

FINANCIAL STABILITY REPORT NOVEMBER 2023



MAIN TAKEAWAYS OF THE REPORT

THE HUNGARIAN BANKING SYSTEM REMAINS STABLE, AND ITS ABILITY TO ABSORB SHOCKS IS STRONG.



- Profitability is outstanding, and capital adequacy ensures the stability of the sector even in the event of severe stress. Deposits decreased, but the sector's liquidity reserve is still ample.
- From the standpoint of the future development of banks' capital adequacy and lending capacity, it is important that the dividend payment policy of the institutions remains conservative, in view of the expected decrease in profitability, and that the exceptionally high profit largely serves to expand bank reserves.

THE OPERATING ENVIRONMENT OF BANKS IS SURROUNDED BY CYCLICAL RISKS.

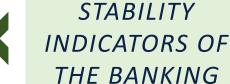


- The increase in credit risks has not materialized yet, but at the same time, the slowdown in the real economy predicts an increase in delays. Interest rate risk (loans with interest rate cap), project loans and subsidised loans linked to child-bearing, if the related conditions are not fulfilled, may represent a particular risk.
- In line with international trends, uncertain demand environment, high inflation and stagnant economic growth led to a slowdown in lending.



THE HUNGARIAN BANKING SYSTEM REMAINS STABLE AND EXTREMELY WELL CAPITALIZED

Financial Stability Indicators	2008	2019	2023 H1
Liquid assets / total assets	10.0%	30.9%	43.5%
Loan-to-deposit ratio	152%	75%	77%
Foreign funds / total liabilites	33.9%	12.7%	11.0%
Capital adequacy ratio of banks	11.2%	22.5%	22.8%
(consolidated in brackets)	(12.9%)	(18.0%)	(18.8%)
Ratio of loans overdue for more than 90 days	4.6%	2.1%	1.5%
Net NPL / solvency capital	16.0%	2.1%	1.9%
Return on equity	11.3%	11.6%	16.7%
Operational costs to assets	2.4%	2.0%	1.6%
FX ratio in household loans	66.3%	0.7%	0.3%
Share of floating rate mortgages of households	77.5%	48.7%	16.7%
Corporate loan growth rate (year-on-year)	6.5%	13.9%	11.1%
Household loan growth rate (year-on-year)	19.1%	16.7%	3.1%



THE BANKING SYSTEM

- High inflation, subdued growth
- Credit risks
- Real estate market risks
- Slowdown in lending dynamics
- Decrease in deposits





International environment

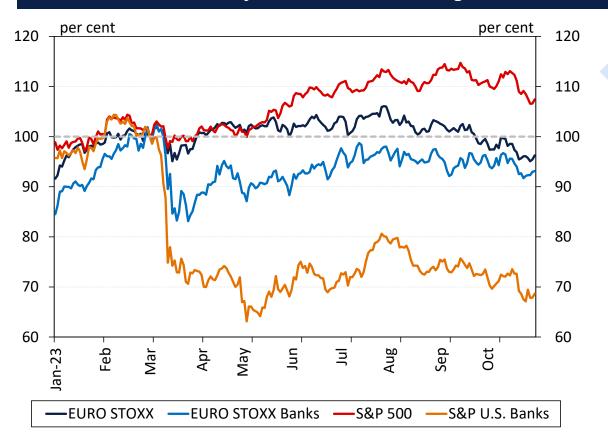
Profitability and shock resilience of the Hungarian banking system

Trends in lending



THE BANK FAILURES IN SPRING HAD A PROLONGED IMPACT ON THE VALUATION OF U.S. BANKS...

...while in the case of EU banks, stricter regulation resulted in a better market perception.



After the fall in the valuation of the EU banking system following the bank failures, the value of the EU banking system has risen again

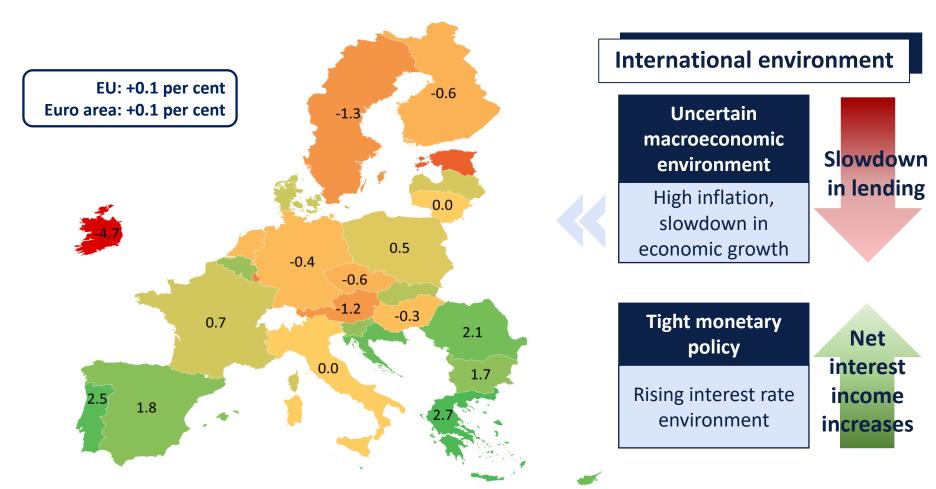
Although the gap between U.S. and European banks' P/BV* values narrowed, the U.S. median remained higher.

PERFORMANCE OF EUROPEAN AND US EQUITY AND BANKING INDICES

Note: 1 March 2023 = 100 per cent. Calculated from the value of the time series in euros.*P/BV: ratio of market value to book value. Source: Yahoo Finance



GLOBAL GROWTH OUTLOOK WEAKENED FURTHER THIS YEAR DUE TO HIGH INFLATION AND GEOPOLITICAL UNCERTAINTIES



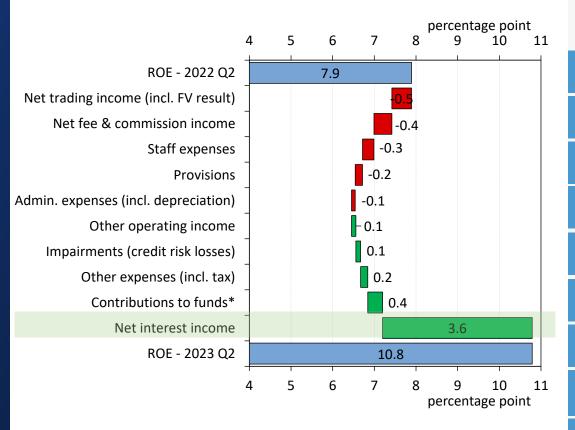
ANNUAL GROWTH RATE OF REAL GDP IN EU MEMBER STATES

Note: Annual change expressed as a percentage. Data for Greece, Croatia, Luxembourg, Malta and Portugal are for Q2 2023 and for the other countries for Q3 2023. Seasonally and calendar adjusted data. Source: Eurostat, HCSO

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AT THE SAME TIME, GROWING INTEREST INCOME IS BEING WITHDRAWN IN MORE AND MORE COUNTRIES, AND INTEREST IS NO LONGER PAID ON THE RESERVE REQUIREMENTS



IMPACT OF CHANGES IN FACTORS CONTRIBUTING
TO PROFITABILITY DEVELOPMENTS IN THE EU
BANKING SYSTEM

Note: *Contributions to deposit guarantee schemes and resolution funds. ROE calculated on 12-month data. Source: EBA

Box 1: Newly announced measures in recent months

June 2023	Estonia: banks' corporate tax rate will be increased by 4 percentage points
July 2023	ECB: abolition of interest paid on the reserve requirements (from 20 September 2023)
July 2023	Italy and Latvia: tax on net interest income
July 2023	Czech Republic: 60% tax allowance on extr profit
August 2023	Austria: no late payment interest and othe charges on housing loans

August 2023

September

2023

September

2023

September

2023

September

2023

October 2023

Latvia: special tax levied on last year's net interest income

Slovenia: a bank levy based on the balance

sheet total for 5 years, to repair flood damage **Czech National Bank:** abolition of interest

paid on the reserve requirements (from October 2023)

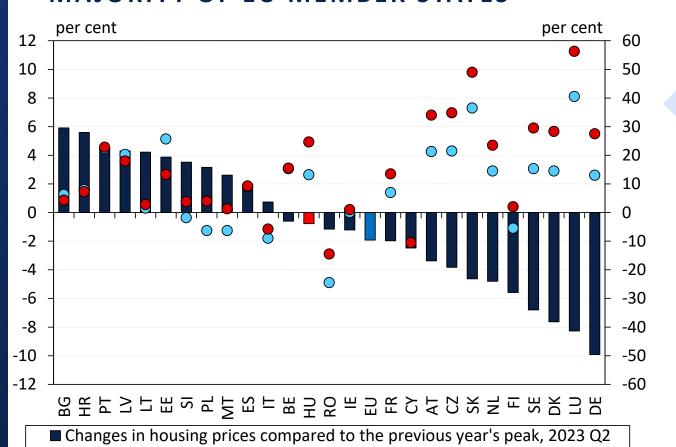
Portugal: "interest rate cap" for mortgage loans

Netherlands: increase in bank levy and a new tax on share buybacks

Swiss National Bank: abolition of interest paid on the reserve requirements (from December 2023)



BESIDE DECREASING TRANSACTION NUMBERS AND PRICES, RESIDENTIAL REAL ESTATES ARE STILL OVERVALUED IN THE MAJORITY OF EU MEMBER STATES



In the majority of EU member states, housing prices began to moderate after 2022 Q2-Q3.

The **decline** in commercial real estate market activity and capital value, and the rise in vacancy rates are typical globally.

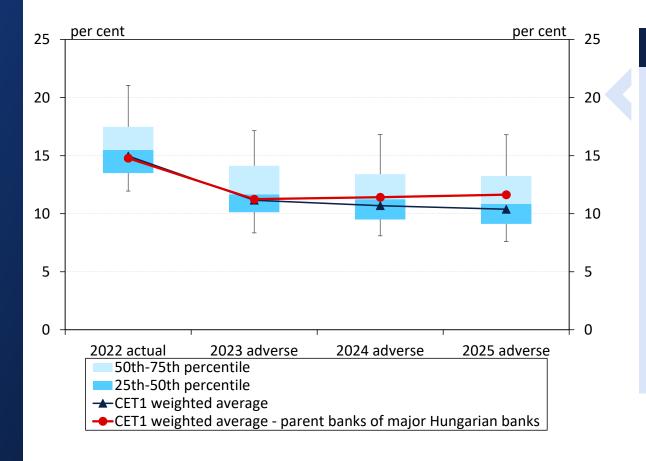
- Housing market overvaluation, 2023 Q2 (RHS)
- Housing market overvaluation, peak in 2022 (RHS)

HOUSING MARKET OVERVALUATION AND CHANGES IN NOMINAL RESIDENTIAL REAL ESTATE PRICES

Source: ECB, Eurostat, MNB



THE EU BANKING SYSTEM WOULD REMAIN RESILIENT TO VERY ADVERSE ECONOMIC SHOCKS



EBA stress test:

Assumption: cumulative GDP decline of 6 per cent over a three-year period.

The CET1 average over the three-year stress scenario would fall from 15 per cent in 2022 to 10.4 per cent in 2025.

It would fall to 11.6 per cent for the parent banks of the largest Hungarian banks and to 14.5 per cent for OTP.

EVOLUTION OF THE CET1 CAPITAL RATIO IN THE ADVERSE SCENARIO

Note: The fully loaded CET1 calculation takes into account all reported capital requirements that will become effective over the time horizon under consideration. Vertical line: 5th-95th percentile range. Source: EBA, 2023 EU-wide Stress Test



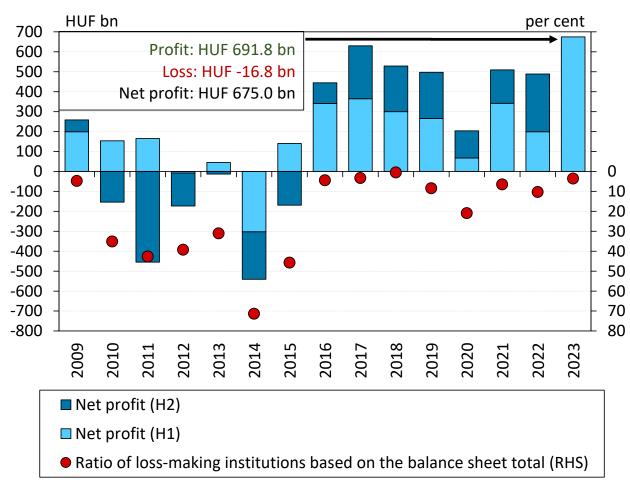
International environment

Profitability and shock resilience of the Hungarian banking system

Trends in lending



THIS YEAR'S (FIRST SEMESTER) PROFIT OF THE BANKING SYSTEM IS OUTSTANDING, EVEN IN HISTORICAL COMPARISON



In the first half of 2023, domestic banks achieved an after-tax profit of HUF 675 billion, which exceeds the total annual after-tax profit of all years observed since the 2000s.

ROE (12M): **16.7**%

(2022: 8.9%)

ROA (12M): **1.3%**

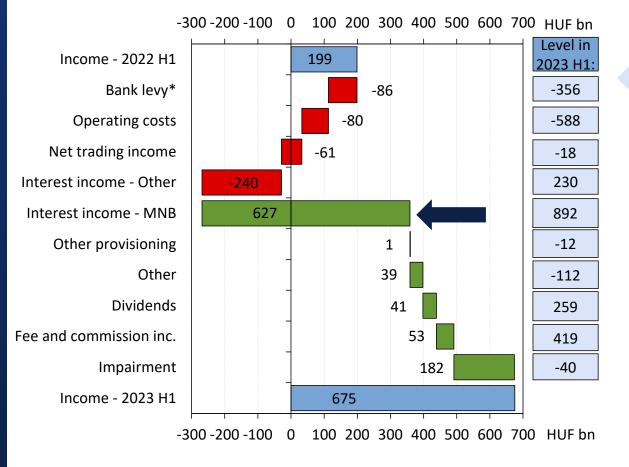
(2022: 0.7%)

AFTER-TAX PROFIT AND LOSS OF THE CREDIT INSTITUTIONS SECTOR

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



THE INTEREST INCOME FROM THE MNB INCREASED SIGNIFICANTLY, BUT THIS INCOME IS NOT SUSTAINABLE



Interest income from the MNB increased by HUF 627 billion compared to the first half of 2022.

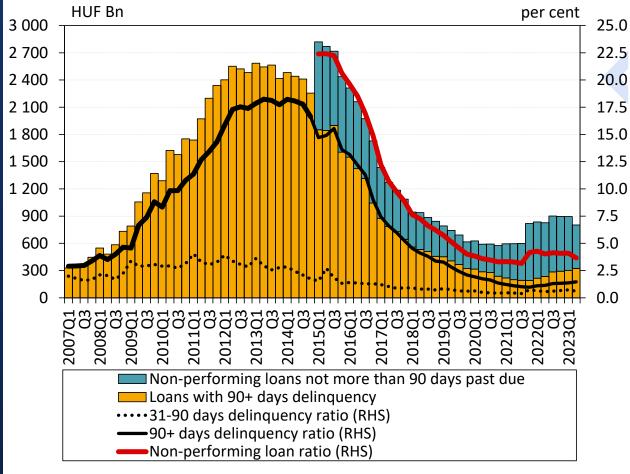
This level of profit is not sustainable. With the reduction of the base rate in line with disinflationary processes, the slowdown of market lending and rising credit risks, profit can be expected to decrease.

ANNUAL CHANGES IN AFTER-TAX INCOME COMPONENTS OF THE CREDIT INSTITUTIONS SECTOR

Note: Nominal values of income components for end-June 2023 are shown on the right-hand side. Bank levy* includes the combined change in the 'normal' bank levy and the extra profit tax. Interest income - MNB does not include interest income on derivative transactions related to MNB. Source: MNB



THE CREDIT RISKS DID NOT MATERIALIZE IN THE FIRST THREE QUARTERS OF 2023



THE NON-PERFORMING LOAN STOCK OF THE PRIVATE SECTOR AND ITS SHARE IN THE CREDIT INSTITUTION SECTOR

	Dec 2022	Aug 2023
Corporate NPL	3.9%	3.7%
Household NPL	4.4%	3.2%
Corporate 90+ NPL	1.2%	1.4%
Household 90+ NPL	1.5%	1.5%
Corporate 90- days past due	4.1%	2.6%
Household 90- days past due	4.5%	4.4%

A gradual increase can be seen in the proportion of corporate loans overdue by more than 90 days.

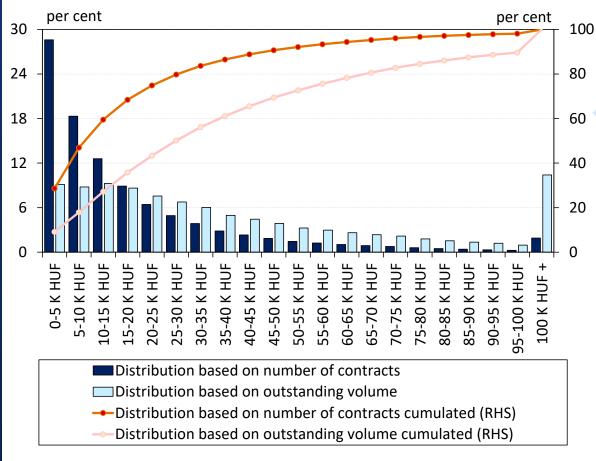
The household NPL ratio decreased due to the reclassification of former moratorium customers.

(Box 4)

Source: MNB



RISKY PORTFOLIOS (1): REPRICING PORTFOLIO, LOANS WITH INTEREST RATE CAP



DISTRIBUTION OF AFFECTED LOANS BY THE NOMINAL INCREASE OF INSTALMENTS AFTER PHASE-OUT OF THE INTEREST RATE CAP

Mortgages:

- HUF 1,200 billion, 300,000 contracts
- Median instalment increase: HUF 11,000; 27 per cent
- Vulnerable*: 77,000 contracts

Instalment increase

Financial awareness is impaired

- Low average maturity
- Low amounts of debt
- Tight labour market
- Borrower-based measures

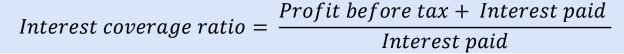
SME loans:

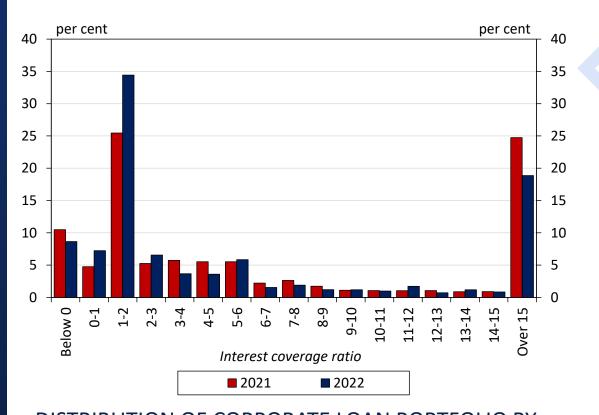
HUF 650 billion, 13,000 corporations

Note: Increase in instalment in January 2024, calculated based on the interest rate forward path as of 27 October, on the mortgage loans outstanding in 2023 Q2. * A contract in which the increase in instalments exceeds 50 per cent or HUF 50,000 is vulnerable. Source: MNB



RISKY PORTFOLIOS (2): THE INTEREST COVERAGE RATIO OF CORPORATIONS WITH LOANS DECREASED





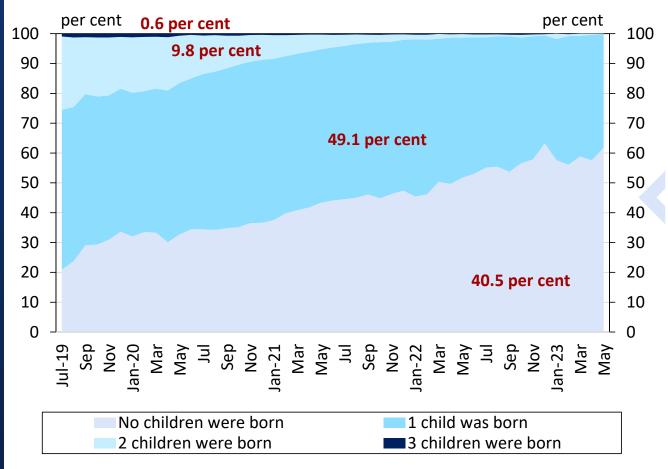
- While only 30 per cent of the loan portfolio was related to companies with a lower (between 0 and 2) interest coverage ratio in 2021, by 2022 it increased to 42 per cent.
- Regarding large companies, the increase in the indicator amounted to **16 percentage points** from 2021 to 2022, while in the case of SMEs it was only **8 percentage points**.

DISTRIBUTION OF CORPORATE LOAN PORTFOLIO BY INTEREST COVERAGE

Note: In the chart, the total loan portfolio of corporations with different interest coverage ratios is shown within the total loan portfolio. The chart only shows debtor corporations. In the case of negative values, the pre-tax profit of the company in the given year was negative. Source: NTCA, MNB



RISKY PORTFOLIOS (3): CHILDBEARING-RELATED SUBSIDISED HOUSEHOLD LOANS



ESTIMATED TRENDS IN CHILDBEARING RELATED TO PRENATAL BABY SUPPORT LOANS SINCE THE BORROWING

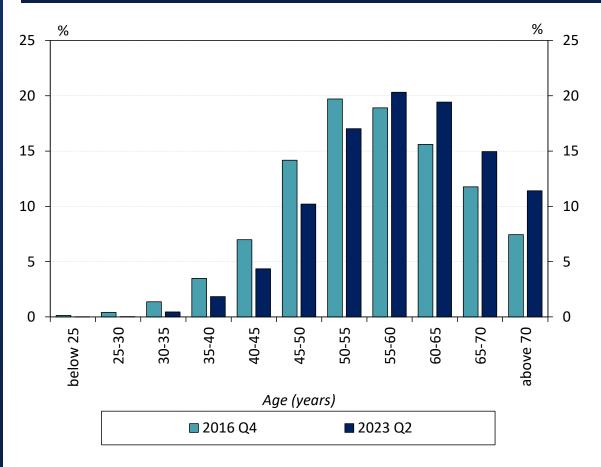
- 2019-2023: 233,000 prenatal baby support loan contracts were signed
- 2016-2023: 226,000 HPS subsidy contracts and 82,000 HPS loan contracts
- Nearly 80 per cent of those who took out prenatal baby support loan in July 2019 fulfilled the childbearing commitment.
- Based on our estimation, approximately 40 per cent of prenatal baby support loan debtors had not yet had a child.
- Risk-reducing factors:
 higher income deciles, state
 guarantee

Note: By the month of the borrowing. In red, the distribution calculated for all debtors, regardless of the date of the borrowing. Source: MNB



EXPECTED AGE AT MATURITY: SUBSTANTIAL SHIFT TO THE RIGHT, PARTLY DUE TO THE DEBT RELIEF MEASURES

...which also reduces the scope for future programs.



DISTRIBUTION OF HOUSING LOANS OUTSTANDING BY
THE DEBTORS' AGE AT MATURITY

Note: Volume-weighted distribution. Based on the average age of the debtors and co-debtors belonging to the contract. Source: MNB



Exchange rate cap

Payment moratorium



Longer maturity of new contracts

Maturity of loans ↑



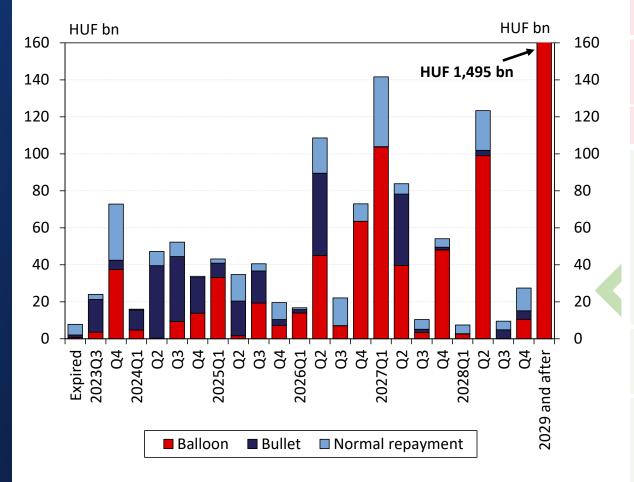
Age of the borrower at maturity \uparrow



Retirement → negative income shock



RISKY PORTFOLIOS (4): CRE-BACKED PROJECT LOAN



MATURITY BREAKDOWN OF PROJECT LOANS COLLATERALISED BY COMMERCIAL REAL ESTATE

Note: Loans of the credit institutions sector. Project loans collateralised by commercial real estate, including housing estate project loans. Exposure-based distribution including the amount of the capital outstanding and the amount of the undrawn facilities. Source: MNB

Growing vacancy rates

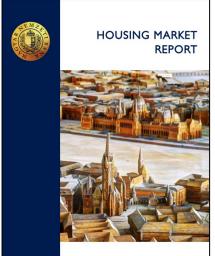
Rising yields → declining valuation

Rising euro interest rates

- The expiring portfolio (requiring refinancing) is limited in the near future: 7 per cent of the portfolio will mature within one year, and 13 per cent within two years.
- Half of the stock is a purchase loan.
- Compared to 2008, the stock is significantly smaller in terms of balance sheet total, GDP and regulatory capital.
- Systemic Risk Capital Buffer (SyRB).

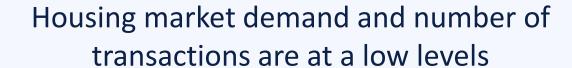


REAL ESTATE MARKET: DECLINING MARKET ACTIVITY AND VALUATION











In the second quarter, there was a slight decrease in nominal prices on an annual basis



The overvaluation in the housing market has eased in merit, but is still at a high level





Growing vacancy rates





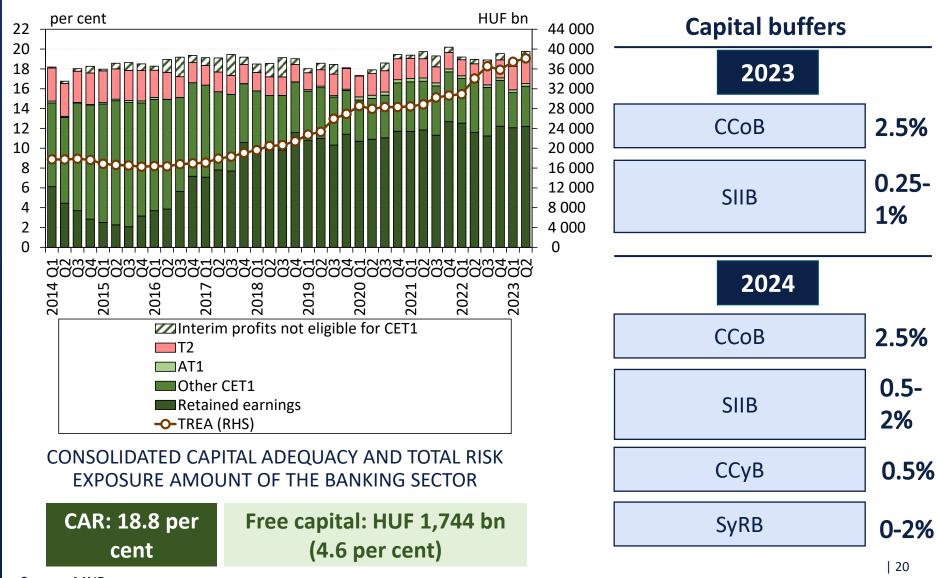
Investment turnover decreased by 60 per cent



Rising prime yields → 19 per cent depreciation in the office market



IN ADDITION TO ADEQUATE CAPITAL LEVEL, THE CAPITAL BUFFER REQUIREMENTS ARE CONSTANTLY INCREASING



Source: MNB



SOLVENCY STRESS TEST: AT THE SECTOR LEVEL, NEGLIGIBLE CAPITAL SHORTAGE WOULD ARISE

Assumptions: In the stress scenario, the level of GDP falls short of the stress test baseline by about 10 per cent in two years, household consumption by more than 12 per cent, while employment decreases by 175,000. This is accompanied by a substantial weakening of the exchange rate and in accordance with this, by tighter interest rate conditions.

	8-per cent 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	0.0	0.0	3.1
Average capital need of banks** (percentage points)	0.0	0.0	0.0	3.9
Capital buffer of banks above requirement (HUF bn)	3 604	3 484	1 417	1 537
Average capital buffer of banks** (percentage points)	12.2	13.3	4.8	5.9

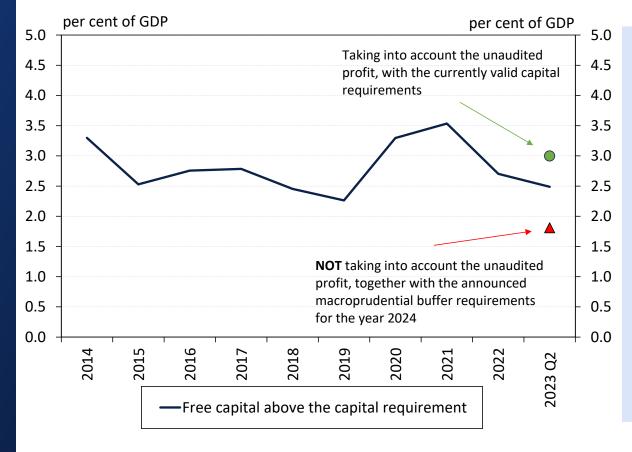
Only a marginal sectoral capital shortage of HUF 3 billion arises by the end of the second year under the stress scenario.

STRESS TEST RESULTS AT VARIOUS CAPITAL REQUIREMENTS

Note: *Capital requirements projected for the given quarter. **TREA-weighted averages. Source: MNB



IT IS IMPORTANT THAT THE BANKS' DIVIDEND POLICY REMAINS CONSERVATIVE, AND THAT THE EXCEPTIONALLY HIGH PROFIT IS LARGELY USED TO EXPAND RESERVES



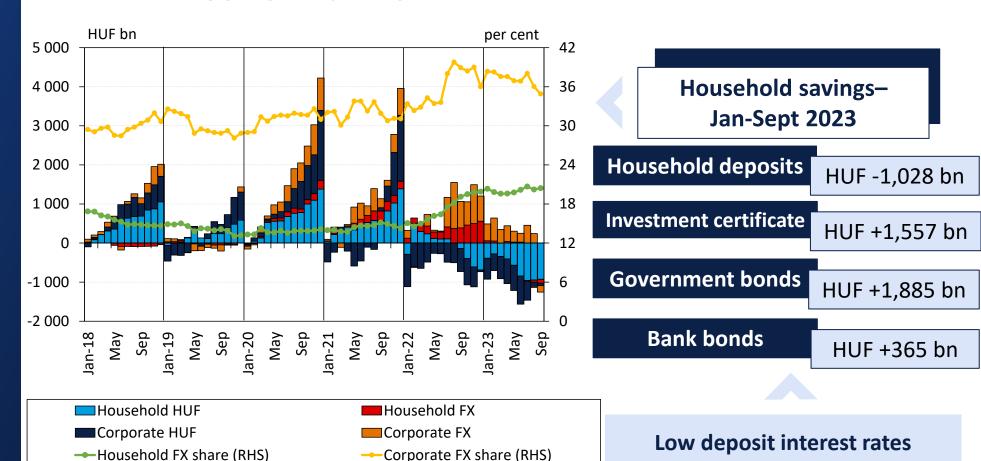
- To increase credit penetration to the regional level, a significant expansion of credit is required.
- Especially in light of the fact that the nominal GDP is expanding substantially.
- Profitability will decrease
 from the next year, in parallel
 with the decline in the interest
 income.
- After the expire of the state guaranteed SME loans, the capital needs of the loans to be refinanced may increase.

FREE CAPITAL OF THE BANKING SYSTEM IN PROPORTION TO GDP

Source: MNB



BANK LIQUIDITY: HOUSEHOLD SAVINGS WERE REALLOCATED, BANK DEPOSITS DECREASED



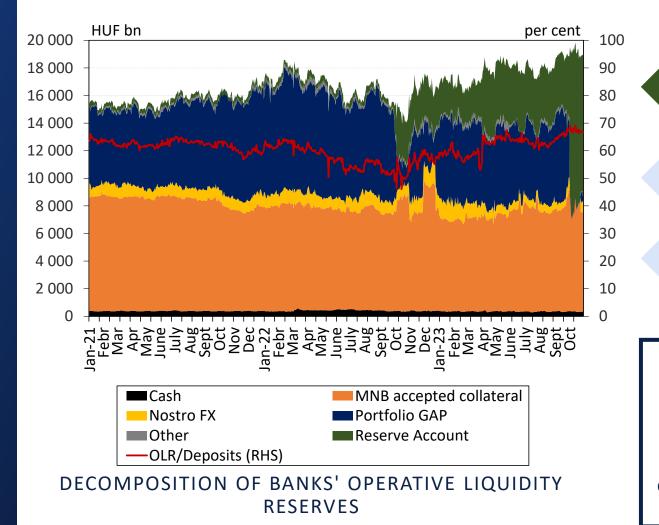
CUMULATIVE ANNUAL TRANSACTION GROWTH OF CORPORATE AND HOUSEHOLD DEPOSITS BY CURRENCY

Source: MNB

Government measures



THE IMPACT OF DEPOSIT OUTFLOWS IS OFFSET BY THE LIQUIDITY EFFECT OF CENTRAL BANK'S INTEREST PAYMENT



Interest paid on central bank instruments

Reallocation of household savings

Deposit outflow of nonbank financial institutions

In October 2023, the banking sector had approximately HUF 19,100 billion liquidity reserves (67 per cent of the deposit holdings), and its liquidity coverage ratio (LCR) was 174 per cent in September 2023.

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 taken into account by the central bank as a liquid asset. From 1 October 2023, the MNB will pay the base rate on the balance of the reserve account in excess of the required reserve (excess reserves), therefore this instrument will take over the role of the policy instrument. Source: MNB



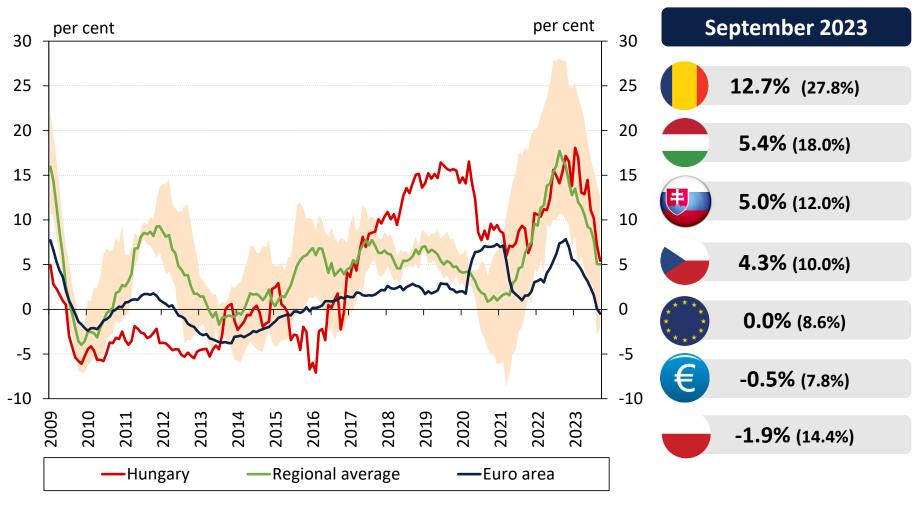
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THE SLOWDOWN IN THE GROWTH RATE OF CORPORATE LOANS IS A GENERAL PHENOMENON IN THE EU, THE UNCERTAIN DEMAND ENVIRONMENT DISCOURAGES LENDING

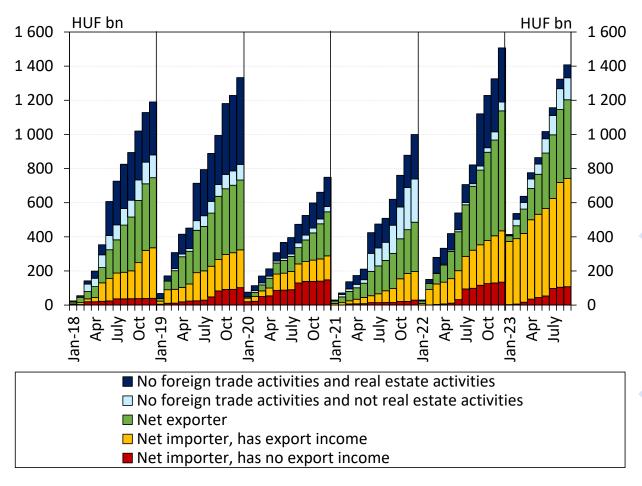


ANNUAL TRANSACTIONAL GROWTH RATE OF CORPORATE LENDING

Note: The yellow band indicates the range of the regional countries (V3 and Romania). Latest data point: September 2023. Previous year's peak of growth rate is in brackets. Source: ECB, MNB



THE FOREIGN CURRENCY LOAN PORTFOLIO EXPANDED, BUT MAINLY DUE TO BORROWING BY CORPORATIONS WITH NATURAL COVERAGE



CUMULATIVE NEW FOREIGN CURRENCY LOAN CONTRACTS
WITHIN A YEAR BY FOREIGN TRADE ACTIVITY OF THE
CORPORATE BORROWERS

2023 Q1-Q3 vs. 2022 Q1-Q3

FX loan contracts:

+26 per cent



Share of loans taken out by corporations with foreign currency revenues

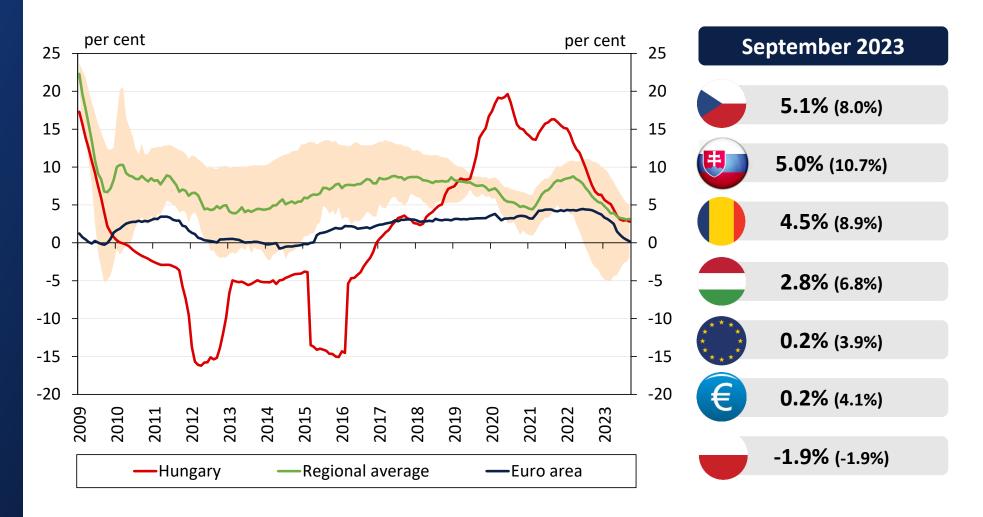
78 per cent

Share of loans taken out by corporations
WITHOUT foreign currency revenues

22 per cent



THE SLOWDOWN IN HOUSEHOLD LENDING IS ALSO NOT ONLY A HUNGARIAN PHENOMENON

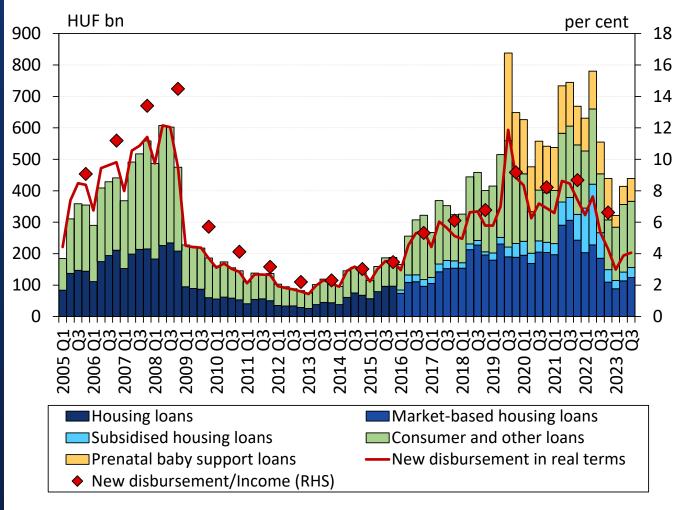


ANNUAL TRANSACTIONAL GROWTH RATE OF HOUSEHOLD LENDING

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NEW LOAN DISBURSEMENTS SIGNIFICANTLY DROPPED IN A YEAR-ON-YEAR COMPARISON



Prenatal baby support loans: -28 % (2023 Q3 vs 2022 Q3)

Personal loans: +12 % (2023 Q3 vs 2022 Q3)

+6 % (2023 Q3 vs 2022 Q3)

Housing loans: -41 % (2023 Q3 vs 2022 Q3)

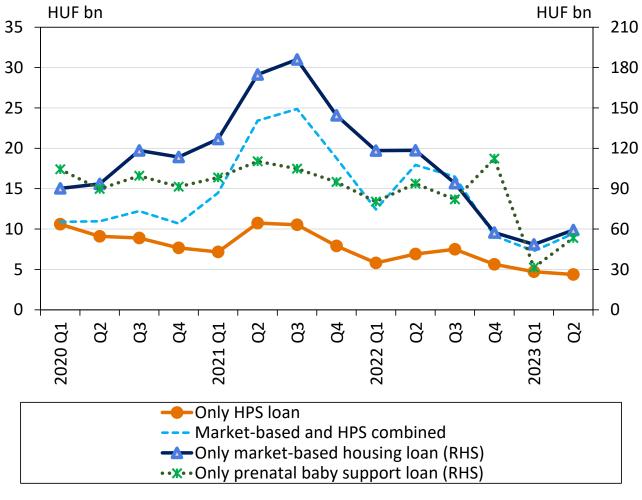
24 per cent drop in real terms compared to 2022 Q3

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



IN ADDITION TO MARKET-BASED HOUSING LOANS, THE VOLUME OF SUBSIDISED LOANS HAS ALSO FALLEN



EVOLUTION OF DISBURSED LOAN VOLUME IN THE GIVEN LOAN TRANSACTIONS

Subsidised loans are
often taken out
together with marketbased loans, so if the
latter becomes more
expensive, it becomes
more difficult to
purchase a home,
thereby reducing
demand for subsidised
loans as well.

Box 2: the borrowings of those who take out only subsidised loans also fell! – interest rates are not the only reason for the decrease.



INTEREST RATES: WITH THE REDUCTION OF THE CENTRAL BANK'S KEY INTEREST RATE, LOAN AND DEPOSIT INTEREST RATES ALSO BEGAN TO DECREASE



HOUSING LOANS:

- Based on the new loan contracts in September, the banks concluded the contracts with an APR below 8.5 per cent for roughly half of the market.
- Based on the condition lists, the previously typical discounts have been significantly reduced.
- An important question in the coming months will be that how much of a crowding out effect will prevail due to the ceiling.



CORPORATE LOANS:

- In the case of market-based loans, interest rates followed the reduction of the key interest rate. The average interest rate of low-amount corporate HUF loans decreased by more than 2 percentage points between April and September.
- The difference between EUR and HUF interest rates has decreased.

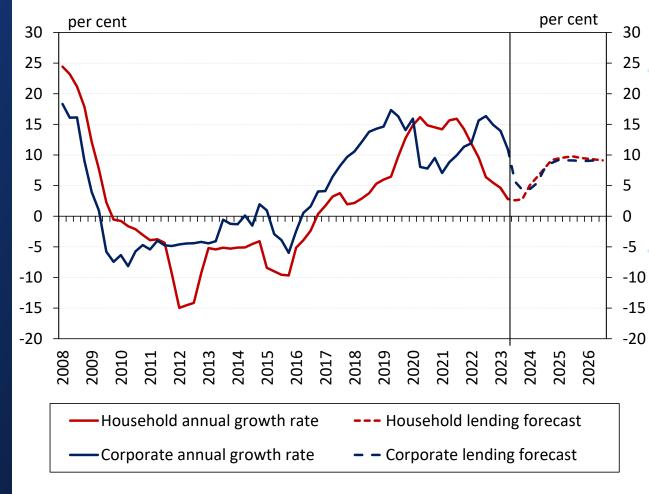


DEPOSITS:

• In the case of corporations, the lowering of the key interest rate is quickly followed by deposit interest rates. The average interest rate on widely available retail deposits still does not approach the level of interbank interest rates.



CREDIT DYNAMICS MAY INCREASE FROM NEXT YEAR



HOUSEHOLD AND CORPORATE LENDING FORECAST

Note: Transaction-based annual growth rate based on data from the financial intermediary system. Corporate liquid assets: cash and cash equivalents, bonds and deposits. Source: MNB

The annual dynamics of household loans outstanding may have reached its lowest point in 2023 H2, remaining below 3 per cent until the end of the year.

HPS Plus can raise the credit dynamics.

The <u>corporate</u> loan portfolio may expand nominally by 4 per cent in 2023, reaching its lowest point by the end of the year.

Corporate liquidity as a percentage of GDP has increased significantly in recent years and is now at the forefront of the region

2013 20.3%	<i>2022</i> 30%
19.3%	20.2%



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- From the standpoint of the future development of banks' capital adequacy and lending capacity, it is important that the dividend payment policy of the institutions remains conservative, in view of the expected decrease in profitability, and that the exceptionally high profit largely serves to expand bank reserves.

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THANK YOU FOR YOUR ATTENTION!