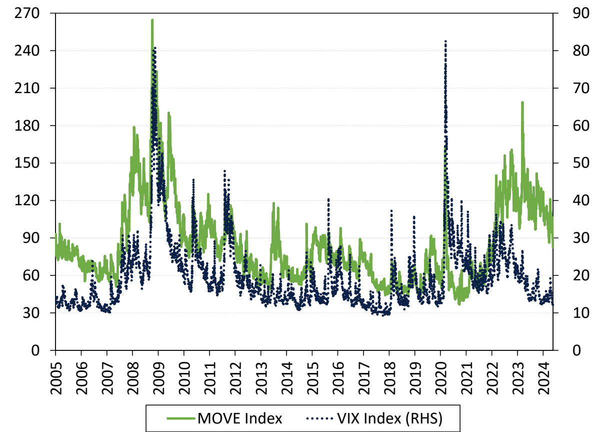
1. Risk appetite

Chart 1: Primary risk indicators



Source: Bloomberg

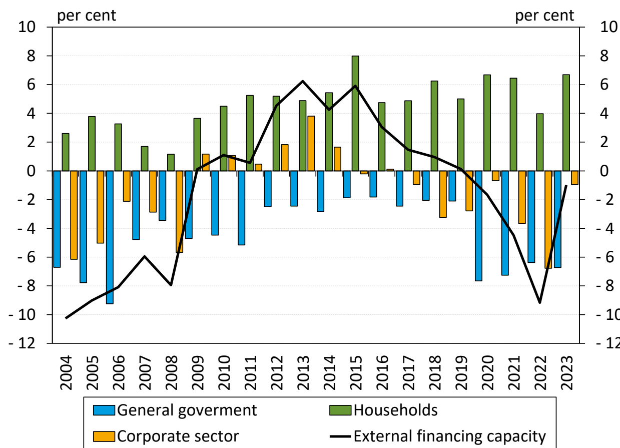
Chart 2: Implied volatility of the primary markets



Source: Bloomberg

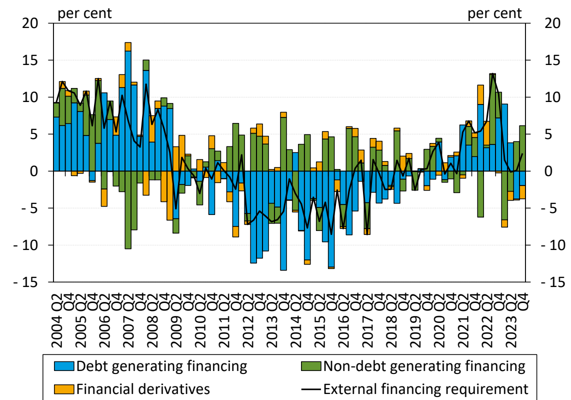
2. External balance and vulnerability

Chart 3: Net financing capacity of the main sectors and external balance as percentage of GDP



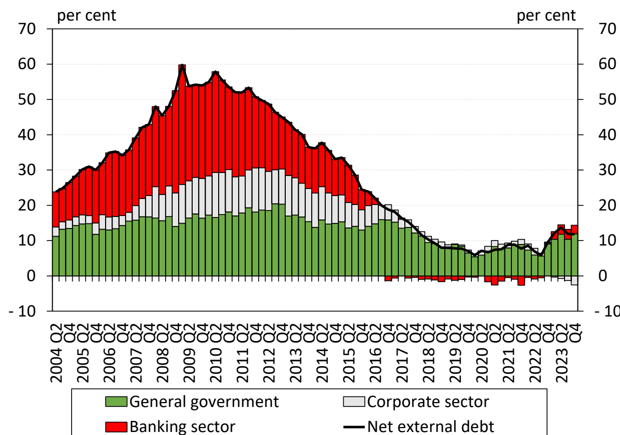
Source: MNB

Chart 4: External financing requirement and its financing as a percentage of GDP



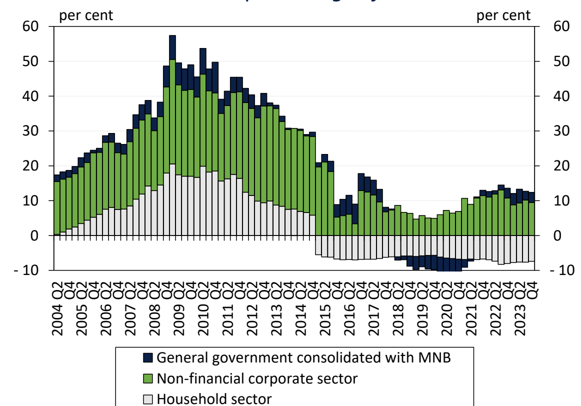
Source: MNB

Chart 5: Net external debt as a percentage of GDP



Source: MNB

Chart 6: Open FX position of the main sectors in the balance sheet as percentage of GDP



Source: MNB

3. Macroeconomic performance

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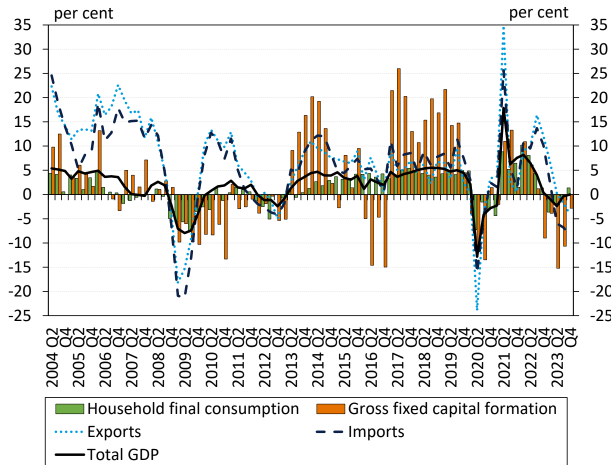

Source: HCSO

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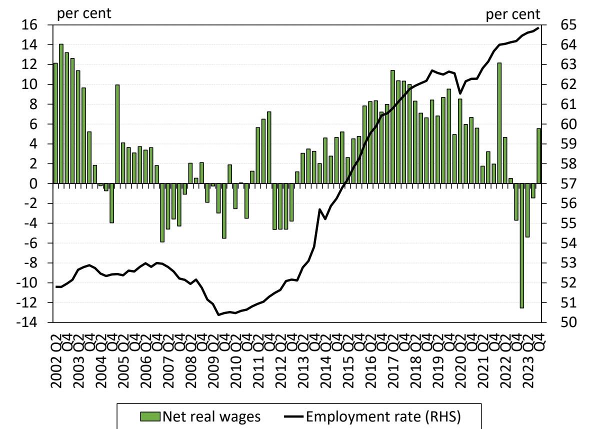
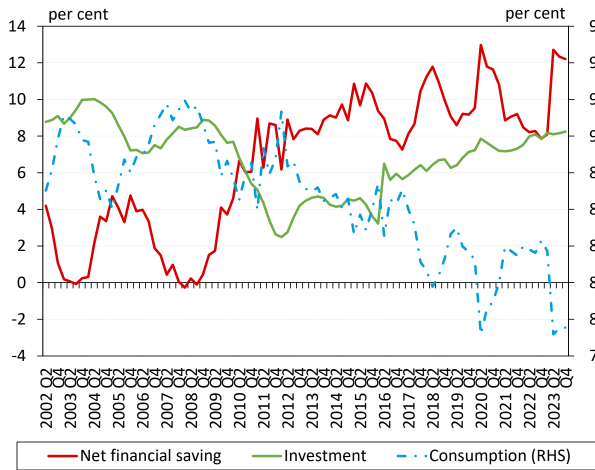


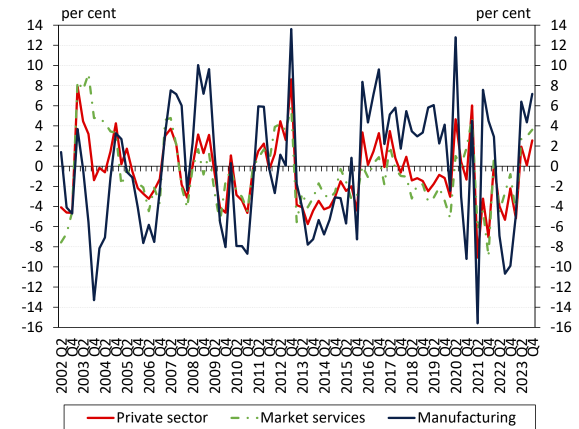
Source: HCSO

Chart 9: Use of household income as a ratio of disposable income



Source: HCSO, MNB

Chart 10: Corporate real unit labour cost in the private sector (annual growth rate)



Source: HCSO, MNB

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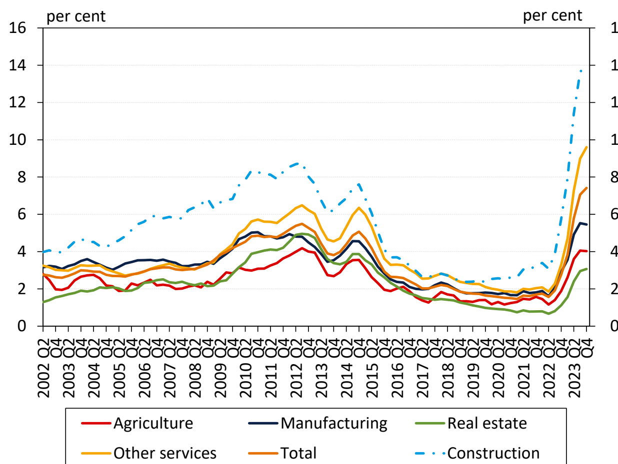

Source: Opten, MNB, HCSO

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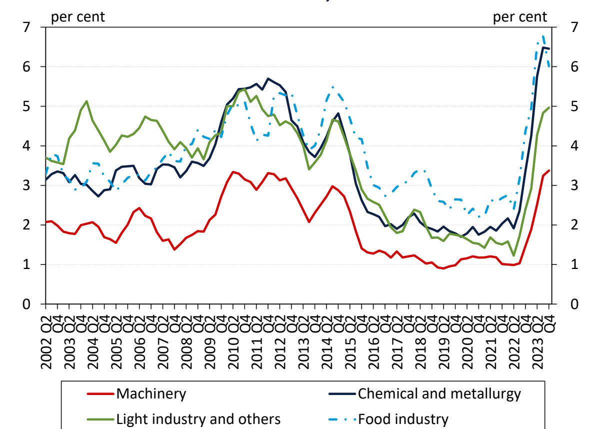
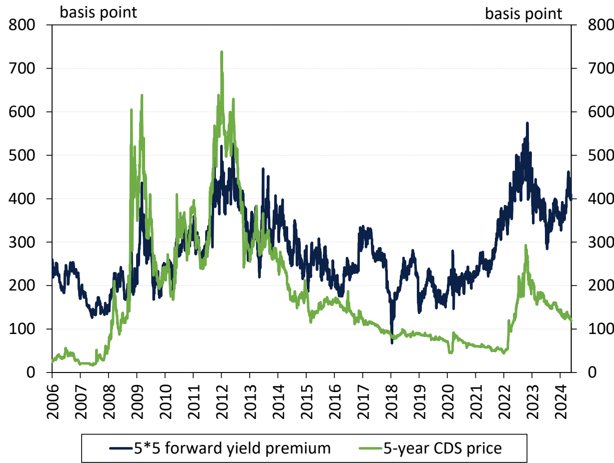


Source: Opten, MNB, HCSO

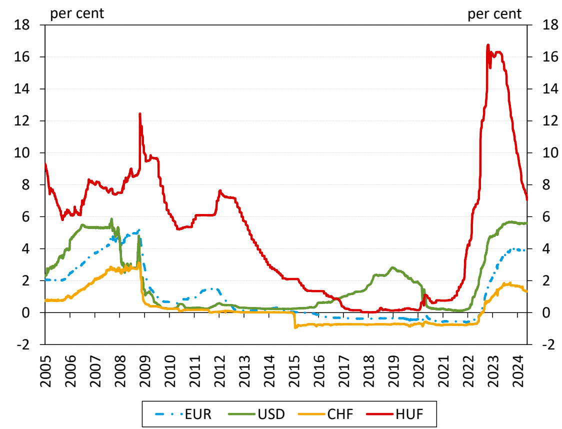
4. Monetary and financial conditions

Chart 13: Long-term sovereign default risk and forward premium of Hungary



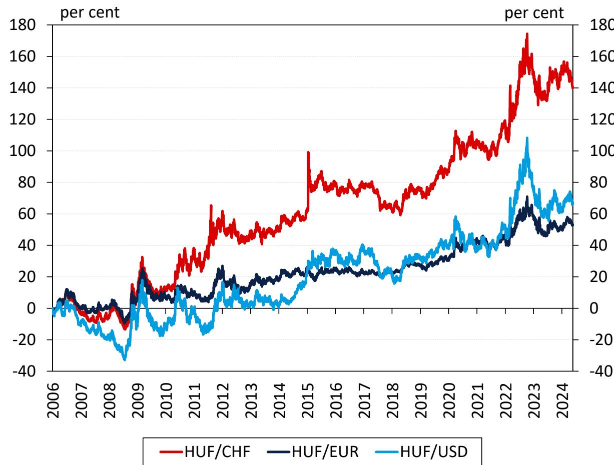
Source: Reuters, Bloomberg

Chart 14: Three-month EUR, USD, CHF and HUF money market interest rates (LIBOR and BUBOR fixing)



Source: Bloomberg

Chart 15: HUF/EUR, HUF/USD and HUF/CHF exchange rates changes compared to 2 January 2006



Source: Reuters

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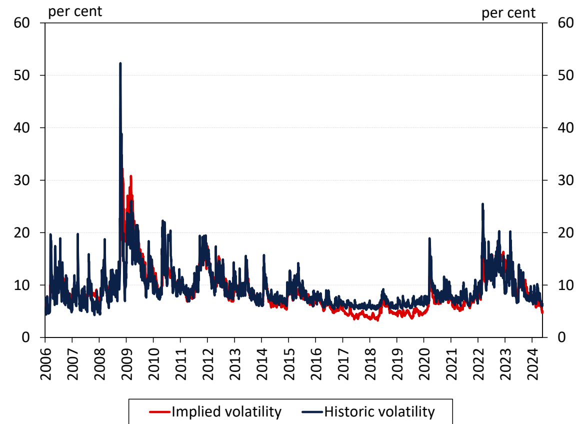
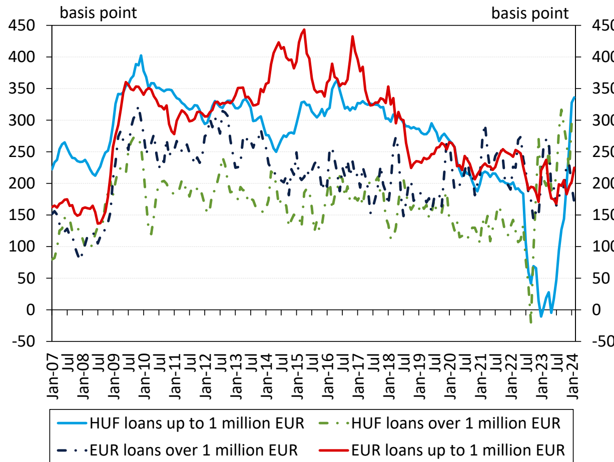


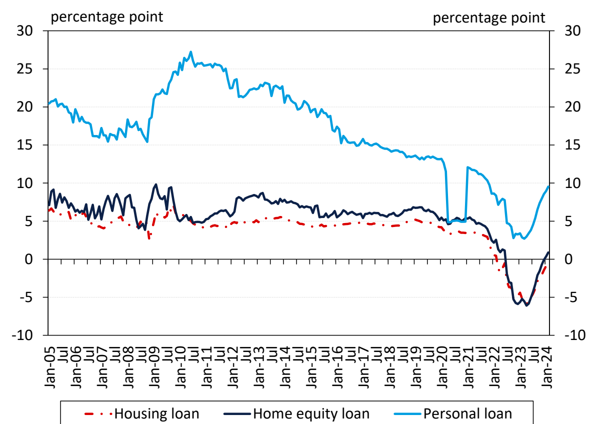
Source: Bloomberg, MNB

Chart 17: Interest rate premium of new loans to non-financial enterprises (over 3-month BUBOR and EURIBOR, respectively, 3-month moving average)



Source: MNB

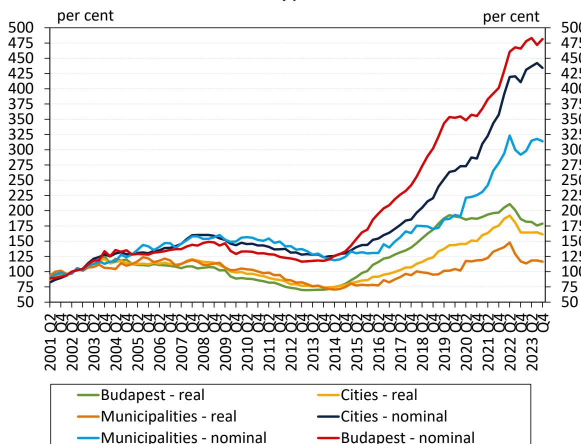
Chart 18: Interest rate premium of new HUF loans to households (over 3-month BUBOR)



Source: MNB

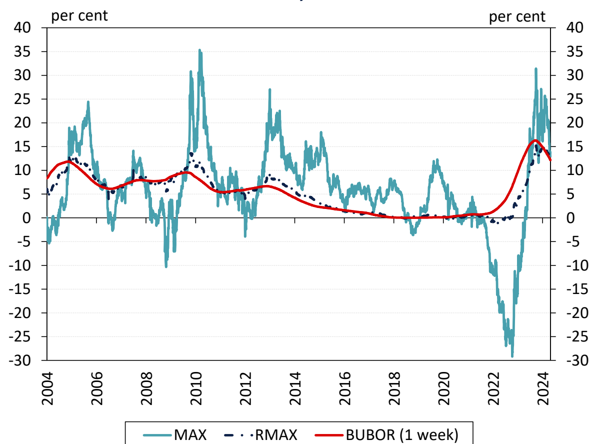
5. Asset prices

Chart 19: MNB house price index breakdown by settlement type



Source: MNB

Chart 20: Annualised yields on government security indices and money markets



Source: Government Debt Management Agency, MNB

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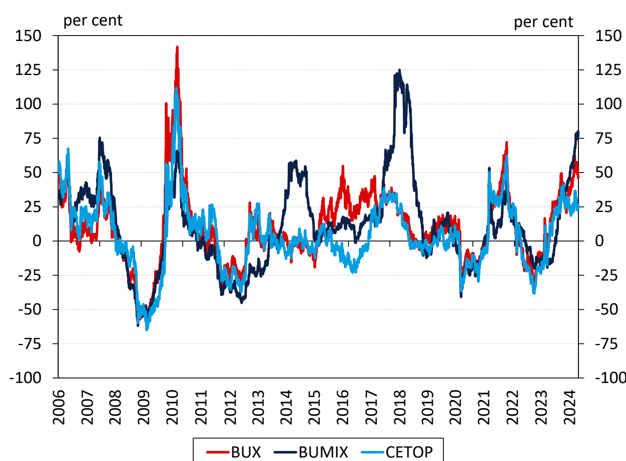
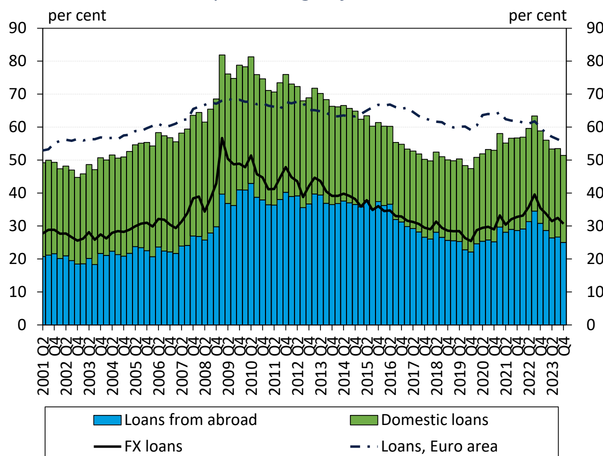


Source: BSE

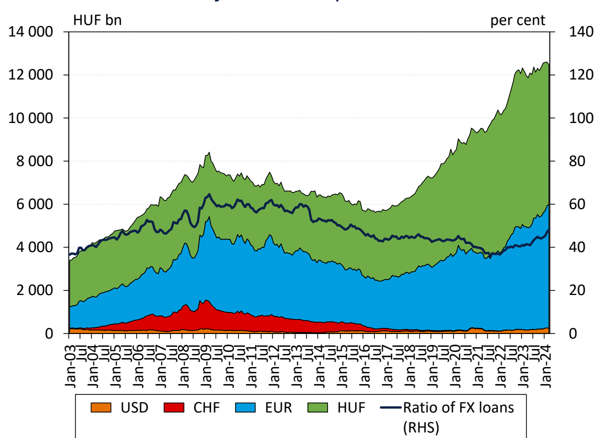
6. Risks of the financial intermediary system

Chart 22: Indebtedness of non-financial corporations as percentage of GDP



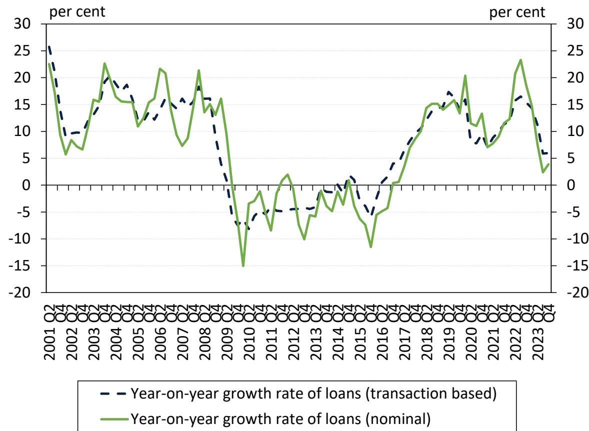
Source: MNB, ECB, Eurostat

Chart 23: Denomination structure of domestic bank loans of non-financial corporations



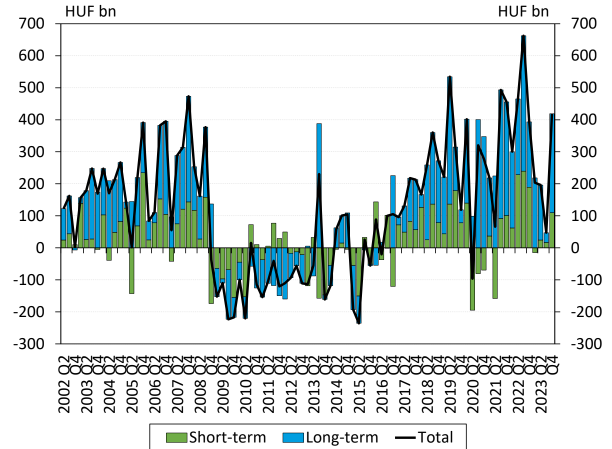
Source: MNB

Chart 24: Annual growth rate of loans provided to non-financial corporations by the financial intermediation system



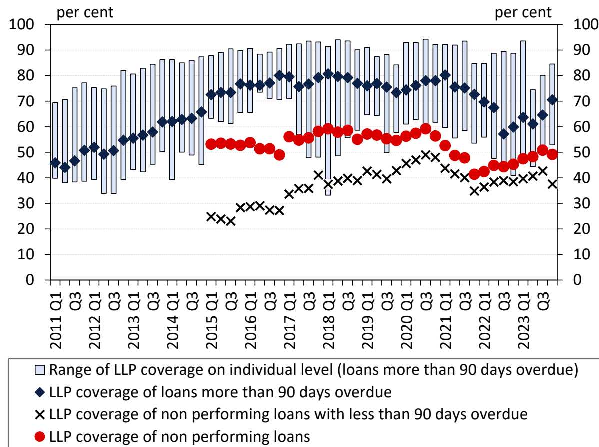
Source: MNB

Chart 25: Lending transactions to the non-financial corporate sector broken down by maturity



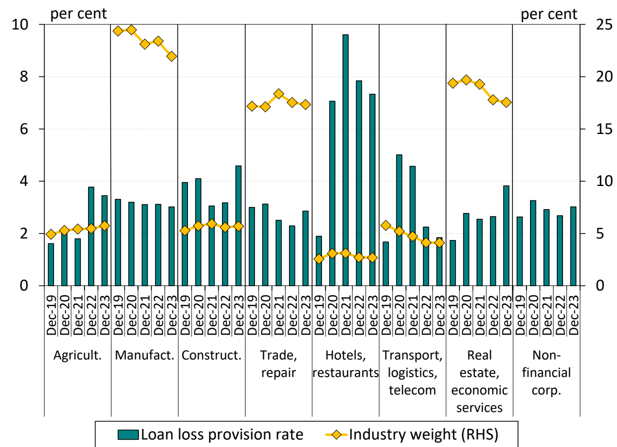
Source: MNB

Chart 26: Loan loss coverage ratio for non-performing corporate loans in the credit institutions sector



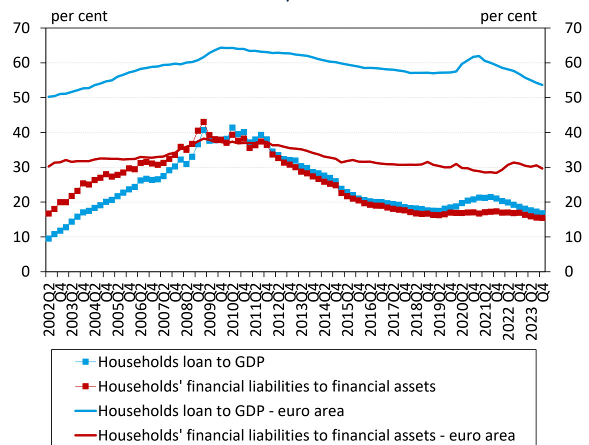
Source: MNB

Chart 27: Provisioning on loans of non-financial corporations by industry



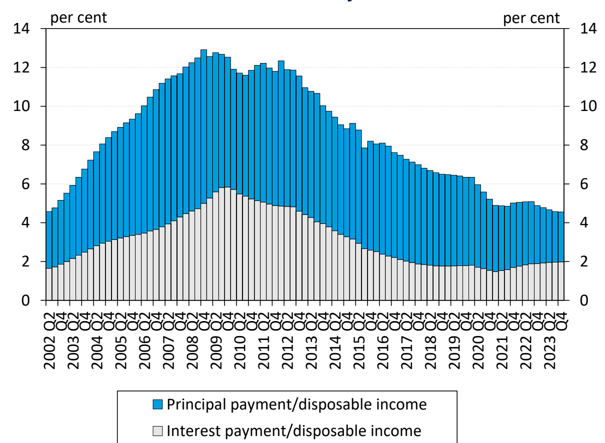
Source: MNB

Chart 28: Indebtedness of households in international comparison



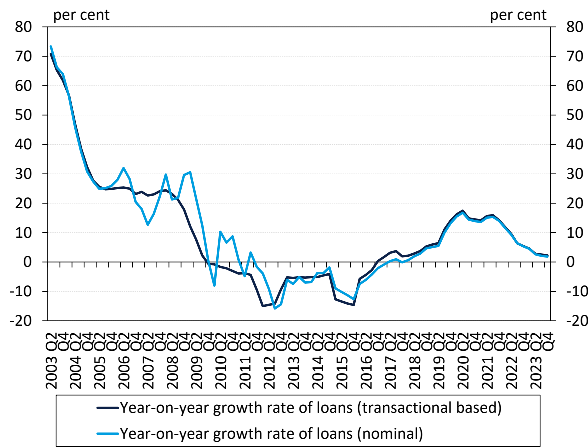
Source: MNB, ECB

Chart 29: Debt service burden of the household sector



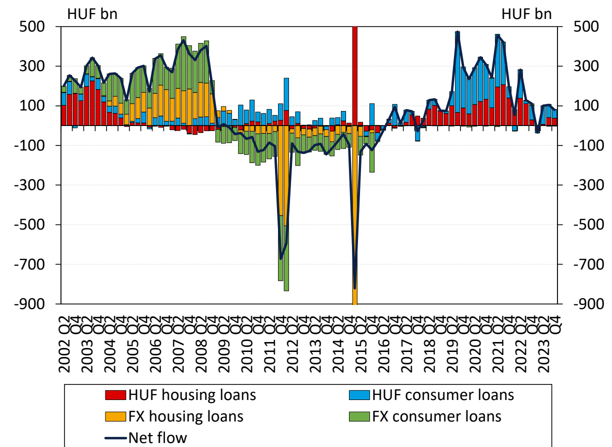
Source: MNB

Chart 30: Annual growth rate of total domestic household loans



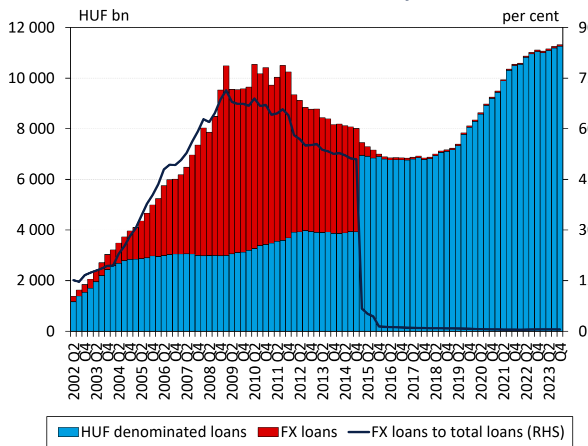
Source: MNB

Chart 31: Transactions of household loans broken down by credit purpose and denomination



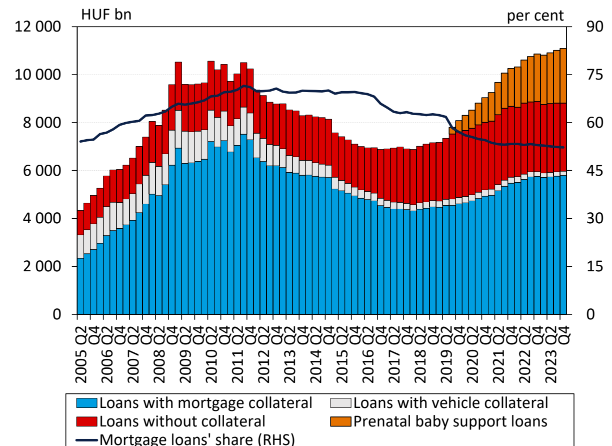
Source: MNB

Chart 32: The denomination structure of household loans



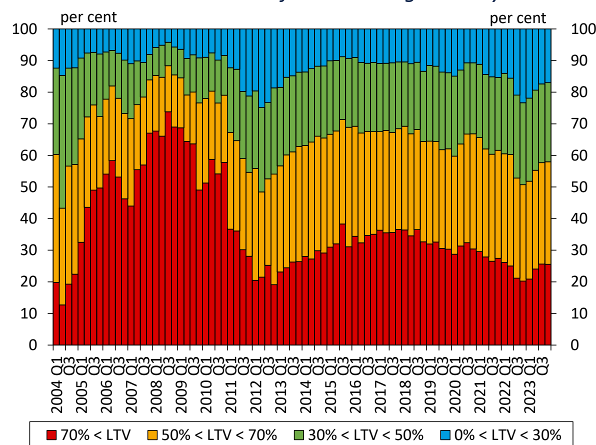
Source: MNB

Chart 33: Household loans distribution by collateralisation



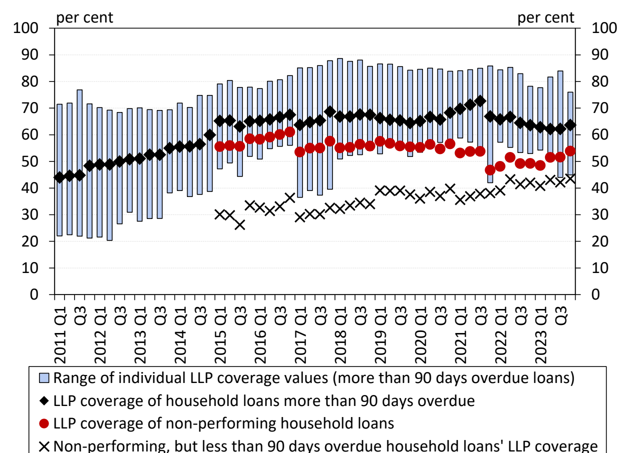
Source: MNB

Chart 34: Distribution of new housing loans by LTV



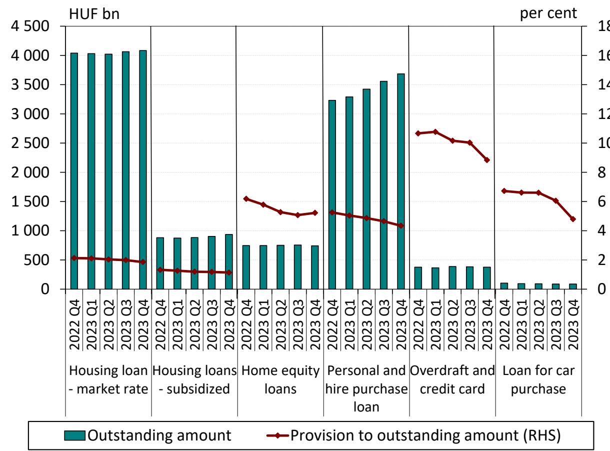
Source: MNB

Chart 35: Loan loss coverage ratio of non-performing household loans



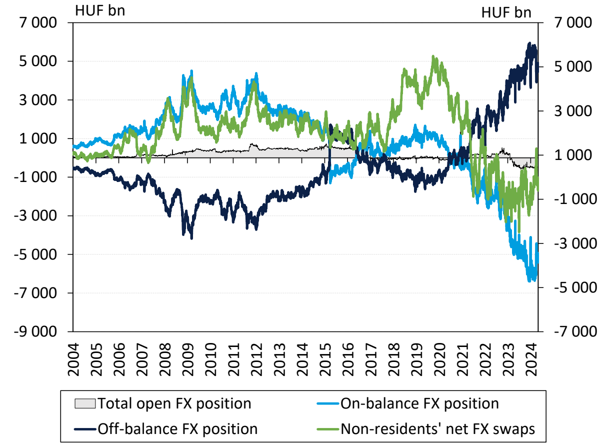
Source: MNB

Chart 36: Provisioning on household loans of financial institutions



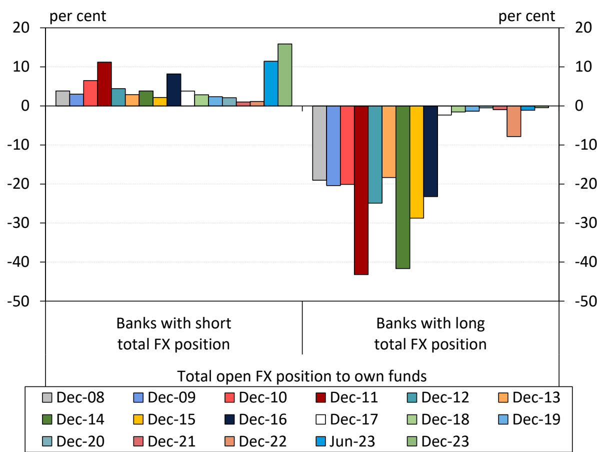
Source: MNB

Chart 37: Open FX position of the domestic banking sector



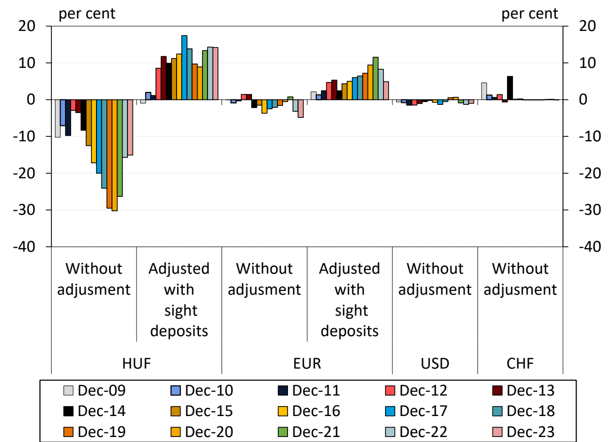
Source: MNB

Chart 38: The exchange rate exposure of the banking sector



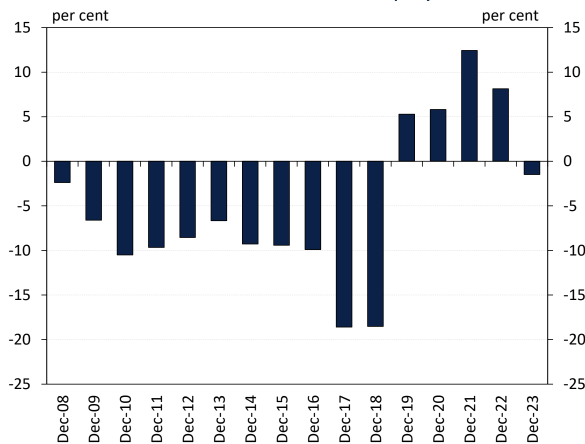
Source: MNB

Chart 39: 90-day re-pricing gap of the banking sector



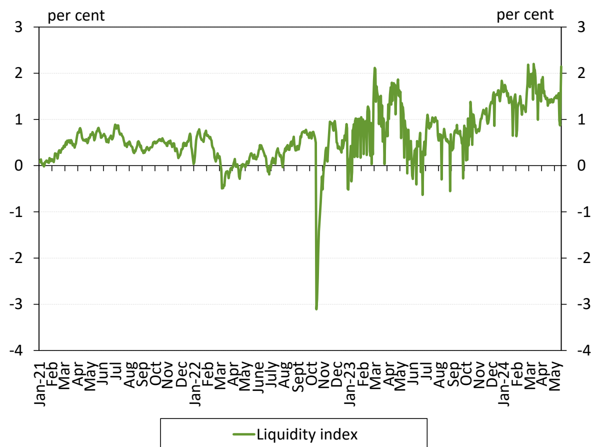
Source: MNB

Chart 40: Estimated maximum loss based on interest rate risk stress tests relative to equity



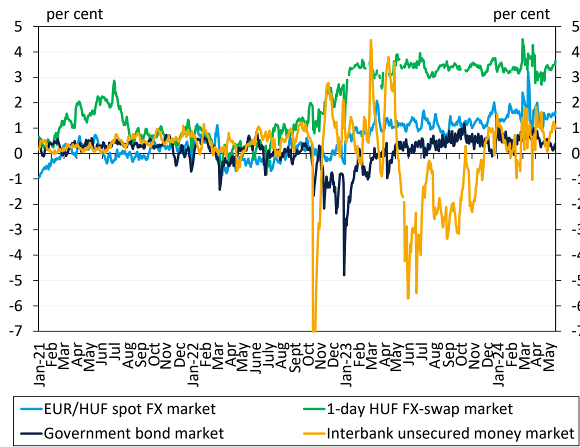
Source: MNB

Chart 41: Liquidity index



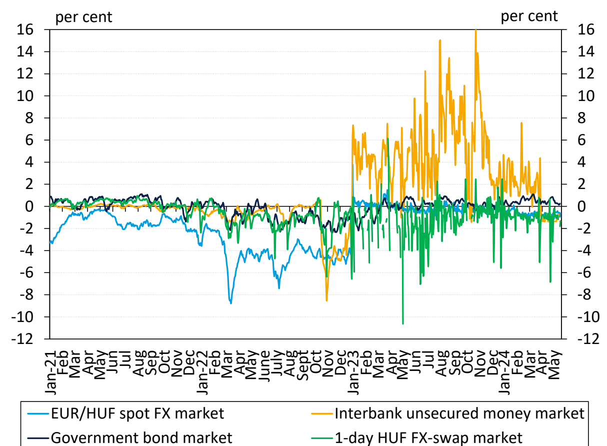
Source: MNB, KELER, Bloomberg

Chart 42: Liquidity indices of sub-markets



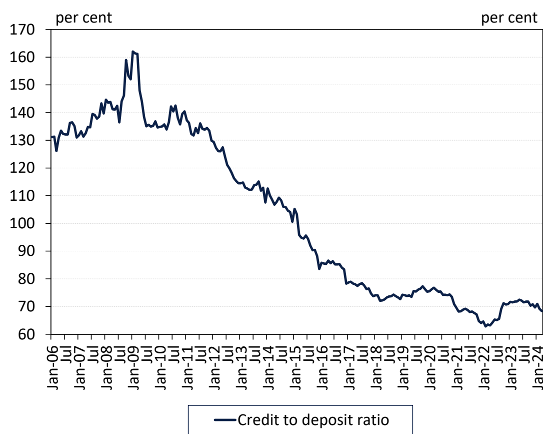
Source: MNB, KELER, Bloomberg

Chart 43: Liquidity sub-indices of bid-ask spreads of the major domestic financial markets)



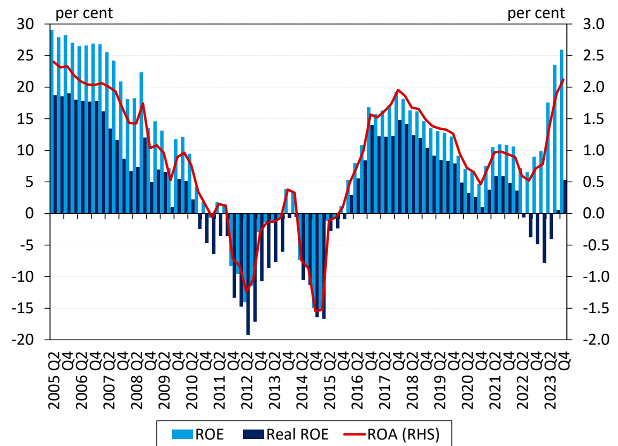
Source: MNB, KELER, Bloomberg

Chart 44: Credit to deposit ratio of the banking sector



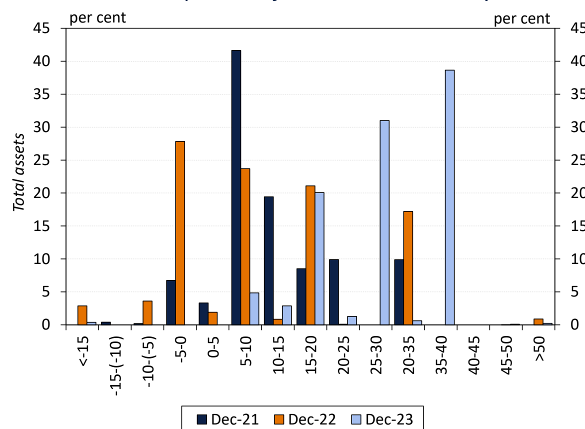
Source: MNB

Chart 45: ROA, ROE and real ROE of the credit institution sector



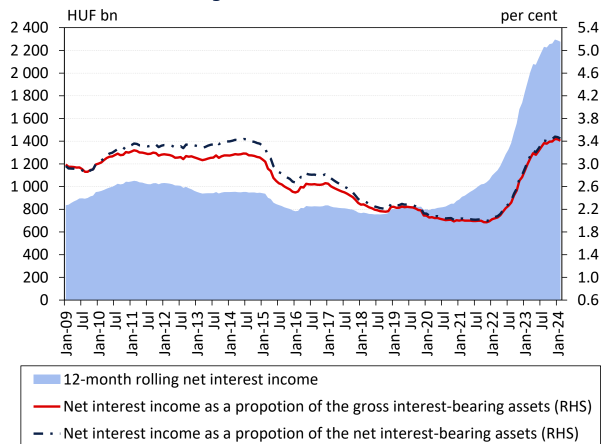
Source: MNB

Chart 46: Dispersion of banks' total assets by ROE



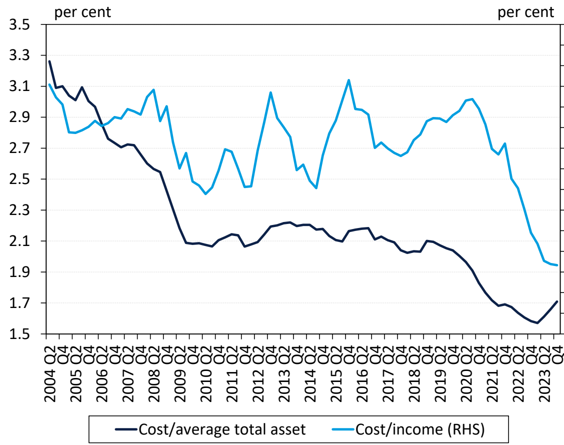
Source: MNB

Chart 47: Net interest income as a proportion of the gross and net interest bearing assets in the credit institution sector



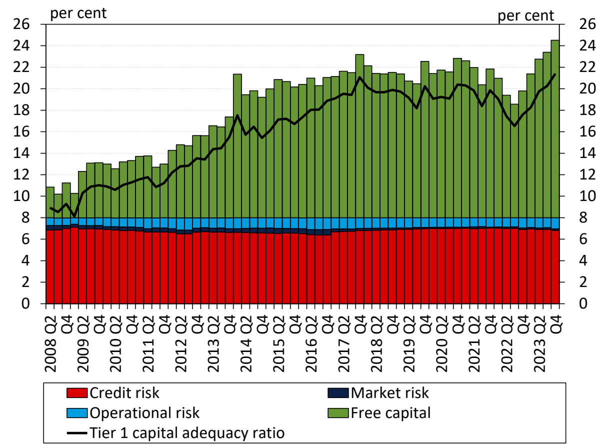
Source: MNB

Chart 48: Operating efficiency indicators of the banking sector



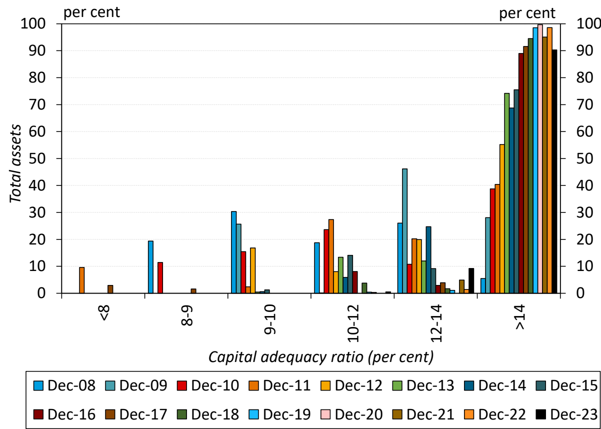
Source: MNB

Chart 49: Banks' capital adequacy ratio (CAR) and Tier 1 capital adequacy ratio



Source: MNB

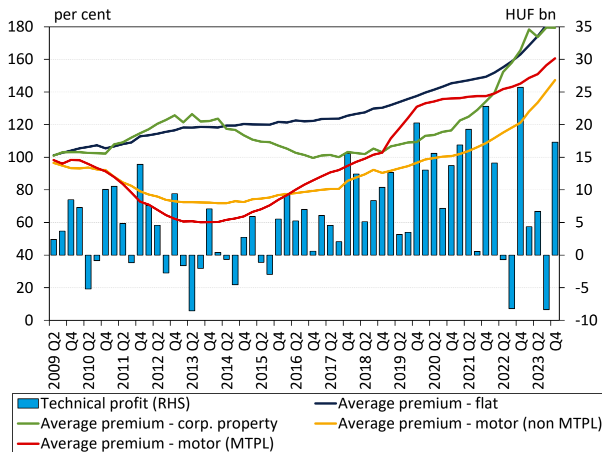
Chart 50: Dispersion of banking sector's total assets by capital adequacy ratio



Source: MNB

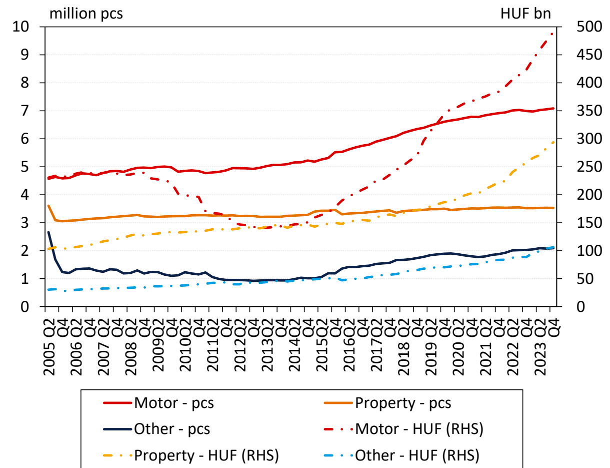
7. Institutional investors

Chart 51: Underline data of insurance tax



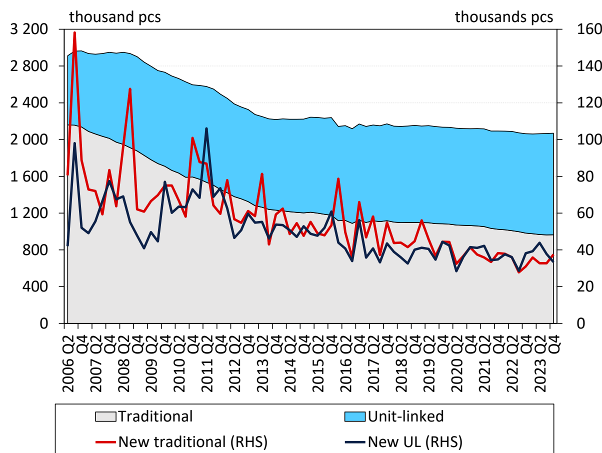
Source: MNB

Chart 52: Development of the outstanding amount of non-life insurance



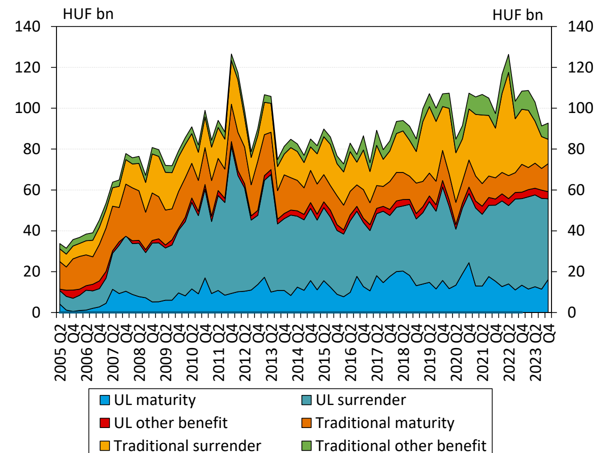
Source: MNB

Chart 53: Development of the outstanding amount of life insurance



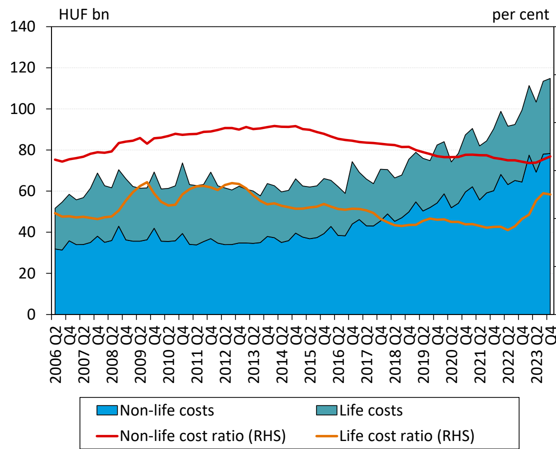
Source: MNB

Chart 54: Development of the outstanding amount of life insurance benefits



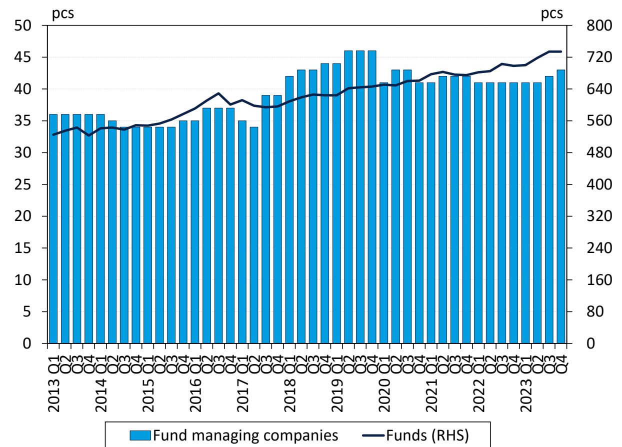
Source: MNB

Chart 55: Costs in the insurance sector



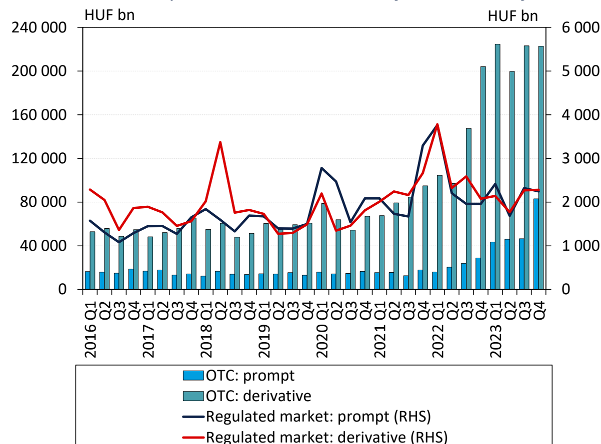
Source: MNB

Chart 56: Number of investment fund managing companies and investment funds



Source: MNB

Chart 57: Capital market turnover of investment firms



Source: MNB

Notes to the appendix

The chart date (e.g. 2020) means the end of the year (the 31st of December) unless indicated otherwise.

Chart 1:

The increased value of the indicator shows declining risk appetite or increasing risk aversion.

Chart 2:

VIX: implied volatility of S&P 500, MOVE: implied volatility of US Treasuries (Merrill Lynch).

Chart 4:

The fundamental development of debt is not influenced by the conversion between unallocated and bullion balances, thus this effect has been excluded.

Chart 5:

Excluding intercompany loans.

Chart 6:

The open FX position of households has turned because of the FX conversion. The compensation of this is shown at banks temporarily, then is was got to the consolidated state with the MNB.

Chart 9:

Disposable income is estimated by the MNB using household consumption, investment and financial savings data.

Chart 11:

Number of bankruptcy proceedings of legal entities, aggregated as of the date of publication and cumulated for 4 quarters, divided by the number of legal entities operating a year before. It also includes economic organizations subject to liquidation proceedings from bankruptcy, voluntary liquidation and forced deletion proceedings.

Chart 12:

Number of bankruptcy proceedings of legal entities, aggregated as of the date of publication and cumulated for 4 quarters, divided by the number of legal entities operating a year before. It also includes economic organizations subject to liquidation proceedings from bankruptcy, voluntary liquidation and forced deletion proceedings.

Chart 13:

The 5-year forward forint risk premium as of 5 years from now, compared to the euro forward yield (3-day moving average) and the 5-year Hungarian credit default swap spread.

Chart 16:

Historic volatility: weighted historic volatility of the exchange rate (GARCH method). Implied volatility: implied volatility of quoted 30-day ATM FX options.

Chart 17:

Spread on the 3-month BUBOR and EURIBOR. Loans with floating interest or with up to 1-year initial rate fixation. Adjusted for money market loans > 1M EUR since 2015.

Chart 18:

Spreads based on the APR.

Chart 19:

2002 average = 100 per cent.

Chart 22:

Nominal values, on current rates. Based on consolidated data (previously only unconsolidated data were available for the euro area).

Chart 25:

Exchange rate adjusted values.

Chart 26:

The individual loan loss coverage range covers the banks with at least 2 per cent share in corporate lending.

Chart 27:

In brackets below the names of sectors the weights within corporate credit portfolio are indicated for end-of-observation period.

Chart 34:

The category 0-30 per cent contains also the loans disbursed without mortgage before 2008.

Chart 35:

The range of LLP coverage on the individual level refers to the larger banks.

Chart 37:

An increase in the swap stock stands for swaps with a long forint spot leg. Based on the daily FX reports of credit institutions. Calculated from swap transactions between credit institutions and non-resident investors. Revisions due to reporting errors and non-standard transactions can lead to significant subsequent modifications of the data series. The data series does not include swap transactions between branches, specialised credit institutions, cooperative credit institutions and non-resident investors. The swap stock is the sum of termin legs calculated at actual foreign exchange rates.

Chart 39:

From December 2019, the values for the security portfolio, the IRS portfolio, as well as for loans and liabilities were calculated on a cashflow basis instead of a contract basis. In addition, for loans and liabilities, from December 2019 onwards, we could only take into account the remaining maturities, not the time remaining until repricing.

Chart 40:

The interest rate risk stress test indicates the two-year projected result of an extreme interest rate event; in this scenario this event is a parallel upward shift of the yield curve by 300 basis points. For calculating the results, from December 2019 onwards, we applied the interest rate risk model detailed in Box 10 of the December 2019 Financial Stability Report. While for earlier calculations we assumed shocks of each currency's yield curve, for these new calculations we only assumed the shock-like upward shift of the HUF curve.

Chart 41:

A rise in the liquidity index indicates an improvement in the liquidity of the financial markets. The indicator is the unweighted average of the aggregate liquidity ratios of the sub-markets shown in Chart 42.

Chart 42:

Each aggregate liquidity index of a sub-market is the unweighted average of exponential moving averages normalized by the mean and standard deviation of the values of four sub-indices (number of transactions, average transaction size, bid-ask spread, and return to volume indices) between 2013 and 2017. An increase in the aggregate liquidity index indicates an increase in the liquidity of the given sub-market.

Chart 43:

A rise in the indices represents a narrowing bid-ask spread, thus an increase in the tightness and liquidity of the market. The liquidity-index of HUF FX swap market includes the data of USD/HUF and EUR/HUF segments, taking into account tom-next, overnight and spot-next transactions. The earlier version of the liquidity index included only the tom-next USD/HUF transactions.

Chart 44:

Client loans include loans and bonds of non-financial institutions, household loans, loans and bonds of financial and investment enterprises, government loans, municipal loans and municipal bonds. Client deposits include the deposits of non-financial institutions, household deposits, deposits of money market funds, deposits of financial and investment enterprises, government deposits and municipal deposits. The loan-to-deposit ratio is exchange-rate-adjusted with respect to the last period.

Chart 45:

ROE: pre-tax profit/average (equity - balance sheet profit).

ROA: pre-tax profit/average total assets.

Interim data are annualised.

Pre-tax profit: previous 12 months.

Average total assets: mean of previous 12 months.

Average (equity - balance sheet profit/loss): 12 month moving average.

Deflator: previous year same month=100 CPI (per cent).

Chart 46:

Pre-tax profit.

Chart 47:

Based on aggregated individual, non-consolidated data.

Net interest income: 12-month rolling numbers, the difference of interest revenue and interest expenditure.

Gross interest bearing assets: 12-month average numbers, total exposure.

Net interest bearing assets: 12-month average numbers, exposure minus the provision.

Chart 48:

Cost: previous 12 months.

Income: previous 12 months.

Average total asset: mean of previous 12 months.

Chart 49:

Capital adequacy ratio (CAR) = (total own funds for solvency purposes/minimum capital requirement)*8 per cent.

Tier 1 capital adequacy ratio = (tier 1 capital after deductions/minimum capital requirement)*8 per cent.

Chart 52:

Motor insurance premiums contains insurance tax from 2019.

Chart 57:

Sum turnover of investment firms and credit institution.

Ferenc Deák

(17 October 1803 – 28 January 1876)

Politician, lawyer, judge at a regional high court, member of parliament, minister for justice, often mentioned by his contemporaries as the ‘wise man of the homeland’ or the ‘lawyer of the nation’. Eliminating the ever-recurring public law disputes and clarifying the relationship between the ruling dynasty and the hereditary provinces, he not only reinforced the constitution and the existence of the nation but also paved the way for the development as well as the material and intellectual enrichment of Hungary.

Deák was actively involved in preparing the laws for the parliamentary period between 1839 and 1840, and he became an honorary member of the Hungarian Academy of Sciences in 1839. After the death of his elder brother in 1842, Deák the landowner liberated his serfs and voluntarily undertook to pay taxes proving that he was an advocate of economic reforms not only in words but also in deeds. He refused to fill the position of delegate to the 1843/44 parliament because he disagreed with the idea of having to be bound by the instructions received as delegate, and as a moderate political thinker he had his concerns about the radical group led by Kossuth.

He remained level-headed also with regard to the evaluation of the events of 1848, he was afraid of violence and rejected it as a political tool. All the same, he accepted the post of minister for justice in the government of Lajos Batthyány. In December 1849 he was arrested for revolutionary activities, but later on, after being tortured for information, he was released. From then on he acted as the intellectual leader of the national passive resistance movement, and believed from the very beginning that Austrian centralisation was doomed to fail due to its inherent faults. He became the leader of the Address Party in the parliament of 1861, and even though they failed to bring the monarch to accept their ideas, he increasingly managed to take over the initiative over time.

Based on his earlier proposals, in 1865 Deák published his so-called Easter Article – which radically influenced Hungarian politics of the time – and until 1867 he virtually devoted all his time to reaching a compromise with the Hapsburg dynasty. After the compromise between Austria and Hungary ratified in 1867, Hungary was able to return to the path of social and economic development.

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