National Bank of Ukraine

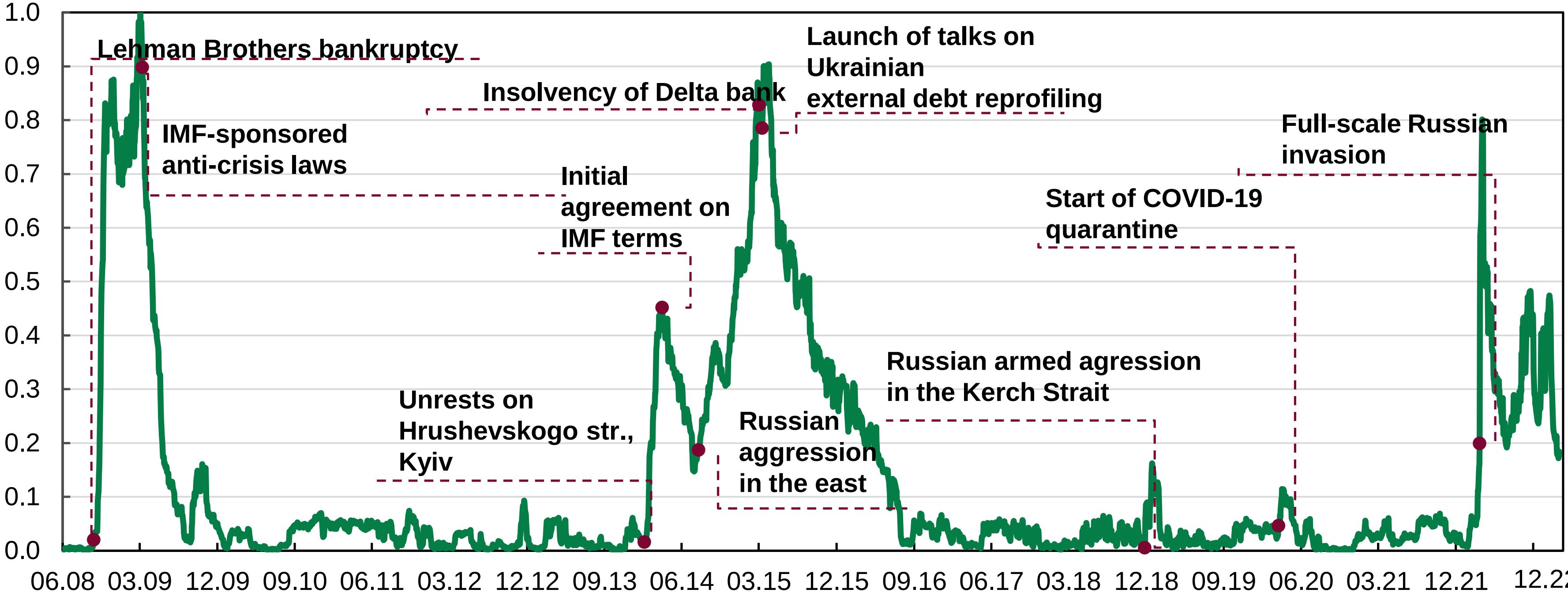
Financial Stability Report

27 December 2022

Summary

- The key sources of risks for financial stability are the war that drags on, terrorist attacks on energy infrastructure, and depressed economic activity they provoke.
- International assistance for Ukraine has increased and provides a solid support for state budget, balance of payments, and international reserves.
- On the housing market, situation is gloomy: buyers' appetite is low, prices are out of equilibrium. However, financial stability risks are low due to the small size of mortgage portfolio.
- Uninterrupted payments and continuous work of branch networks are among cornerstones supporting financial stability.
- Sector's liquidity growth is uneven, and some small banks lack liquidity.
- Loan demand remains weak, state programs for business lending support underpin it, and only in certain segments. Market-based lending will only resume as economy recovers.
- As repayment holidays in retail segment were over, credit losses on loans falling past due are recognized in full. Thanks to active restructurings, provisions on business loans are building up only gradually, and banks' estimates on expected losses are overly optimistic.
- Destruction of energy infrastructure and slower economic recovery increase the credit risk, thus war-related losses may amount to 30% of the portfolio.
- Bank losses from operational risk have already reached UAH 13 billion and are set to grow on.
- Despite substantial provisioning, the sector generated profits thanks to high interest income, recovery of fee and commission income, and revaluations.
- In 2023, as economy stabilizes, the NBU plans to assess asset quality and banking system resilience, as well as banks' need in capital.

Financial Stress Index (FSI) declined

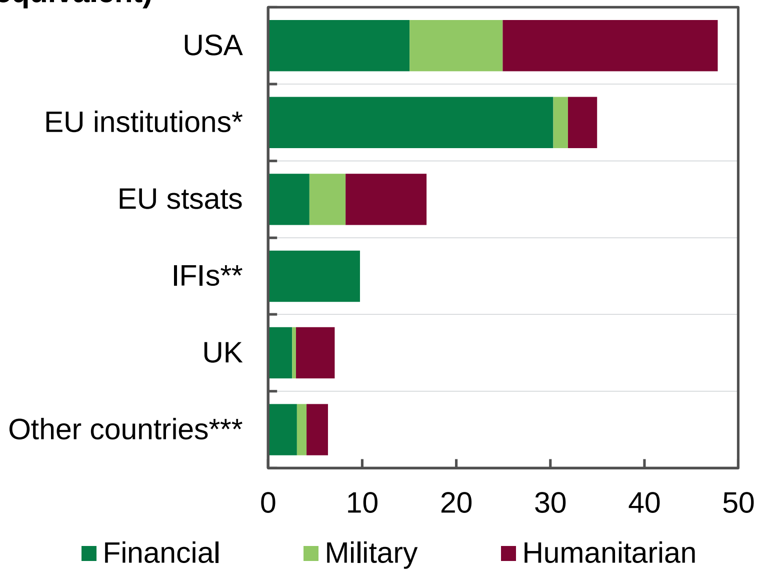


Джерело: НБУ.

- In H2, the FSI was volatile and hovered around high levels.
- Attacks on energy infrastructure provoked FSI surge in October; however, in November, financial sector's sensitivity fell considerably; almost all sub-indices were subsiding.
- At the moment, the stress level is at its lowest since the beginning of the war.

External environment: international assistance for Ukraine increases

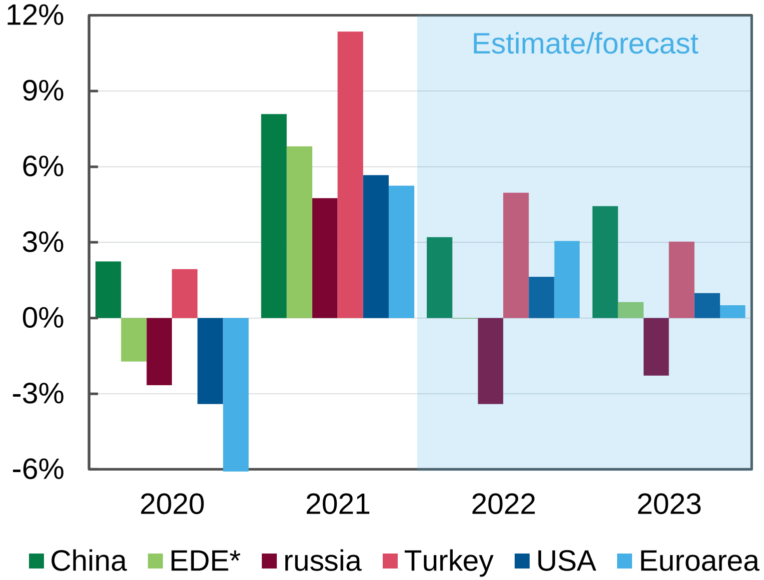
Committed official assistance for Ukraine, from end-January through end-November 2022, euro billions (equivalent)



* Funds from European Commission, EU Council, and European Peace Facility, including announced 18 billion euro package. ** IMF, World Bank, EBRD, UN. Assistance under multidonor programs is counted as assistance from individual countries. *** Australia, Canada, New Zealand, Norway, South Korea, Taibei, Turkiye, Switzerland, and Japan.

Source: Kiel Institute for World Economy (Germany).

Change of GDP of Ukraine's major trading partners and russia



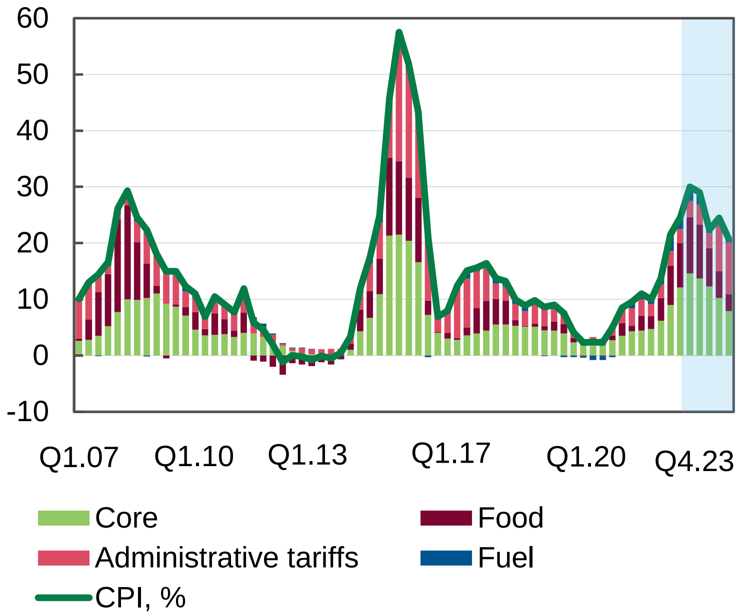
* Emerging and developing Europe including Balkan countries.

Source: IMF, World Economic Outlook, October 2022.

- The war turns into a protracted one, yet the assistance from partners only grows stronger. Ukraine and its partners search for a mechanism to finance Ukraine's post-war recovery.
- Because of impact of the war, economies of Ukraine's partner countries slow down, their inflation rates remain elevated, primarily because of high commodity prices.

Macroeconomic risks are under control

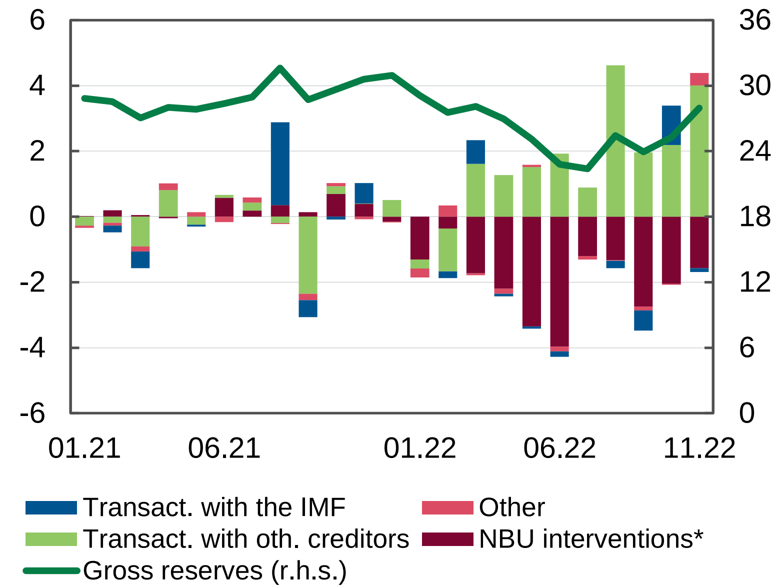
Contribution into CPI change by components, pp*



* Data for 4Q2022 through 4Q2023 – NBU's forecast as of October 2022..

Source: State Statistic Service, NBU estimates.

Change in gross international reserves, USD billions



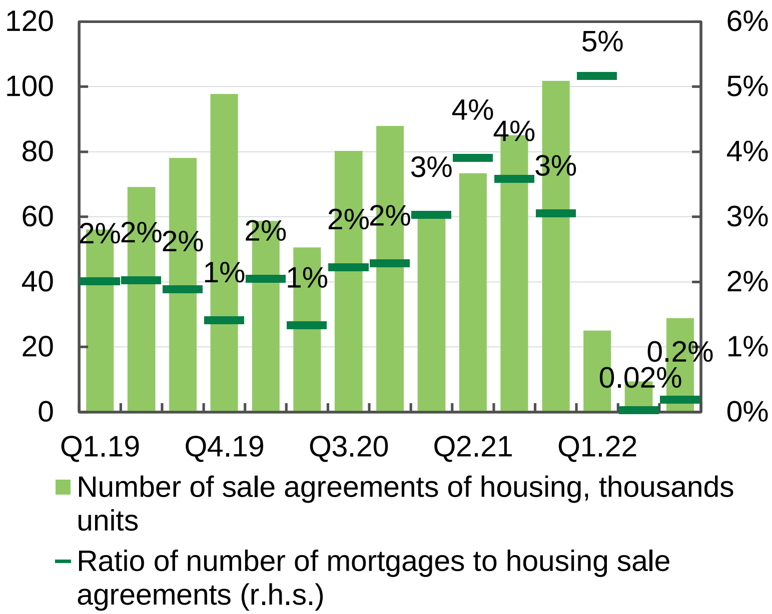
* NBU interventions: (+) refers to purchasing FX to increase reserves; (-) refers to selling FX from reserves; "other" means the revaluation of financial instruments due to changes in their market value and exchange rate fluctuations, as well as other transactions..

Source: NBU.

- Destruction of infrastructure slows down the economy and pushes prices up.
- Unprecedented assistance from partners boosted economy's resilience margins. By end-November, the international reserves exceeded pre-war levels.
- Pressure on FX market has subsided, yet the market is still not in the position to re-balance itself. Thus, the NBU has to compensate further for the foreign currency deficit.
- Payments to servicemen compensated for a decline in in incomes in private sector. However, consumer demand remains depressed.

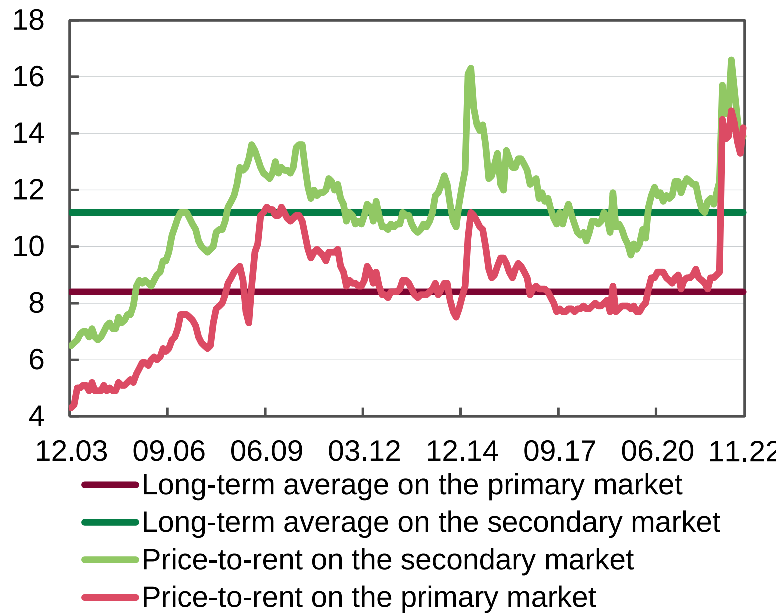
Housing market is out of balance: prices are rising, demand is low

Housing market activity



Source: Ministry of Justice, banks' data..

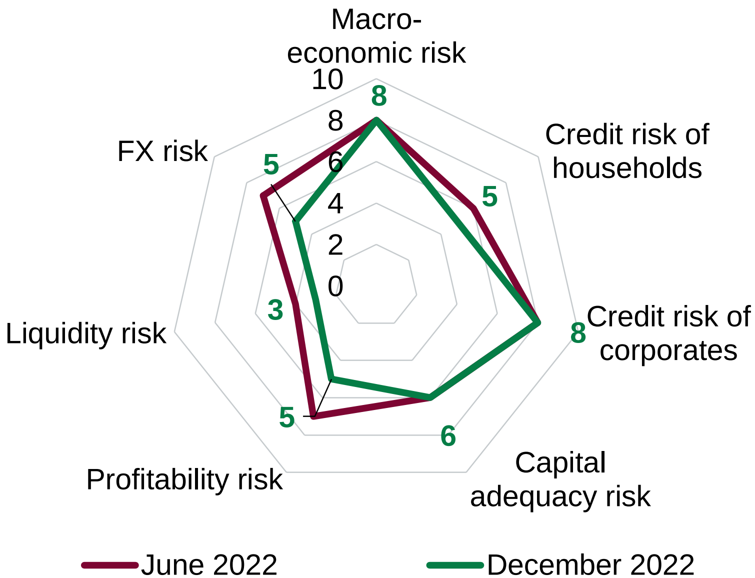
Price-to-rent ratio



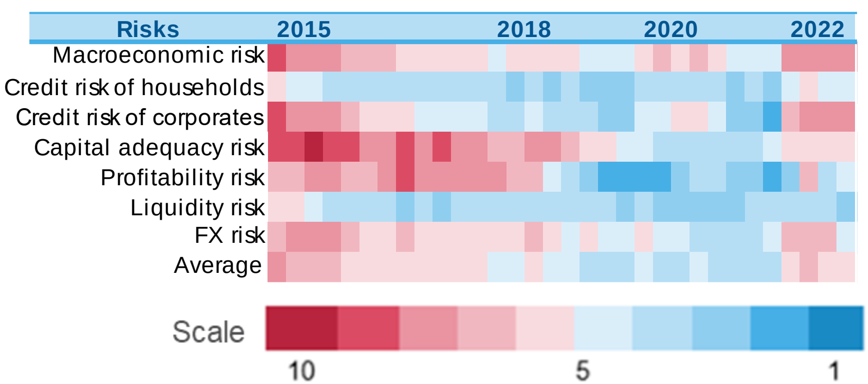
Source: real estate agencies, NBU estimates.

- Housing demand remains weak and volatile: buyers' interest depends on the shelling intensity of a given town or city.
- Building of housing supply has slowed down. Coupled with demolition of housing stock because of shelling, it may lead to a deficit of supply in the future.
- Announced buy prices mostly grow, while rent remains almost half of that seen prior to the war. This is a sign of the market imbalances.
- While the war drags on, markets for real estate and mortgages will stagnate.

Risk map of the financial sector



Financial sector heatmap



Macroeconomic risk has not change. The economy is in a deep crisis, public debt and budget deficit relative to GDP are high.

Credit risk of households has declined (-1) due to lower debt burden. At the same time, credit losses increase the risk.

Credit risk of corporates has remained the same. The situation in the real sector is complicated, expectations of enterprises are downbeat, share of defaults is on the rise.

Capital risk has not changed: most of the banks maintained solid resilience and replenished capital with profits from this year. Yet risks of further credit losses persist.

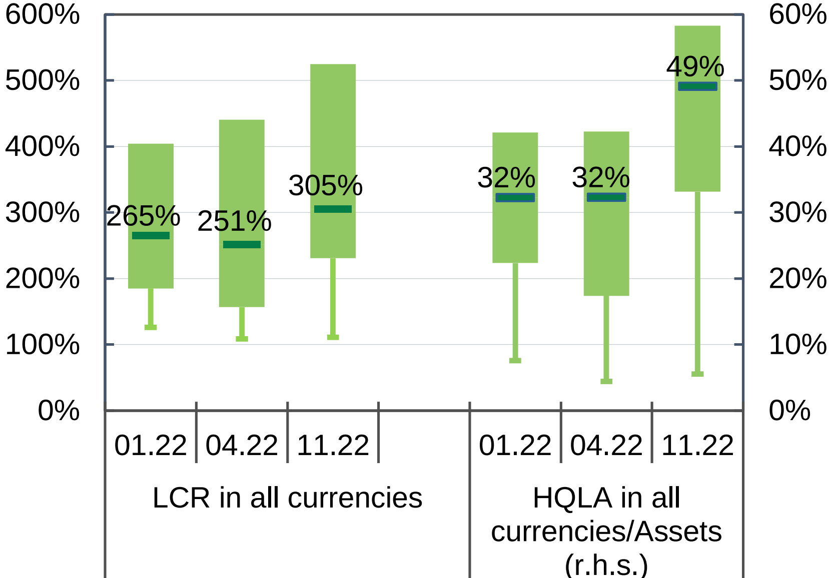
Profitability risk has abated (-2) due to the increase of key incomes and better operational performance of banks. However, expenses provisioning will increase further.

Liquidity risk has decreased (-1). Bank funding is stable. The Stock of high quality liquid assets has increased, yet some of the banks face liquidity issues.

FX risks has declined (-2), primarily due to lower volatility of exchange rate on foreign currency cash market and replenishing of international reserves.

Sector's liquidity is rising, although its distribution is uneven

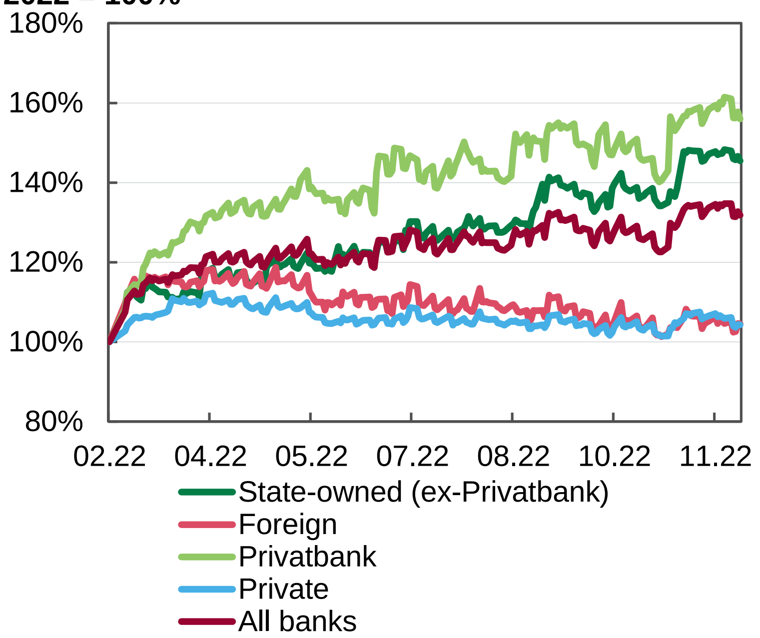
Distribution of LCR and HQLA in all currencies to net assets



* Upper and lower edges of the rectangles represent the first and the third quartiles of the indicator distribution across the banks. Dashes inside the rectangle are the median. Lower dashes below the rectangle show the fifth percentile.

Source: NBU.

Hryvnia retail deposits by groups of banks, 23 February 2022 = 100%

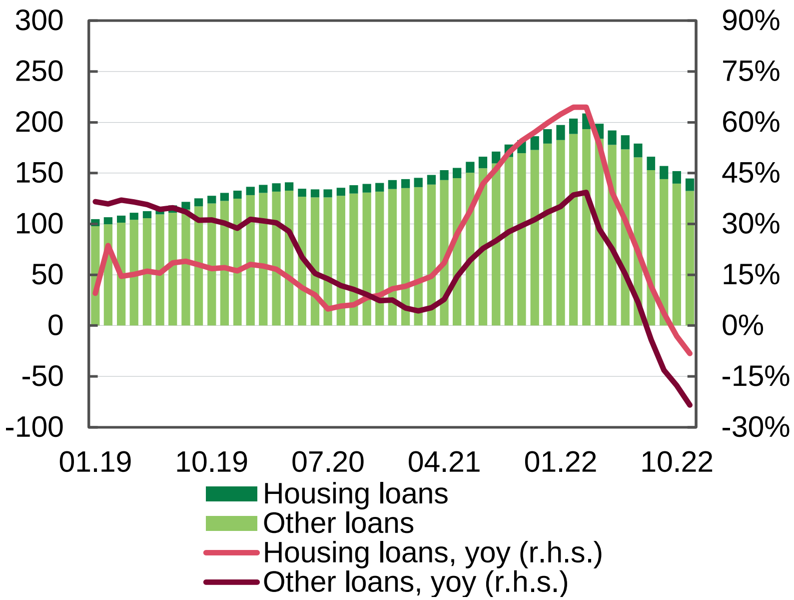


Source: NBU, daily data.

- The banking sector liquidity is rising on the back of public expenses, but retail deposits accumulate primarily at state-owned banks.
- The share of term retail deposits declined, funding becomes less stable. Thus, under adverse developments, liquidity risk may materialize for some banks.
- An increase in corporate deposits, which was even across all groups of banks, will slow down over the next months because of blackouts. This will limit liquidity distribution between the banks.
- Some small banks face liquidity shortages.

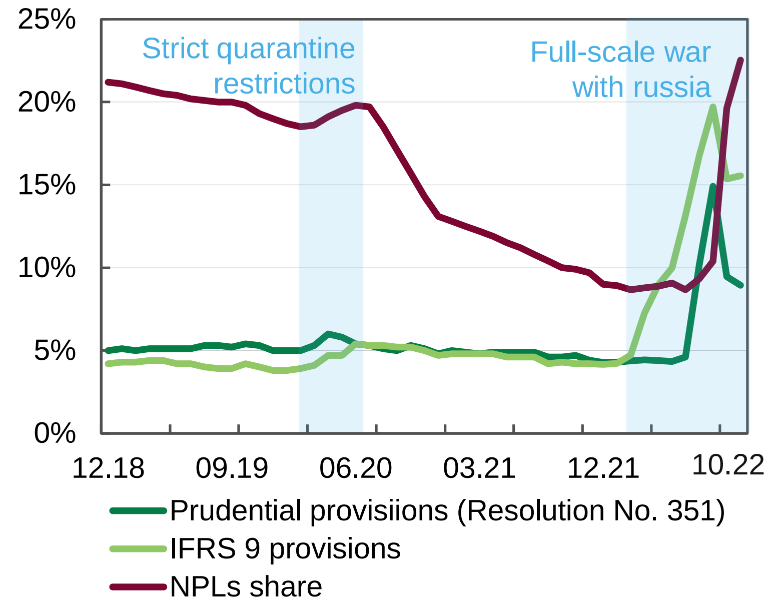
Retail loan portfolio contracts further

Net retail loans in hryvnia, UAH billions



Source: NBU.

Provisions for performing retail portfolio and share of hryvnia retail NPLs

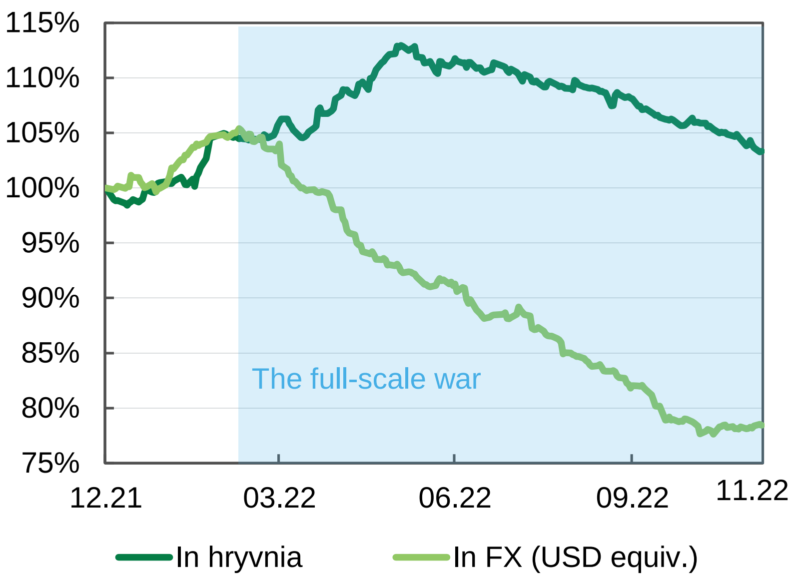


Source: NBU

- Retail loan portfolio shrinks further because of covering credit losses with provisions and anemic new lending. The portfolio will recover only as consumer demand revives.
- The banks have already reported material losses on retail loan portfolio, primarily because of loans falling past due. Overall war-related losses of the retail portfolio may reach 30%.
- Because of the portfolio contraction, the banks are losing interest income; however, they still generated fees and commissions from banking cards' and foreign exchange transactions.

Growth of the corporate loan portfolio has halted

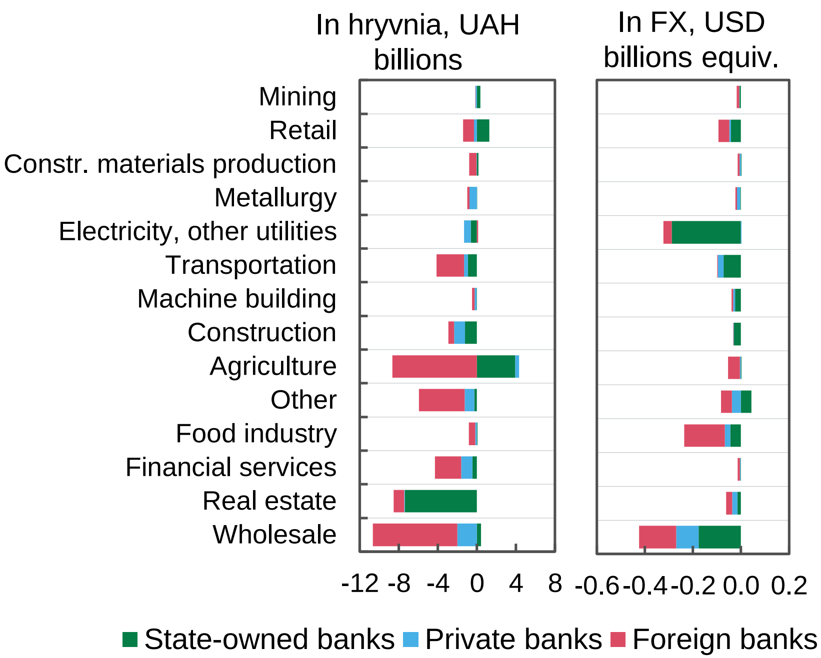
Net corporate loans, Dec. 2021 = 100%



At banks that were solvent as of 1 December 2022.

Source: NBU.

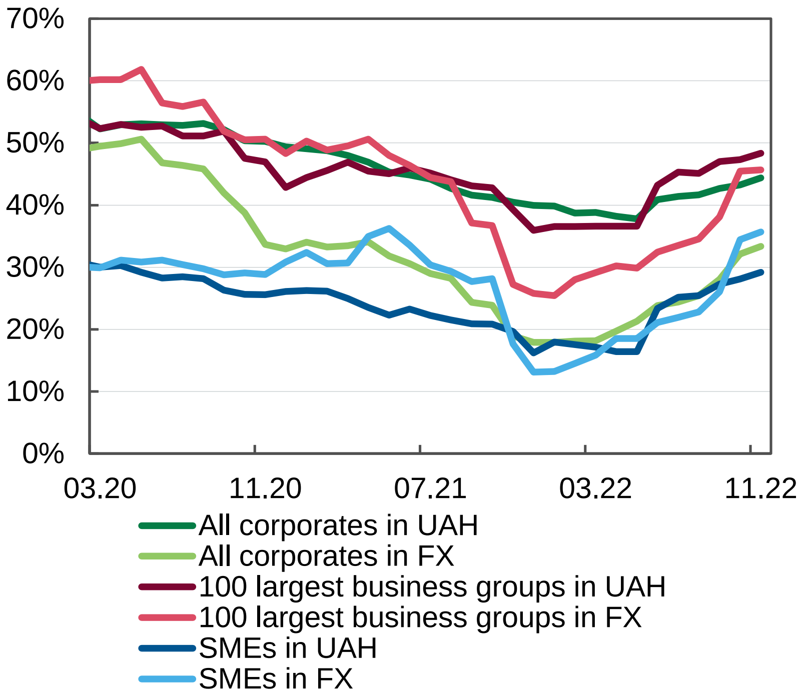
Change in gross performing corporate loans by industry from 1 June 2022 to 1 December 2022, UAH billions



- Net corporate loans decreased due to the low real demand for funds and recognition of credit losses.
- During the last six months, only state-owned banks were able to increase their portfolio in the agricultural sector with the help of state programs.
- In 2022, lending took place almost exclusively within the framework of the “Affordable loans 5-7-9” state program: its ratio in the net hryvnia corporate portfolio reached 26%.

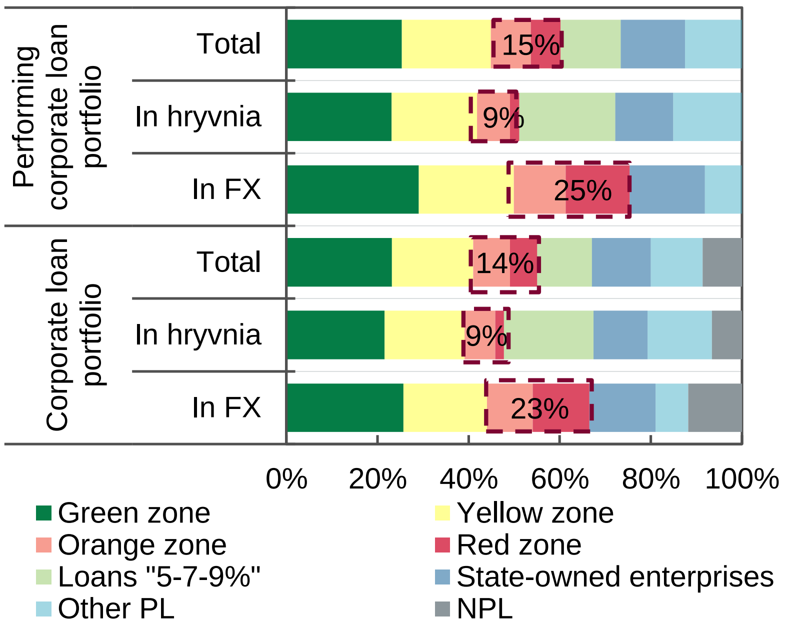
Banks may lose up to 30% of corporate loans

Corporate NPL ratios



Source: NBU.

Net corporate loans by the estimated quality as of 1 December 2022



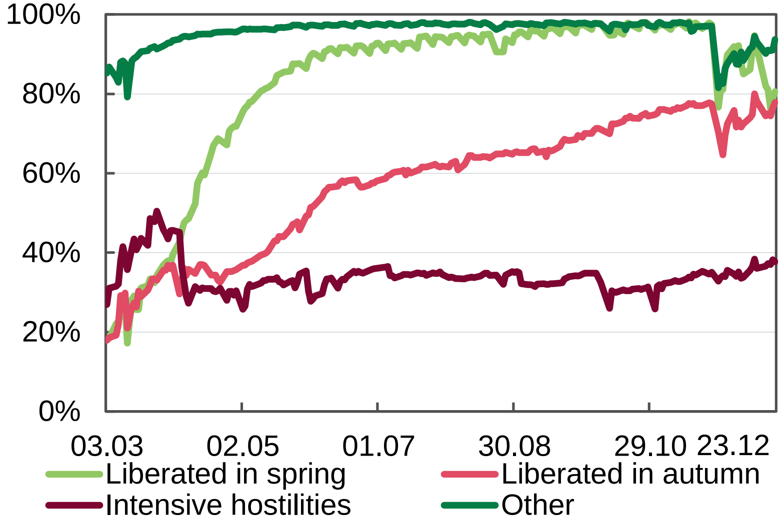
The largest 1,090 corporate borrowers with debts of at least UAH 20 million were analyzed. Zones are divided depending on the level of credit risk.

Source: NBU.

- Banks have already lost 9% of their pre-war net loan portfolio, mainly as a result of loans being recognized as non-performing.
- Another 14% of the portfolio will have material difficulties in servicing loans under current conditions.
- Due to the still limited export opportunities and attacks on the energy infrastructure, the cumulative losses from the credit risk of the portfolio will increase to 30%.

Banking network is functioning despite power outages

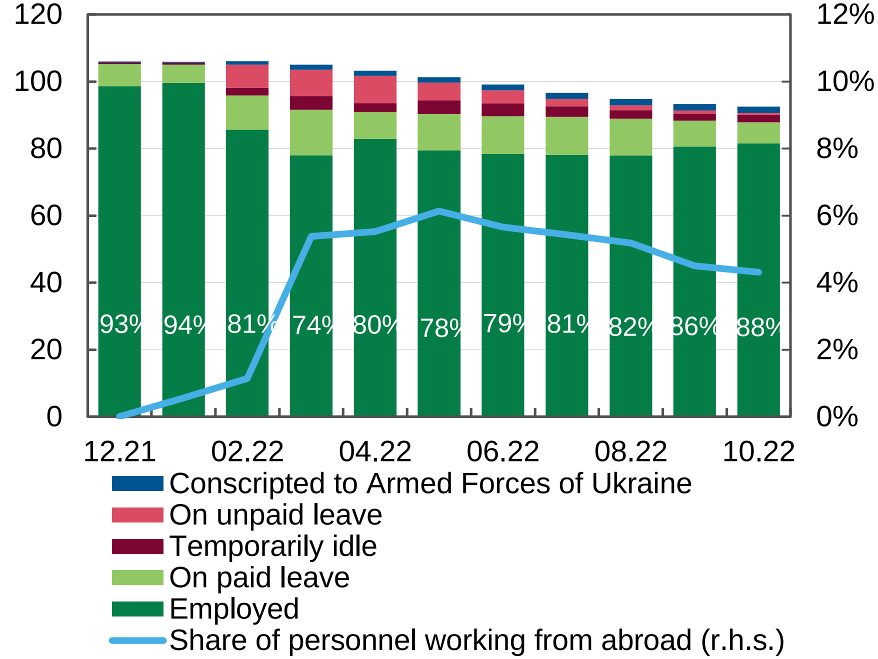
Share of working branches of systematically important banks



Regions are classified into groups. “Liberated in spring” comprise Kyiv, Sumy, Chernihiv oblasts, and city of Kyiv. “Liberated in autumn” comprise Mykolaiv and Kharkiv oblasts. “Intensive hostilities” comprise Donetsk, Luhansk, Zaporizhzhia, and Khesron oblasts.

Source: NBU, survey of systematically important banks important banks

Banks’ number of staff, thousands

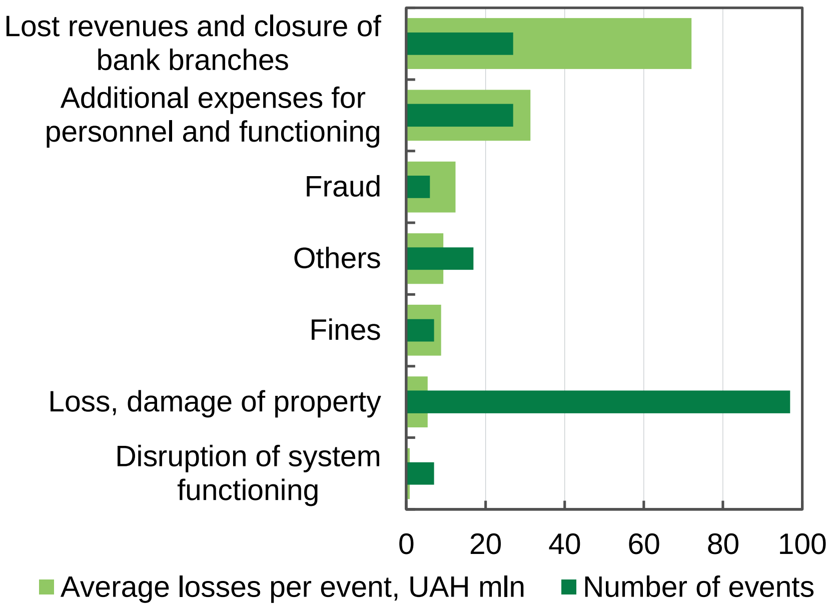


Source: NBU, Survey of bank operations in wartime.

- In H2, the proportion of working bank branches increased, but because of power outages, it sometimes drops.
- Power outages is a new challenge for uninterrupted functioning of banks, additional operating expenses for arranging work under such conditions will exceed UAH 300 millions.
- Banks are optimizing their network. They had to cut their staff by 12% since the beginning of the war, while as of beginning of November about 4% of banks’ employees work from abroad.

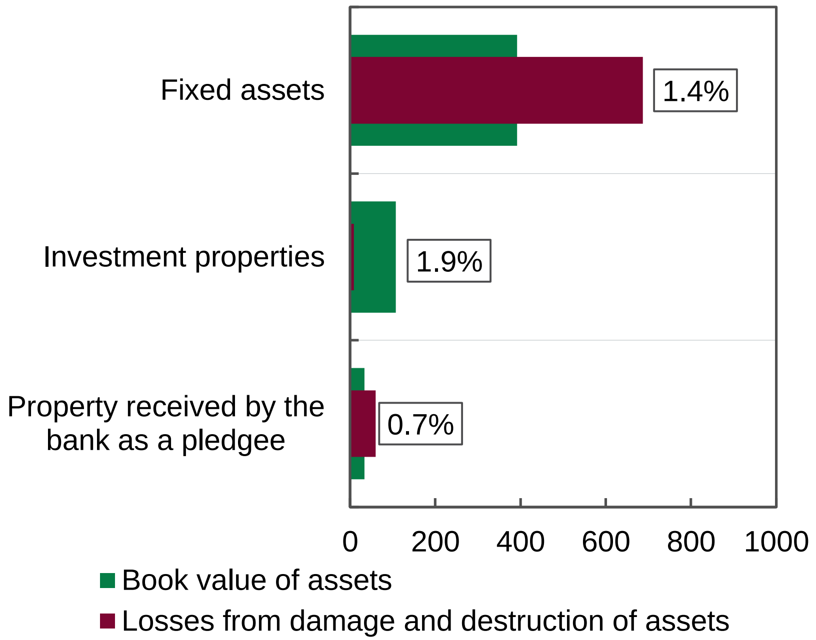
Banks' losses from operational risk will continue to rise

Classification of the largest war-related operational risk events of banks



Source: NBU, Survey of bank operations in wartime.

Banks' real estate in war-affected territories as of 1 November 2022 and losses from lost assets for February–October, UAH millions

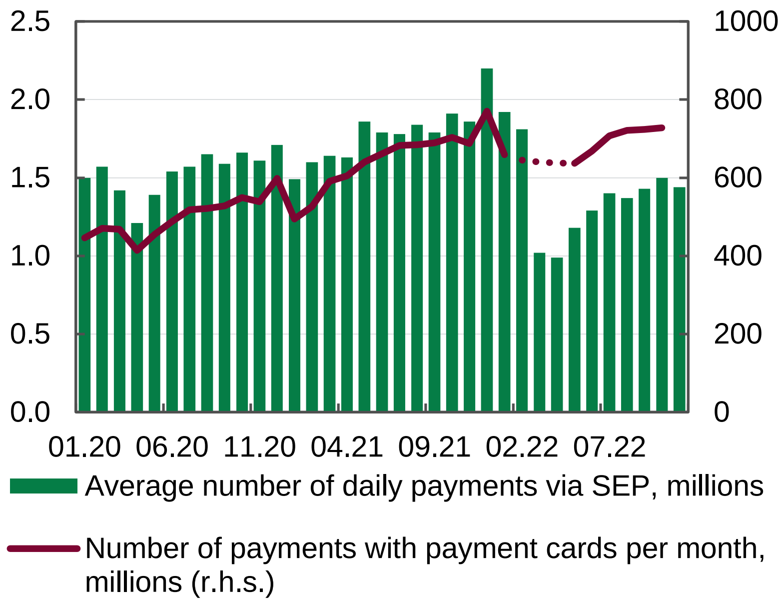


Source: NBU, Survey of bank operations in wartime.

- In the last six months, the amount of banks' losses and lost revenues from operational risk has reached UAH 13 billion, having more than doubled compared to February-April levels.
- Since the beginning of May, financial institutions have stepped up writing off of their lost assets, while banks' losses from destruction of real estate rose to over UAH 750 million.

Undisrupted access to payment services promotes trust to banks

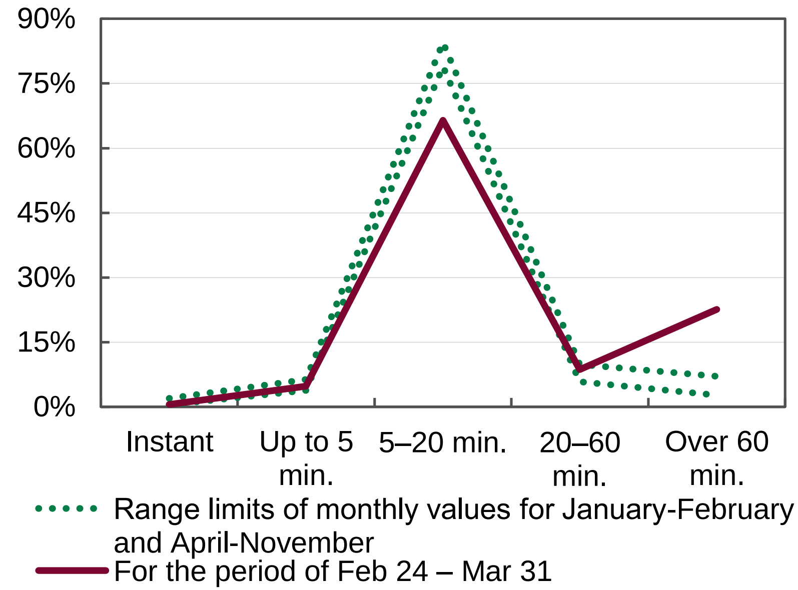
Number of payments through SEP and by cards



* In February–April 2022, static data submission was suspended.

Source: NBU.

Distribution of payments in SEP* by time a transaction takes



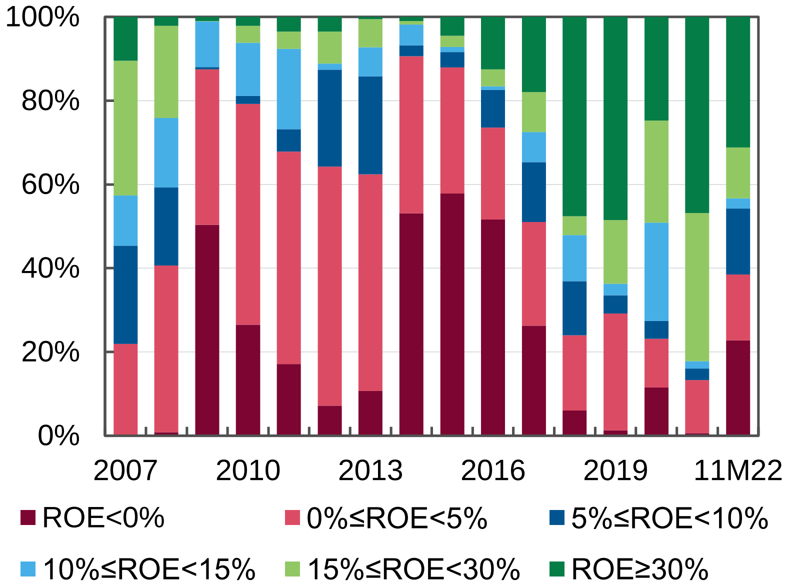
* By number of transactions in 2022.

Source: NBU.

- Despite of the full-scale war, payments were continuous, which prevented high demand for cash and saved banks' liquidity.
- The number of payments in the System of Electronic Payments (SEP) shows that the economy adapts to war conditions and gradually recovers. The number of card payments in summer-autumn has already exceeded that for the same period last in 2021.
- The SEP maintained regularity of transactions. Only in the first days of the invasion and during massive bombardments some payments took more time to complete and were slightly postponed.

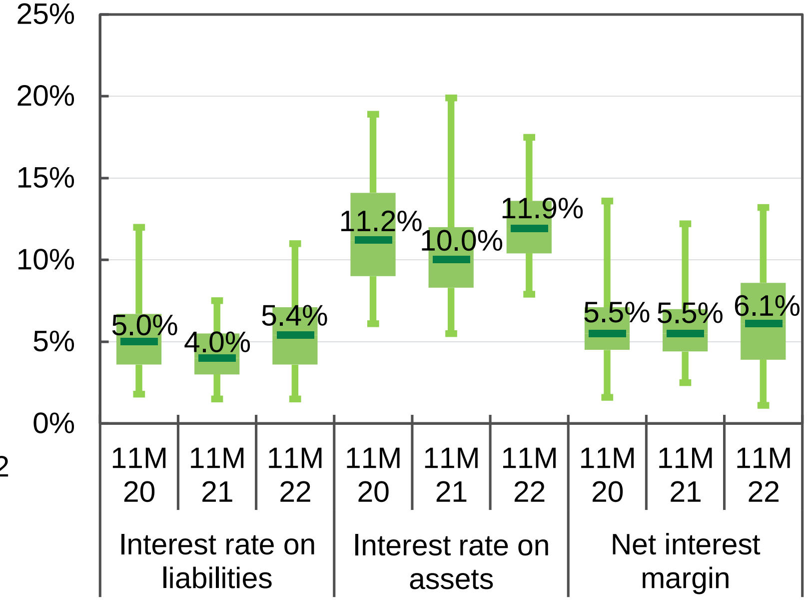
On top of rising profits, the sector's interest margin also expands

Distribution of ROE by banks' assets



Source: NBU.

Interest rates on assets and liabilities of banks and net interest margin*



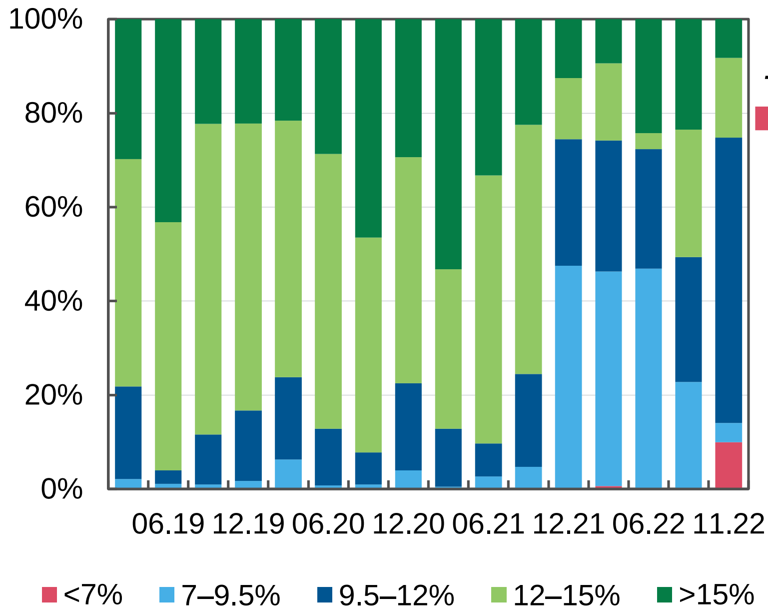
* Upper and lower edges of the green rectangles represent the first and the third quartiles of the indicator distribution across the banks for the date. Dashes inside the rectangle show the median. Upper and lower dashes outside the rectangle show the 5th and 95th percentile.

Source: NBU.

- The sector was profitable thanks to higher interest income, resumption of commission incomes, and irregular "nonmonetary" incomes from revaluations.
- Net interest margin increased to 6% due to faster growth of income generated by assets compared to cost of funding, ROE is on average above 9%.
- Going forward, provisions are set to increase, however, most of the banks will be in the position to absorb losses thanks to income and capital.

Next year, the NBU will conduct bank resilience assessment

Distribution of core capital adequacy by share of banking assets



Source: NBU.

Time

Stage 1 *Deep economic crisis*	**Stage 2** *Economic stabilization*	**Stage 3** *Post-war economic recovery*	**Stage 4** *Stable economic growth*
▪ Capital declines, portfolio quality deteriorates. ▪ Regulatory easing: the NBU does not sanction banks for capital losses.	▪ The NBU reviews asset quality and viability of banks ▪ The NBU sets deadlines for restoring capital. ▪ Banks submit restructuring/ re-capitalization plans.	▪ The banks implement restructuring / recapitalizatio n plans. ▪ The banks gradually restore their capital in line with the NBU-validated plans.	▪ The NBU re-imposes pre-war requirements. ▪ The NBU further harmonizes regulations with the EU acquis.

- Banks maintain, sometimes build up capital despite of the war. However, capital adequacy risks are rising.
- In 2023, the NBU expects stabilization of economic situation and gradual economic recovery. Therefore, given current developments, the NBU plans to review asset quality and estimate banks' viability next year.

Recommendations

Recommendations to banks

- To assess portfolio quality in an objective manner and recognize credit risks in time.
- To ensure continuous work of bank branches during a blackout.
- Banks should pay more attention to liquidity risk management.

Recommendations to non-bank financial institutions

- To uphold operations even in wartime.
- To comply with regulatory requirements.

Recommendations to authorities

- To boost domestic borrowing market.
- To optimize state programs for business support.

NBU plans

- To assess asset quality in 2023.
- To proceed with implementation of new requirements for banks in line with previously announced timeline:
  - deduction of 75% of non-core assets' value from capital from 31 December 2022
  - Implementation of NSFR requirements at 100% from 1 April 2023.