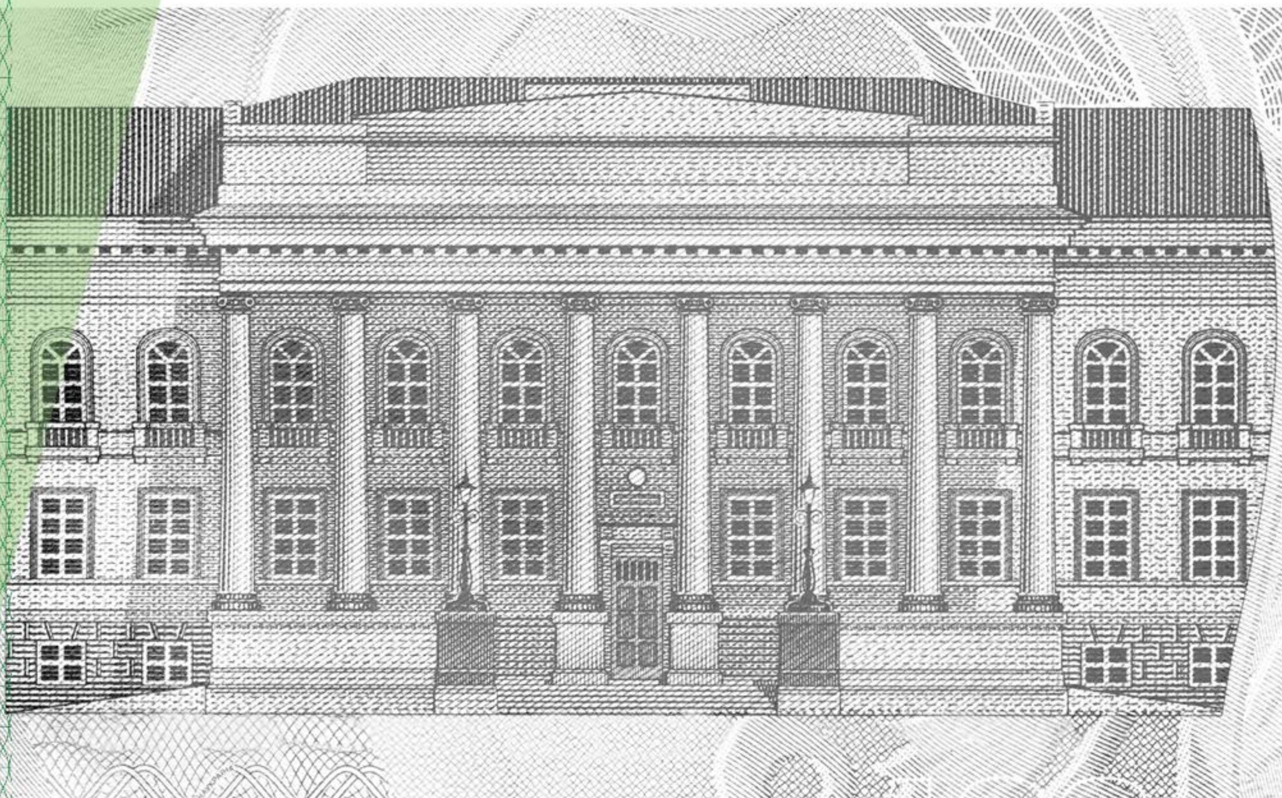
National Bank of Ukraine

Financial Stability Report

June 2023



The Financial Stability Report (hereinafter the report) is a key publication of the National Bank of Ukraine (the NBU). It aims to inform about existing and potential risks that can undermine stability of Ukraine's financial system. This report focuses on risks that Ukrainian financial sector and economy face under protracted full-scale war. The report also offers authorities and financial institutions recommendations that aim to mitigate wartime risks, enhancing financial system's resilience to these risks, and building ground for the post-war recovery.

The report is primarily aimed at financial market participants, and all those interested in financial stability issues. Publication of the report promotes higher transparency and certainty of macroprudential policy, helps to boost public confidence in the policy, and thus facilitates National Bank's management of systemic risks.

The Financial Stability Committee of the NBU approved this report on 27 June 2023.

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Summary

The financial sector has successfully adapted to operating in the hard conditions of full-scale war. The banks are providing services without interruption, maintaining their networks and increasing capital, while also preserving their operational efficiency and profitability. The safety margins they have accumulated is contributing to financial stability, reinforcing the banks' resilience to the further challenges of a protracted war, and preparing them for the full recovery of lending.

The energy terror unleashed by russia last autumn and winter turned out to be less damaging to the economy than expected last year. The energy system has withstood the attack, and economic activity has revived. This year, the economy will grow moderately, inflation will continue to decelerate, and the FX market will remain stable. Therefore, the NBU will be able to cut its key policy rate earlier than expected. The financial performance of businesses is improving, despite still-low production volumes. However, companies' need for loans is moderate. The labor market and household incomes are gradually recovering. As a result, the propensity to consume is increasing. This is pushing up households' demand for bank loans, especially card-based loans.

The protracted hostilities require significant funding, which has led to a record-high budget deficit It is impossible to cover all budgetary needs with funding available on the domestic market. Therefore, international assistance remains critical for Ukraine. The IMF program that has been launched will enable Ukraine to receive USD 115 billion from partners over the next four years, while making international financial support more systematic. Ukraine's fulfillment of its obligations to its international partners is the prerequisite for further regular inflows of funding.

Funds received from international partners have supported the balance of payments and have allowed the NBU to build up the highest level of international reserves in more than a decade. This creates an additional safety margin to support the FX market, which has improved markedly in recent months. The NBU's interventions have decreased, and the cash exchange rate has come close to the official one. The NBU is gradually easing FX restrictions.

The liquidity of the banking system does not raise any concerns: short-term liquidity ratios are on average three times higher than the minimum requirements. Bank retail deposits are stable. The NBU's efforts to improve the term structure of retail deposits are yielding results. The regulator's steps prompted the banks to make hryvnia term deposits more attractive by raising interest rates on longer-term deposits and by revising their deposit product line. As a result, the volume of hryvnia term deposits has started to grow, as has their share in overall deposits. The inflow of corporate deposits continues. Given their market bargaining power, businesses are getting higher rates on their deposits. Higher rates and larger deposits have led to a sizeable increase in the banks' costs on corporate funding. The portion of refinancing loans and external loans in the banks' liabilities fell to minimal levels.

The corporate loan portfolio continues to shrink. The main reason is weak demand: the volume of new lending does not cover the repayment of previously issued loans. However, the banks are optimistic, and hope that the hryvnia loan portfolio will grow during the year by about 10%. The financial institutions expect this growth to be primarily driven by lending under state support programs. State programs remain the main channel of credit financing for businesses. Therefore, banks and businesses must retain access to these programs, and the banks have to be timely compensated for interest payments.

The retail loan portfolio has at last stabilized after sharply declining since the beginning of the invasion. However, it is premature to assume that this is a full recovery. Stabilization is being driven by stronger demand for card loans taken out to meet current needs. The banks with the best online apps are rebuilding their portfolios: they have increased credit limits and are expanding their client base. However, the other retail segments are still depressed. While seeking to recover their portfolios, the financial institutions should stay vigilant to maintaining portfolio quality. Moreover, as the financial standing of households has deteriorated during the

war, lending should be done responsibly, without creating an excessive debt burden for clients.

The state support program *eOselia* is producing episodic bursts of mortgage lending. However, financing of the program is sporadic, so its mortgage plans are significantly underachieved. Market demand for mortgages is practically absent, and demand for real estate bought with a purchaser's own funds remains extremely low. Uncertainty will restrain the development of the real estate market and mortgage lending for an extended period.

This year, the banks have sharply reduced their provisioning after recognizing large losses from credit risk last year. Since the outbreak of the full-scale war, the banks have recognized the loss of almost 15% of the portfolio that was performing before russian full-scale invasion. Losses are somewhat lower for the corporate portfolio, and higher for the retail portfolio. However, some of the corporate loans undergoing restructuring with easing of loan service terms may eventually become nonperforming. Considering these additional potential losses, cumulative war-related losses to the portfolio will approach the estimates made by the NBU a year ago – around 20%. The pessimistic credit losses scenario that assumed lasting adverse effects from power shortages has not materialized.

Despite the losses caused by the war, the banks generated profits in 2022, and in 2023 their profits increased. This was mainly driven by high interest income from investments in high-quality liquid assets. Switching to less risky instruments is a common response of banks to a crisis, and in times of high interest rates they also generate significant income. Moreover, income from corporate lending remain stable. Robust interest income has allowed the banks to maintain high interest margins despite a rise in the cost of funding. This reassures the banks in the face of a possible decline in interest rates, thus making profitability risks low.

High net interest margins and operational efficiency are inherent in banks of all classic business models: corporate, retail, and universal. Therefore, banks with private capital did not seek to change their business models after the outbreak of full-scale war. The role of state-owned banks has strengthened: they perform social functions, actively lend under state support programs, and take the lead in lending to state-owned enterprises. Their market share is growing, which is typical for crisis periods. The privatization of the state-owned banks will return to the agenda in the post-war period. For now, the key issue is to update their strategies to take into account persisting uncertainty over security conditions.

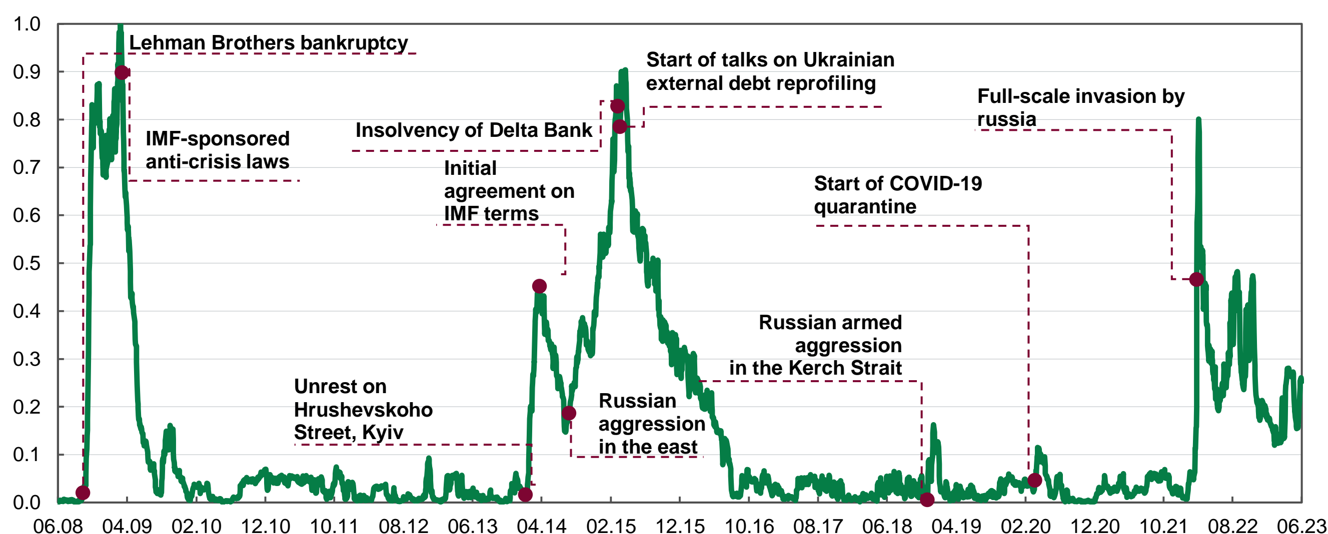
High profitability resulted in an increase in the sector's capital adequacy, which is currently double the minimum requirement. Only one bank is in breach of the requirement. The NBU's bank resilience assessment, launched in April, is designed to reliably estimate the banks' potential capital needs over the next three years. Based on the assessment's results, the banks that are identified as needing capital will draw up capitalization or restructuring programs. The financial institutions' profits are expected to be the main source of capital increases. Accumulated profits will be used by the banks to meet postponed and new capital requirements that are in line with European standards. Furthermore, based on the resilience assessment, the NBU may reimpose on the banks requirements to build capital buffers. Capital distribution restrictions will remain in place until these priority goals are achieved.

Financial Stress Index

The Financial Stress Index (FSI) has been high and significantly volatile for more than a year. It has risen in recent months, following a drop in winter. The main cause of this was a simultaneous increase in several components of the index. Over the past six months, the sub-index of households' behavior has grown gradually, primarily due to a further rise in interest rates on hryvnia deposits. The current interest rate increases are not related to the outflow of deposits, and thus are not evidence of additional pressure on liquidity. Rather, they reflect tighter monetary conditions, which exacerbate the challenges that financial system is facing. The banking sub-index also increased as a result of a certain deterioration in liquidity indicators, but it was still the lowest of all of the FSI components. The sub-index of government securities remained high because of an increase in yields on sovereign Eurobonds. Along with that, the narrowing of the spread between the official and the cash foreign exchange rates and a decrease in volumes of the NBU's FX interventions led to a gradual decline in the foreign currency market sub-index.

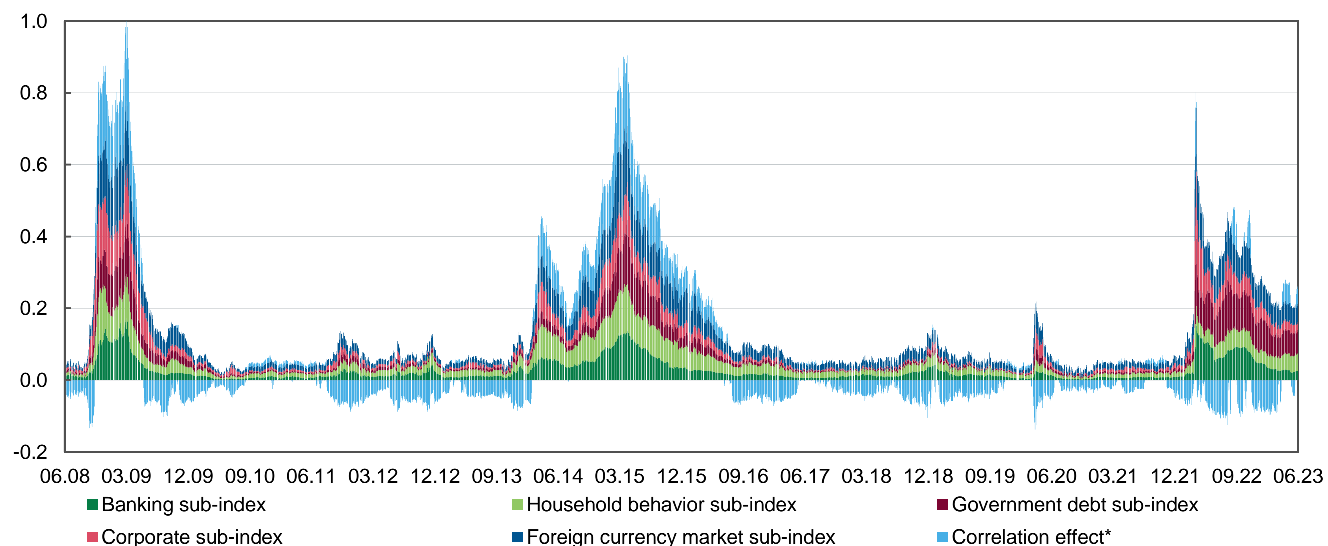
The FSI reflects only the current condition of the financial sector and does not signal future risks that may arise over the short or long term.

Figure FSI1. Financial Stress Index



Source: NBU.

Figure FSI2. Financial Stress Index decomposition



* The correlation effect is the contribution of the current correlation between sub-indexes compared to its average over the entire observation period.

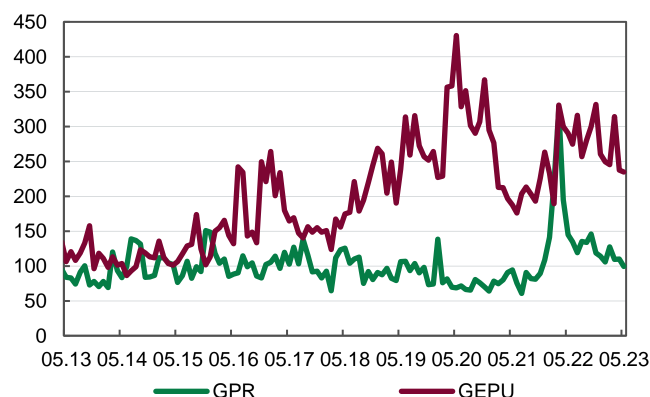
Source: NBU.

Part 1. External Conditions and Risks

1.1. External Developments

International financial and military assistance to Ukraine is becoming more systematic and relevant to the state's needs. However, a mechanism for financing the post-war recovery, in particular by transferring russia's frozen assets to Ukraine, has yet to be established. The world has managed to avoid the risks of global recession, which favors further support for Ukraine. The drop in energy prices, combined with the effect of sanctions, has been affecting russia's economy, but sanctions need to be tightened. Food prices have been decreasing gradually, but uncertainty over supply channels has a greater impact on Ukrainian exports.

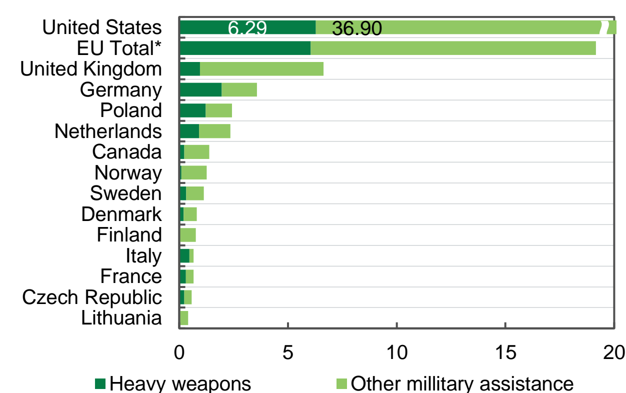
Figure 1.1.1. Geopolitical Risk (GPR)* Index and Global Economic Policy Uncertainty (GEPU) Index**



* https://www.matteoiacoviello.com/gpr.htm
** https://www.policyuncertainty.com/global_monthly.html

Source: Dario Caldara and Matteo Iacoviello. Davis, Steven J.

Figure 1.1.2. Commitments on military assistance to Ukraine from top-15 partners from end-January 2022 through February 2023, EUR billions



* EU member states and institutions.

Source: Kiel Institute for the World Economy (Germany).

The defense forces of Ukraine have held the frontline and are preparing to liberate Ukrainian territory

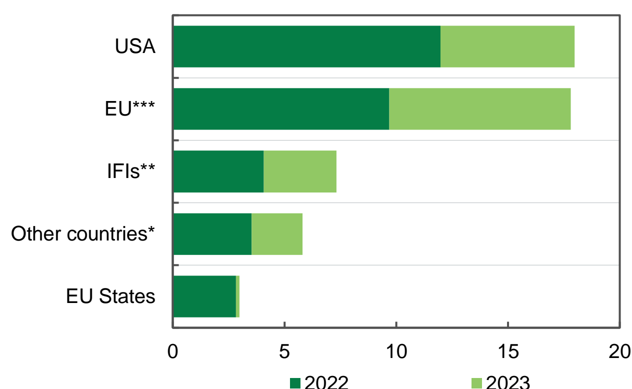
The frontline has remained practically unchanged over the past few months. With the help of the allies, which provided weapons, Ukraine's defense forces stopped russia's advance this winter. The country's air defenses have also been reinforced, which, among other things, helps to protect the energy system from further damage. However, the war continues, its course is unpredictable, and its duration is uncertain. After the demolition of Kakhovka hydropower station dam, moscow might commit new large-scale acts of terror. The covert, long-running mobilization in russia shows that the enemy has no intention of de-escalating the war. Therefore, the need for international assistance remains critical. Military support for Ukraine has become more systematic than in the first months of the full-scale invasion. Military assistance coordination platforms – primarily Ramstein – have been operating successfully and regularly. The Ukrainian army continues to receive increasingly modern and powerful weapons to prepare for the liberation of the occupied territories. In the meantime, conflicts are spreading within the ranks of the enemy.

International financial assistance is now systematic

The major factor in external financial assistance becoming more systematic and predictable was approval of the IMF's new extended fund facility for Ukraine in March. The Fund approved a four-year financing package of USD 15.6 billion. The IMF loan is a part of a larger financing package of USD 115 billion to be provided over the next four years. The EU has announced a new aid package of EUR 50 billion starting next year and continues its macrofinancial assistance program. The support is becoming more systematic: in particular, the United Kingdom and the Netherlands have switched to one-year assistance planning horizons following the example set by the United States and the European Union. The total assistance planned for 2023 meets the government's current financial needs, but the risks of an increase in military expenses and assistance needs becoming larger are currently high. A prerequisite for the timely inflow of announced assistance is the fulfillment of Ukraine's commitments, in particular the proper implementation of reforms.

At the G7 summit in Japan, the leaders of the advanced economies reiterated their support of Ukraine and their intention to provide the country with all types of assistance "for as long as necessary," including funding for covering

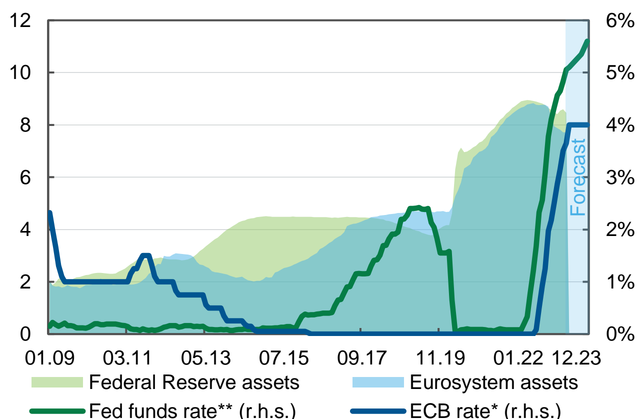
Figure 1.1.3. External financing of the state budget as of 14 June 2023, USD billions



* Canada, the United Kingdom, Japan, Switzerland, Norway, Iceland, Albania. ** IMF, World Bank. *** EU institutions including the EIB.

Source: Ministry of Finance.

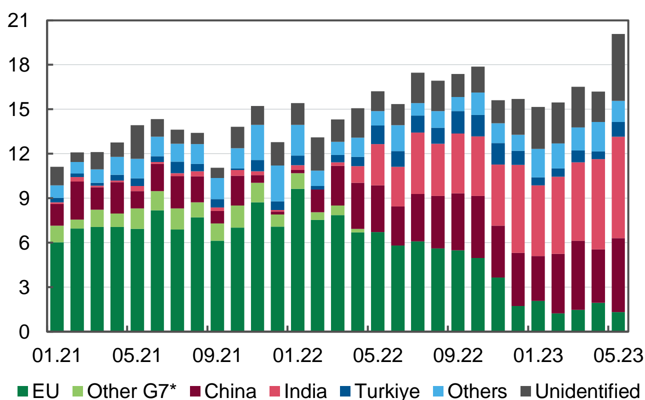
Figure 1.1.4. Assets*** and rates of the ECB and the Fed



* ECB main refinancing operations rate. ECB staff projection. ** Effective fed funds rate. Fed staff projection. *** EUR billions and USD billions respectively.

Source: ECB, Fed, Fred.

Figure 1.1.5. Monthly landings of russian seaborne crude oil, millions of tons



* United States, Canada, United Kingdom, and Japan.

Source: Breugel, Russian Crude Oil Tracker.

budgetary needs. At the same time, the timing and details of the assistance volumes will be provided later.

The search for mechanisms to finance Ukraine's post-war recovery is progressing slowly

The destruction and losses caused by the war are increasing. The World Bank estimates the cost of rebuilding Ukraine will exceed USD 400 billion over the next ten years. The development of a mechanism to finance Ukraine's reconstruction is underway on several platforms. The United States and other partners announced support for rebuilding infrastructure. The resource needs could be partially covered by russia's frozen funds. According to Bloomberg estimates, almost USD 360 billion in russian assets were frozen outside Ukraine as of the end of May. Mechanisms for transferring these funds to Ukraine are still being developed and tested. According to the agency's estimates, the United States has already recovered around USD 635 million. A special mechanism for confiscating private and state-owned russian assets has been established in Canada. The Belgian government plans to transfer interest on russia's frozen assets to Ukraine. However, none of the frozen or confiscated funds have been transferred to Ukraine yet.

Sanctions and unfavorable terms of trade are holding back the russian economy, but not sufficiently

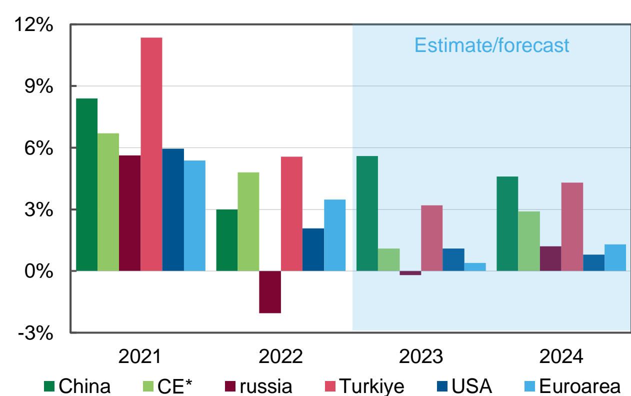
Sanctions pressure on russia continues to increase. The United States and Europe have stepped up their efforts to counteract any attempts at helping moscow circumvent sanctions or buy dual-use goods. Still, many large countries have not joined in the restrictions imposed on the aggressor country and continue to trade with russia. Thus, crude oil and petroleum products continue to be exported by sea, although these exports are now directed to other, mainly Asian markets, and are sold at a discount compared to global prices. Together with an overall decline in energy prices and a drop in natural gas exports, this more than halved oil and gas revenues to the russian budget in the first four months of the year compared to the same period last year. Due to the decrease in revenues, coupled with an increase in expenditures, russia's budget deficit for January-May has already exceeded the planned figure for the whole of 2023.

Nevertheless, the russian economy is adapting to the crisis. The country's GDP may grow slightly this year despite the sanctions due to a sizeable increase in expenditures on committing terrorism and waging the war. Russia still has its welfare fund of 8.2% of its GDP, which allows it to cover the budget deficit. Therefore, the sanctions pressure has to be increased significantly.

Partners' economies may avoid recession

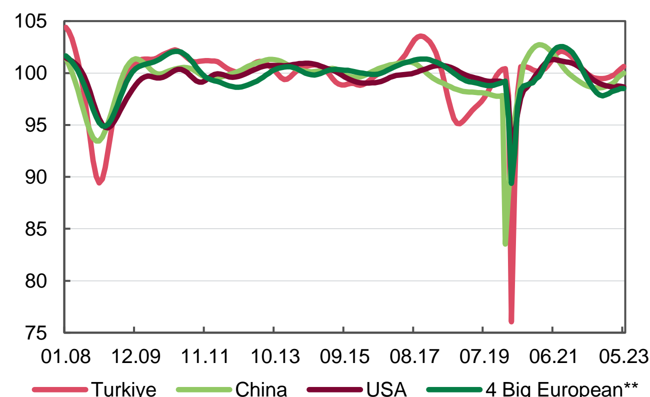
This year, the economies of Ukraine's main partner countries will grow slowly, but the forecasts of the leading international financial institutions have improved significantly compared to last year's expectations. In particular, in June, the World Bank significantly improved its GDP growth forecast for the United States, to 1.1%, and for the euro area, to 0.4%. Lower recession risks facilitate further support for Ukraine. At the same time, several European countries, including the UK, Germany, the Czech Republic, and Lithuania, are expected

Figure 1.1.6. GDP change in russia and Ukraine's main trading partners



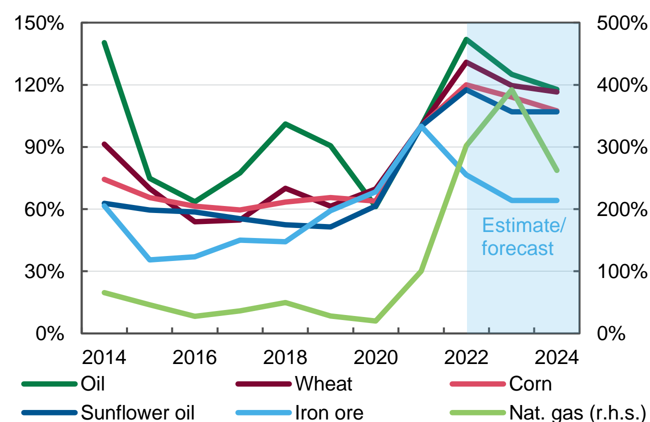
* Central Europe, including Bulgaria, Hungary, Poland, and Romania.
Source: World Bank, Global Economic Prospects, June 2023.

Figure 1.1.7. OECD* composite leading indicators (CLI) of Ukraine's main trading partners



* 100 indicates a long-term trend. ** United Kingdom, Germany, France, and Italy.
Source: OECD.

Figure 1.1.8. Global commodity prices*, 2021 = 100%



* Brent crude; russian natural gas; China's imports of Iron Ore Fines 62% FE; sunflower oil; wheat and corn at international prices.
Source: IMF World Economic Outlook, April 2023.

to experience GDPs stagnation this year. In contrast, the Chinese economy will grow almost twice as fast this year following its reopening after the coronavirus crisis. However, economic data in recent months have been pointing to new risks to economic growth in China. Overall, global economic growth is forecast to be lower than last year. It will be restrained by tight financial conditions in the global capital markets, and geopolitical threats. The growth rate of global trade will decline to 2.4% – two times less than last year and four times less than the year before. Global trade growth is expected to be subdued in the coming years.

Global inflation has begun to decline from its highest levels in decades, in part due to leading central banks raising their key rates to 2008 levels and winding down their quantitative easing programs. In the meantime, the monetary policy of these central banks is likely to remain tight for an extended period to further contain the still high inflation risks. The bank failures in the United States and Switzerland presented another challenge to the financial system at the start of the year. It did not escalate into a systemic crisis, but led to the tightening of financial conditions in the capital markets. Therefore, raising funds on the global markets will remain expensive, especially for emerging markets. This does not pose a direct threat to Ukraine, as the country's access to the global debt markets remains closed. However, it will affect Ukraine's partner countries.

Prices in commodity markets have been declining

Global commodity prices are falling. Energy prices have almost halved since August 2022. Due to a mild winter, large stocks, and new sources of supply, natural gas prices in Europe have fallen more than tenfold from their peak in late August last year. The price decline is likely to continue, although new episodes of high prices are possible as the cold season begins. Crude oil prices dropped as demand decreased on the back of the economic slowdown. On the other hand, expected gradual economic recovery may contribute to some price rises over the course of the year.

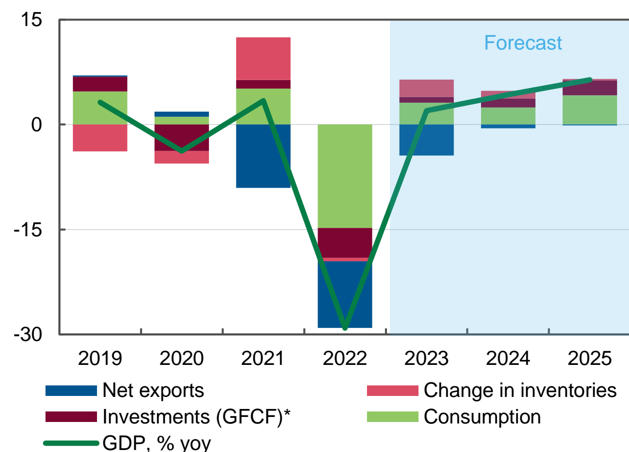
Global prices for food products, which form the bulk of Ukraine's exports, are also declining, mainly due to a large supply. The decline in wheat prices will be slow, as higher supply from a number of major producers (Australia, Kazakhstan, and Brazil) is offset by lower supplies from Argentina and higher demand, particularly from India. Corn prices will gradually decline due to strong harvests in the United States and Brazil, as well as lower imports by China and Egypt. Nevertheless, food prices will remain considerably higher than their average over the past five years, in particular due to low global stocks. The key risk to Ukrainian exports is uncertainty over export channels: namely the short-term nature of the agreements on the grain corridor, and russia's constant threats to suspend it. An additional constraint for Ukrainian agricultural producers is the ban on imports of four Ukrainian agricultural products to five EU countries until mid-September, which has already caused problems for domestic producers. However, there are no restrictions on the transit of export products.

Part 2. Domestic Conditions and Risks

2.1. Macroeconomic and Fiscal Risks

The stability of the Ukrainian energy system is the key reason behind the improvement in the forecasts for this year's economic growth: GDP will increase by 2%, while inflation will be below 15%. Substantial and regular international financial aid offsets the deficit in the trade in goods and services, a large portion of budgetary needs, while also making it possible to increase international reserves. The situation on the FX market has improved: the NBU's interventions have decreased, the cash exchange rate has approached the cashless one, and the expectations of households and businesses have risen. However, the Ukrainian economy still remains weak and vulnerable to security risks, while demand for banking services is depressed.

Figure 2.1.1. Contributions to GDP growth by final use, pp



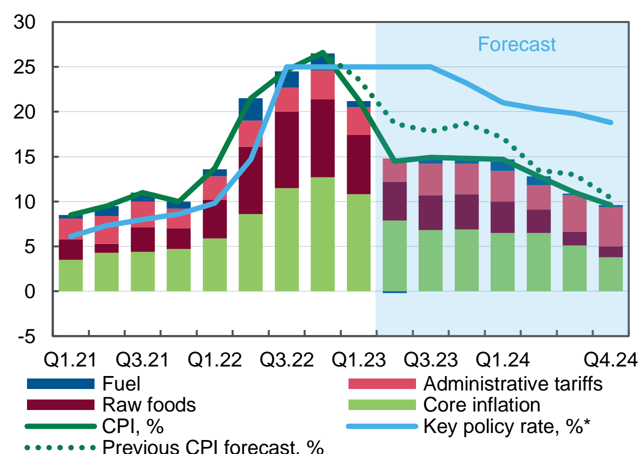
The 2023–2025 forecast will be revised in July.
* GFCF – gross fixed capital formation.

Source: SSSU, NBU estimates.

Although gradually reviving, the economy remains vulnerable

Despite ongoing hostilities and russian missile attacks on Ukrainian cities, the Ukrainian economy began to gradually recover. Real GDP is expected to grow by 2% in 2023. The NBU has revised its forecast upwards compared to the beginning of the year, primarily due to the fact that the energy sector held up, despite Russian airstrikes. This improved the performance of companies, above all retail trade and services companies. Better household expectations and rising government spending, thanks to significant international aid, will shore up consumer demand. However, destroyed production facilities and infrastructure, in particular energy infrastructure, will further restrain economic activity, and its restoration will require substantial resources. The economy continues to sustain losses from the war and remains vulnerable to security risks, as was clearly demonstrated by the demolition of the Kakhovka Hydroelectric Power Plant by russian troops. There persists uncertainty about the uninterrupted operation of the "grain corridor" and whether or not the throughput of land export routes can be increased. Longer-lasting restrictions on imports of Ukrainian food to neighboring EU countries also pose a problem. Security risks are curbing investment activity. In view of the slow recovery of the economy, the demand for certain banking services, in particular for loans, remains weak.

Figure 2.1.2. Contributions to annual change in CPI by components, pp, and the key policy rate, %



Contributions from Q2 2023 – NBU forecast as of April 2023. * On the forecast horizon it is the middle of the confidence interval.

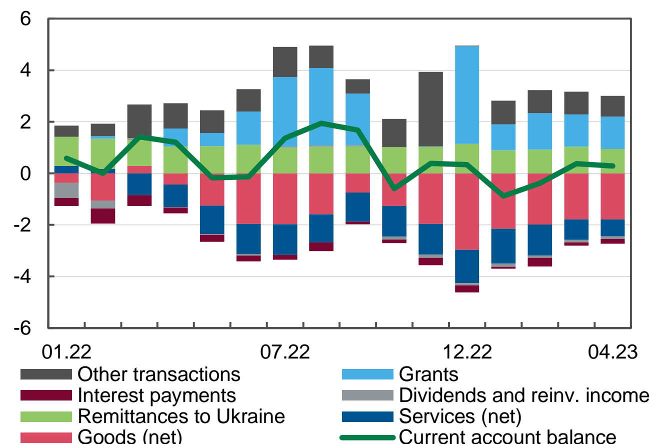
Source: SSSU, NBU estimates.

Lower inflation will open the way for earlier interest rate cuts

Inflation is declining faster than expected. A sufficient supply of food and fuel, decreased power shortages, and improved inflation expectations thanks to favorable FX market conditions are helping bring inflation down. Lower global inflation will also contribute to a slowdown in price growth. According to NBU forecasts, the growth of consumer prices will not exceed 15% in late 2023.

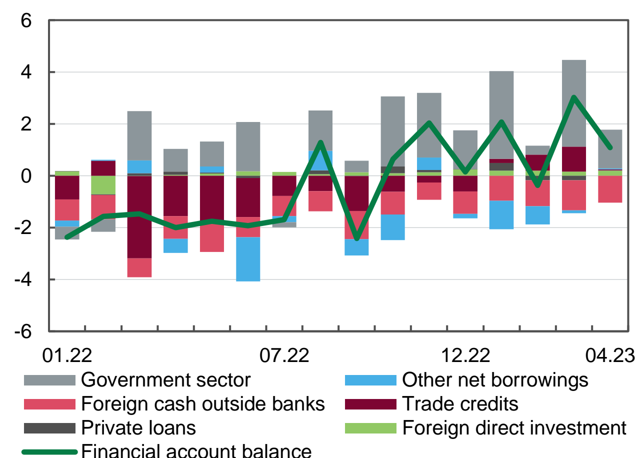
A decline in inflation, a stable FX market, and an increase in international reserves to a sufficient level are laying the foundations for a cut in the key policy rate. According to current estimates, the key policy rate could be cut this year, and probably even earlier than envisaged by the April macroeconomic forecast. Thus, the financial system will gradually leave the environment of high nominal interest rates. The gradual and predictable nature of this process will give financial institutions enough time to adjust the prices of their key products.

Figure 2.1.3. Current account balance, USD billions



Source: NBU.

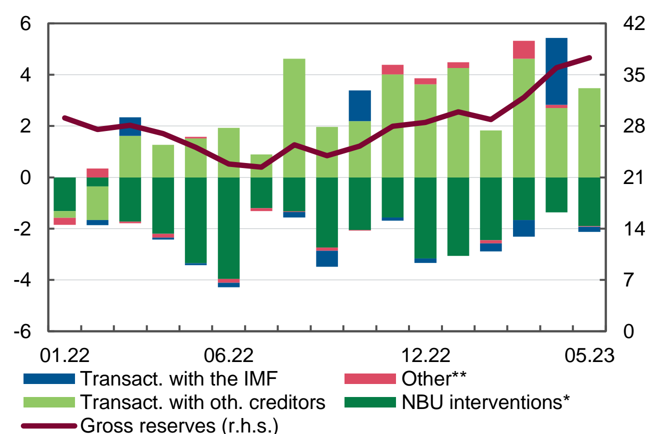
Figure 2.1.4. Financial account balance*, USD billions



* Including errors and omissions.

Source: NBU.

Figure 2.1.5. Change in gross international reserves, USD billions



* The NBU's net 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.

International assistance closes balance of payments gaps and helps build up international reserves

The substantial deficit in the trade in goods and services persists. In Q1, it was USD 9.3 billion, or 27.8% of GDP according to the NBU forecast. Compared to Q4 2022, there was a drop in earnings from exports of a number of goods: those from food exports declined due to falling global prices and lower harvests, while those from chemical exports shrank due to domestic demand for fertilizers. Exports of IT services also dropped. The spending of Ukrainians abroad had a strong negative effect on the current account. These factors will persist. The next complications in the operation of the "grain corridor" and the restrictions imposed on imports of Ukrainian food by some European countries began to put additional pressure on the current account from April. At the same time, grants provided by Ukraine's international partners will offset a considerable portion of the deficit in trade and services.

Financial account inflows were generated by international aid in the form of loans. Furthermore, nonresidents' debts on trade credits have fallen. The need to finance the activities of companies and a stable FX market are facilitating the inflow of funds from the private corporate sector into the country. This trend is set to continue.

The sufficient level of international reserves is improving exchange rate expectations

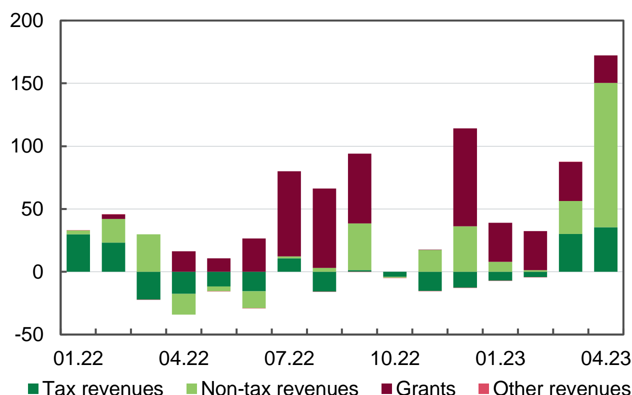
The FX market environment has become more benign. The NBU cut down on its interventions compared to the winter months. The cut-down resulted, among other things, from increased FX sales by agrarian companies ahead of the sowing campaign and the lower demand for FX among energy importers seen in spring months. The outflow of funds under card transactions also decreased, including due to the enhanced regulation of the gambling business. As a result, the cash exchange rate of the hryvnia has strengthened by 9% since the start of the year, while the cash exchange rate almost matched the cashless one. In late 2022, the difference between the two was close to 10%. This improved the exchange rate expectations of businesses and households. In turn, this is driving down households' demand for FX. In particular, in May, the volumes of net FX purchases by households were the smallest since August 2022.

Substantial international assistance, coupled with the NBU's reduced interventions, pushed up international reserves to a high not seen in the last 11 years. In late May, international reserves had risen, to USD 37.3 billion, covering almost five months of future imports. This safety cushion provides more room for the gradual revision of FX restrictions.

The regular arrival of donor funds safeguards the liquidity of the government

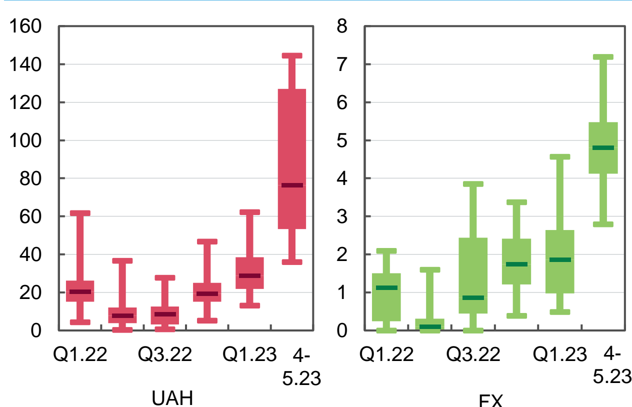
Considerable defense needs are behind the record-high deficit of the state budget. The nominal deficit of the state budget planned for 2023, excluding grants, amounts to more than UAH 1.7 trillion, or 26% of GDP according to the NBU forecast. At the same time, there persists the risk of a widening in the deficit – the planned deficit has already been

Figure 2.1.6. Contributions to the annual change in consolidated budget revenues, pp



Source: STSU, NBU estimates.

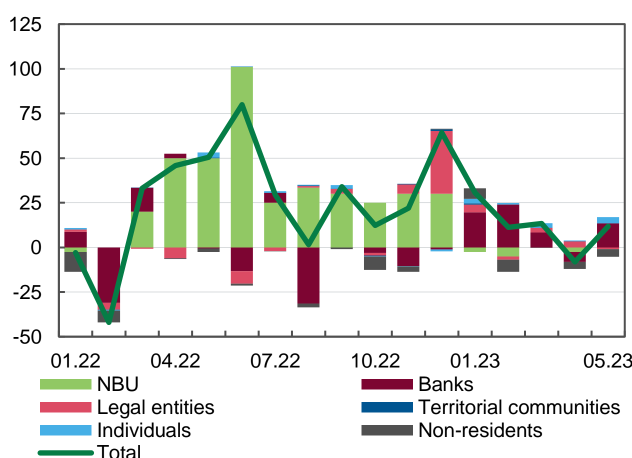
Figure 2.1.7. Daily balances of the State Treasury accounts in hryvnia and foreign currencies (USD equiv.) in 2022–2023, billion units*



* The faces of the rectangle show the first and third quartiles of the distribution. The line inside the rectangle is the median. The upper and lower "whiskers" outside the rectangle indicate maximum and minimum values.

Source: NBU estimates.

Figure 2.1.8. Change in the amount of domestic government debt securities in circulation, by their nominal value, UAH billions



Source: NBU.

revised twice this year. The possibilities of cutting back on government expenditure are limited, for objective reasons. Conversely, expenditures could rise if additional needs arise to finance the country's defense capabilities, if social support programs expand, and if damaged infrastructure is repaired. Another challenge is the accumulation of quasi-fiscal deficits in the energy sector, which will be only partially mitigated by tariff increases.

International assistance remains the main source of financing budgetary needs. The new four-year program with the IMF, approved in March is crucial for the budget. The first successful review of the program took place in May. In addition to providing access to significant financial resources, this arrangement will contribute to the further implementation of structural reforms, in particular reforms in public finance management. The regular arrival of international aid has noticeably improved the government's liquidity. The built-up liquidity stock makes it possible to increase the expenditure planning horizon and to fulfill obligations when they fall due. This could result, among other things, in an improved payment schedule under the government program "Affordable loans 5-7-9%".

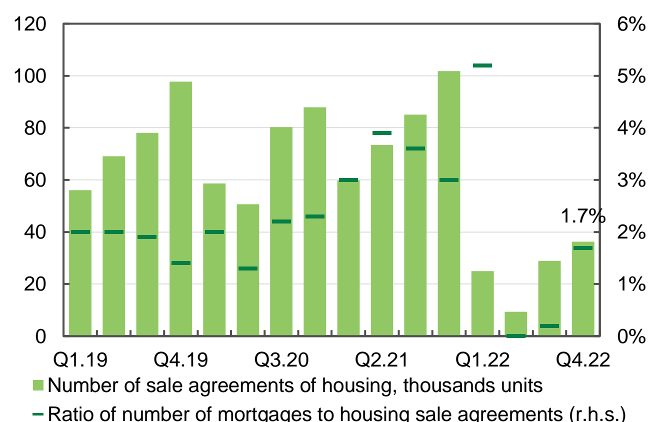
Domestic borrowing will play an increasingly important role in financing the budget deficit

This year, the budget is replenished without monetary financing. Following last year's low domestic debt rollover, this year it markedly exceeds 100% for both hryvnia and FX debt. The government's hryvnia borrowing has already exceeded that for the whole of 2022. The banks' holdings of domestic government debt securities have risen by UAH 60 billion since the start of the year. However, to a large extent, this growth was generated by the NBU's measures, and namely the permission to meet a portion of the banks' reserve requirements with benchmark domestic government debt securities. But this effect is now almost fully exhausted. Instead, the considerable liquidity of the banking sector will contribute to continued borrowing growth. Another contributing factor is slower inflation, which is pushing up real yields on hryvnia debt instruments. Looking ahead, the government should borrow through placing bonds on the market.

2.2. Real Estate Market and Mortgage Lending

Purchasing activity on the housing market remains very low, with signs of recovery being weak. Demand will be depressed for a long time because of security risks, a fall in household income, and considerable immigration. The housing stock is shrinking due to its destruction, while the pace of new housing construction is at risk because of uncertainty and the deteriorating financial health of developers. Although quoted prices are growing for the most part, the deals themselves are concluded with discounts. The price-to-rent ratio continues to indicate that there are significant market mismatches. Mortgage lending on market terms is almost non-existent, while the operation of government support programs is currently sporadic. The market for retail space is rebounding, while that for office space continues to stagnate.

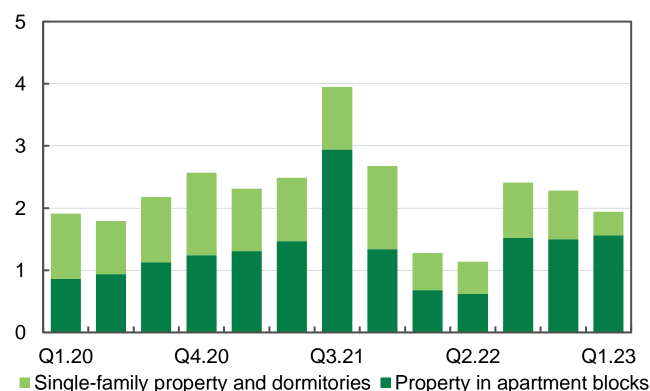
Figure 2.2.1. Housing market activity



The number of new mortgage agreements is provided by a survey of the banks that together had a total gross mortgage portfolio worth 95% of the sector's overall portfolio as of the end of 2021.

Source: the Ministry of Justice of Ukraine, bank data.

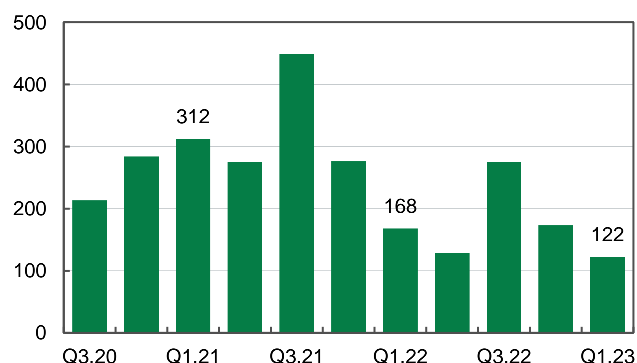
Figure 2.2.2. Commissioned housing in Ukraine, millions of square meters



Data for Q1 2023 is the estimate based on data about the number of flats commissioned over the period.

Source: SSSU.

Figure 2.2.3. Issued certificates of commissioning and permits to construct apartment blocks during the period



Source: Single State Electronic Construction System.

Demand for residential property is subdued

H2 2022 saw a gradual rise in the number of housing purchase and sale agreements. In spite of that, the total number of these agreements in 2022 was only a third of that in 2021, before the war. Although the first signs of a gradual recovery appeared in mid-2022, the recovery was later held back by the uncertainty resulting from massive airstrikes. With high security risks and the fall in the real income of most household categories, buyers' activity remains low.

According to a survey of developers conducted by LUN, a residential real estate website, primary market sales contracted by 8 to 12 times yoy. Purchases of unfinished housing are currently not attractive due to the elevated risk that the construction will not be completed because of the security situation and the deteriorating financial health of developers. Demand for finished housing in western oblasts is being shored up by persons displaced from areas with difficult security conditions. At the same time, a survey of potential buyers conducted by the LUN website shows that half of solvent potential buyers are putting off housing purchases until the end of war. Demand will remain depressed for a long time, dragged down by the slow recovery of the economy and income, immigration, and overall uncertainty.

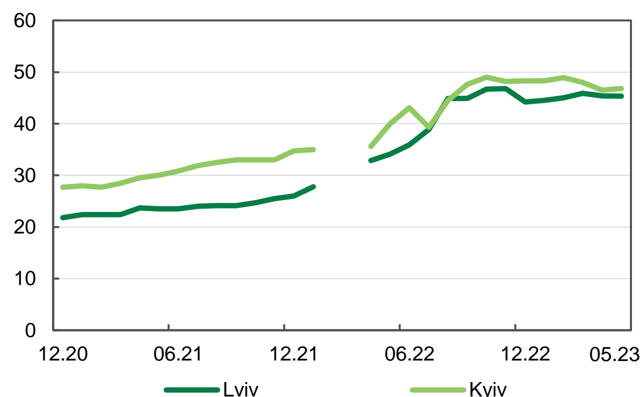
Housing purchases are mostly financed through savings, with mortgages – as before the start of the full-scale invasion – accounting for a very small share of sales. Less than 2% of the agreements concluded last year were financed with bank loans.

Housing supply is at threat

According to LUN website data, by late May construction had resumed at almost ¾ of the construction sites that were active in February 2022. In western oblasts, this figure is close to 100%, while in Kyiv it is only slightly more than a half. The construction pace at resumed sites is slower than the pre-war one. Developers are for the most part completing nearly finished buildings.

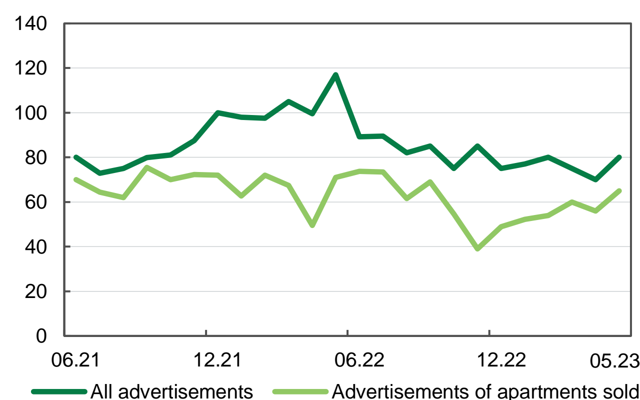
In Q1, almost 25,000 flats in residential buildings were commissioned. These were mostly blocks of flats, the construction of which began long before the full-scale invasion. This is almost two times more than in the same period of 2022, but 18% less than in the first three months of pre-war 2021. At the same time, the number of construction permits issued continues to decline. Last year, developers received half the number of permits than the year before. In Q1 2023, the number of new construction sites continued to drop.

Figure 2.2.4. Prices quoted for newly built housing, UAH thousands for a square meter



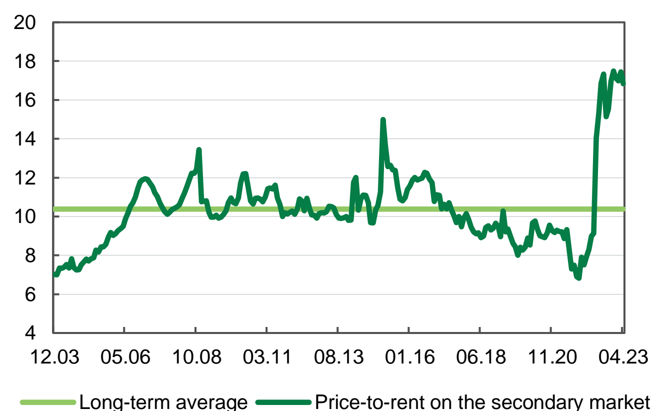
Source: LUN website.

Figure 2.2.5. Average prices quoted in advertisements for two-room flats in Kyiv, USD thousands



Source: Rieltor.

Figure 2.2.6. Price-to-rent ratio



Source: real estate agencies, NBU estimates.

At the same time, the housing stock is still being destroyed. According to the *Russia Will Pay* project, more than 150,000 residential buildings worth a total of USD 53.6 billion were either destroyed or damaged during the first year of the full-scale war.

With the housing stock shrinking due to being destroyed and increasingly fewer new projects being launched, supply shortages are becoming more likely to occur on the housing market over the long run. According to LUN website data, in late May there were 17% fewer new apartment blocks for sale in Kyiv than in early February last year. Forecasts are becoming gloomier, as both developers' financial safety cushions and the commissioning of current construction sites are in question.

Quoted prices are not marked-driven

Quoted housing prices have increased noticeably over the last year. By May, primary market housing prices had risen by over 16% yoy in Kyiv, while in western regions the rise had been even more pronounced. In view of very sluggish demand, quoted prices mostly reflect sellers' expectations and desire to cover rising construction costs.

Secondary market prices better reflect the balance of market forces, as most deals are struck in this segment. Housing is mostly sold at discounts, as sellers make concessions. The average prices in ads for all housing are significantly higher than those in sales listings for flats that have been sold. According to Rieltor, a real estate information portal, this difference was the greatest in the first months of the full-scale war and during the intensive airstrikes on infrastructure in late 2022. As of May, housing prices in sales adverts for sold flats were a quarter lower than the average prices given in all ads.

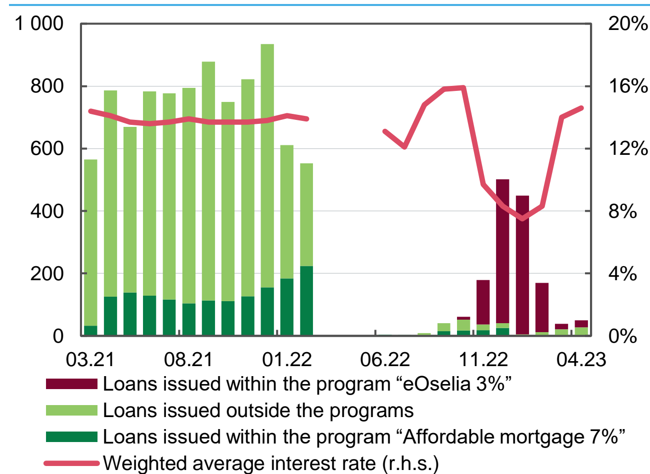
The price-to-rent ratio also shows that real estate prices are far from their natural, market-driven level. This ratio continues to be almost twice as high as its historic average. Rental terms are more attractive than housing purchases, which will continue to dampen buying activity on the market.

Housing rental prices have been stable over the last six months. However, these prices have changed in different ways across regions since the start of the full-scale war: in Kyiv rental prices are on average one third lower than their pre-war levels, while in Lviv these prices are nearly twice higher than in late 2021.

Mortgage lending has almost stopped again

Mortgage lending is practically nonexistent: over the first year of the full-scale war, the banks issued fewer than 250 mortgages on market terms. Some of these deals had been agreed upon before February of last year. Government-supported mortgage lending was more active. In October 2022, the state mortgage lending support program eOselia was launched. This program offers a reduced rate of 3% per annum for benefit-entitled categories of the population: servicepersons, law enforcement officers, medical workers, teachers and scientists. Since the launch, slightly over 1,500 mortgages have been issued under the program. However, the amount of mortgages issued over more than a year of full-

Figure 2.2.7. New mortgage lending, UAH millions



Source: bank, BDF, and Ukrfinzhytlo data.

scale war has been nine times less than that issued over the 12 months that preceded the war. Almost 100% of the new loans were issued for the purchase of secondary market housing. Demand on the primary market is weak, while the banks are avoiding this segment because of considerable risks.

Following a short-lived surge, lending under the state program was suspended for three months. By late January, the funds of the Ukrainian Financial Housing Company (Ukrfinzhytlo), which administers the program, had been fully distributed among partner banks. Thus, the company faced funding shortages. Lending resumed in late May thanks to additional funding raised on the open market. In spite of that, the company's plan for 2023 has so far been fulfilled by less than 10%.

The retail space market continues to be driven by consumer demand and the security situation, while the office space market is stagnating

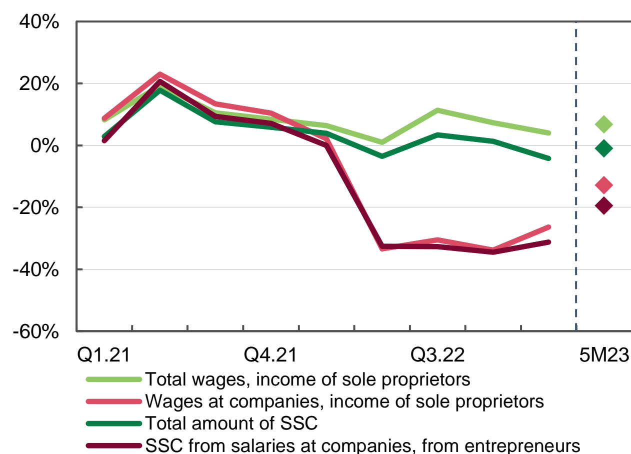
Since the start of the year, the rental income of retail space owners has grown, fueled by retailers' rising goods turnover. The growth stopped in May on the back of more frequent airstrikes on peaceful cities, and first of all Kyiv. Shopping malls in densely populated cities with lower security risks – those in western oblasts – have better visitor and payoff ratios. The preferences that consumers have developed during the full-scale war have become entrenched. People prefer visiting small and medium-sized shopping malls that are located near residential areas. The vacancy rate in these shopping malls is close to zero. At the same time, large and remote shopping malls have unrented space, in particular due to the reluctance of some international anchor operators to return to the Ukrainian market. Overall, demand is slowly returning equilibrium to the balance of forces between lessees and retail space owners. Discounts, which totaled at least one third of rental rates last year, are decreasing. What is more, practically no discounts are given on high-quality retail space. Shopping malls that were destroyed during airstrikes are being rebuilt.

Despite improved business expectations, the situation on the office space market is critical. The reason for this is the popularity of the remote work regime, which is safer and cheaper for employers. When lease agreements expire, companies usually decrease rented space or give up renting space altogether. As a result, the vacancy ratio on the market is rising, while rental rates continue to fall due to larger discounts – office space is generating less and less income. Sometimes office space owners agree to a rent that only covers the operating expenses on space maintenance. With the construction of new office space launched before the full-scale war, the supply on the market will exceed the weak demand for a long time.

2.3. Households and Related Risks

Nominal household incomes are being supported by large payments to the military and a recovery in wages at private and state-owned companies. However, high inflation is holding back the recovery in real incomes: they remained almost unchanged year-on-year in the first five months of the year. The economic revival and lower inflation will help improve households' financial standings, thus increasing the propensity to consume and demand for loans. Households' debt burdens have declined since the start of the full-scale war. However, the debt burden is still significant for certain categories of borrowers, especially those with the lowest incomes.

Figure 2.3.1. **Real household income*, yoy**



* The amount of salaries and income of sole proprietors are obtained from bank data on cash turnover. Privatbank's data has been adjusted, only salary payments are taken into account.

Source: Pension Fund of Ukraine, State Treasury Service of Ukraine, banks, NBU staff estimates.

Despite inflation, real household income is not decreasing

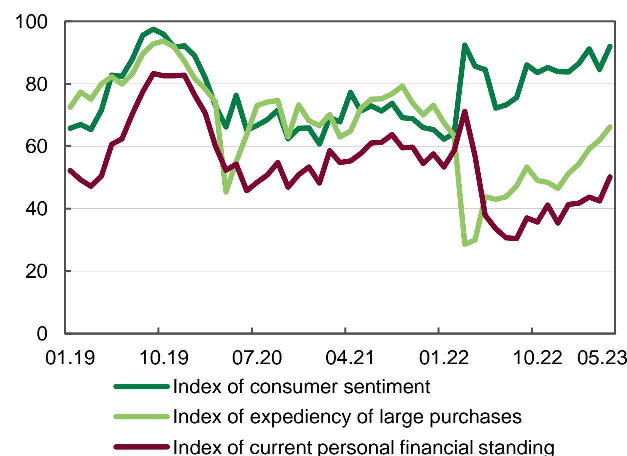
The economic revival in the spring of 2023 helped bring the main component of personal income – corporate salaries and sole proprietors' income – closer in nominal terms to the levels of the end of 2021. As a result of this year's revision of approaches to remuneration of people serving in the military, payments to the military decreased. However, the share of these payments in household income remains significant, and the amount is still high. Thanks to the recovery of salaries and large payments to the military, total household income is not decreasing in real terms.

Companies are restrained in their plans to raise wages. However, further economic recovery will boost employment, and thus households' income from wages. At the same time, inflation is expected to continue to decelerate. This will create preconditions for a further recovery in households' financial standings.

The labor market is stabilizing, but unemployment remains high

Labor market conditions are improving gradually. The number of vacancies on job search websites has been growing rapidly since the start of the year. The number of new resumes also grew slightly for a time, but overall it remains close to the pre-war level. The key problem in the labor market is occupational and regional imbalances, primarily due to the large number of internally displaced persons and migrants abroad. The unemployment rate has been declining since its peak in mid-2022, but remains high, at around 20%. Unless there are new shocks, it will continue to decline slowly.

Figure 2.3.2. **Households' consumer sentiment, points**



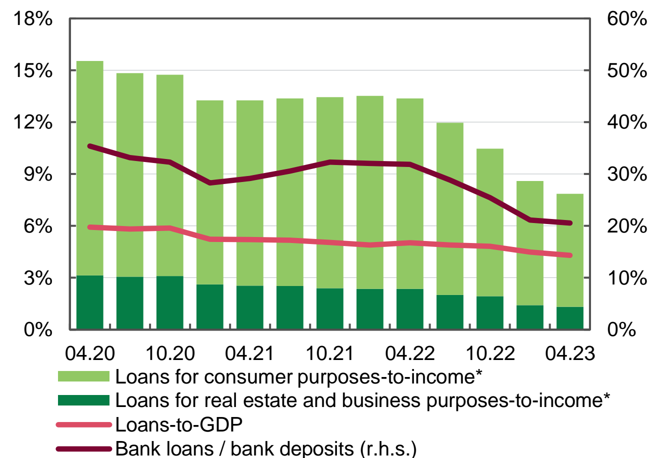
* The index dropping below 100 means that society mostly considers the situation to be negative.

Source: NBU, Info Sapiens, monthly surveys of households (respondents aged 16+).

Improved consumer sentiment is contributing to the recovery of certain lending segments

The gradual recovery of incomes and growth in employment have improved consumer sentiment. According to Info Sapiens surveys, the Consumer Sentiment Index returned to pre-pandemic levels in May. This positively influenced demand for certain types of loans, particularly card loans, and helped stabilize the retail loan portfolio. In Q1 2023, for the first time since the start of the full-scale invasion, the banks reported in the Bank Lending Survey that consumer sentiment was not reducing credit demand. At the same time, high uncertainty will continue to deter households from making large purchases, including real estate. The range of potential borrowers is limited by the still-high number of unemployed, internally displaced persons, and refugees abroad, whose credit risks are assessed by the banks very conservatively.

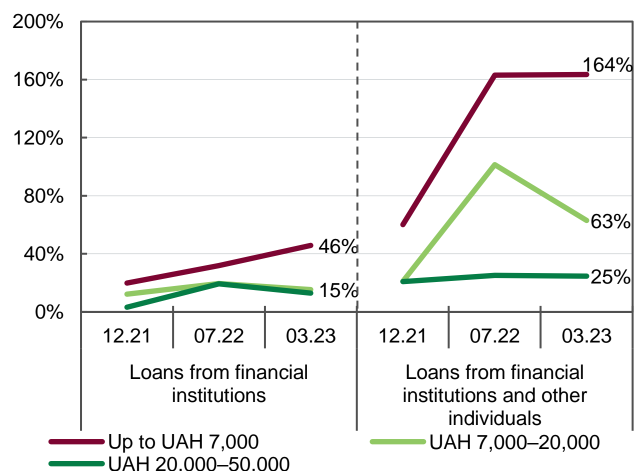
Figure 2.3.3. **Household debt burden**



* Estimated as amounts of salaries and income of sole proprietors obtained from bank data on cash turnover and pensions paid by the Pension Fund of Ukraine.

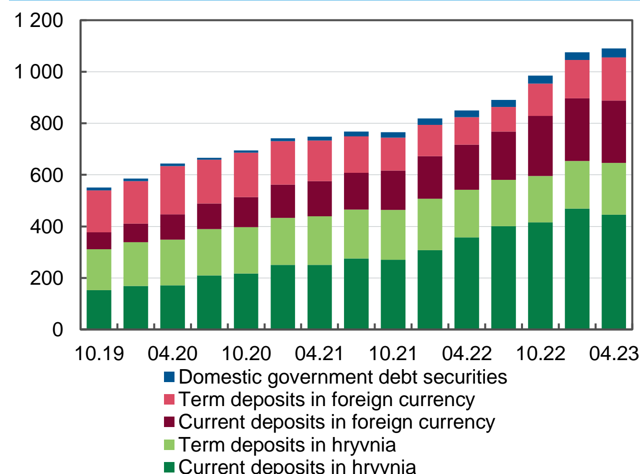
Source: Pension Fund of Ukraine, NBU staff estimates.

Figure 2.3.4. **Ratio of debt to annual income of households, groups by monthly income**



Source: Info Sapiens, quarterly surveys of households (respondents aged 16+).

Figure 2.3.5. **Main types of households' financial savings, UAH billions**



Source: NBU staff estimates.

Loan penetration is declining, and the debt burden on low-income households has increased

Weak demand for loans and rising nominal incomes has led to a decline in the average debt-to-income ratio of households. However, the debt burden has increased for many categories of households. The key factor behind this is loans received from relatives, friends, or acquaintances. According to Info Sapiens research, on average, debt to financial institutions accounts for less than a quarter of the total outstanding debt of households with incomes under UAH 20,000. Volumes of borrowing from relatives and friends rose by many times with the onset of full-scale war. Only in recent months has it started to decline slowly. This category of households is the most heavily indebted to the banks. Therefore, the risks of insolvency for debtors with lower incomes are quite high. At the same time, the debt burden of clients with higher incomes remains moderate.

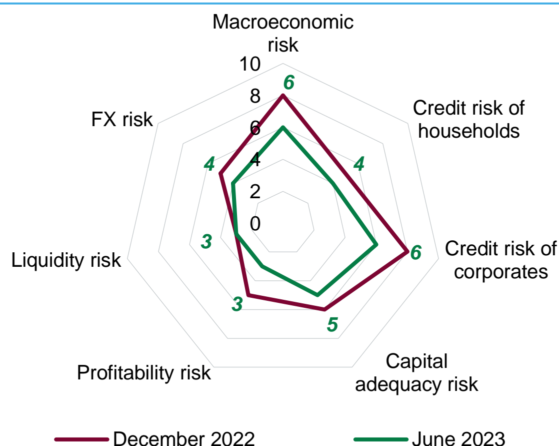
Savings are growing slowly this year, with the share of term instruments increasing

Households' savings grew throughout 2022, supported by high nominal incomes. Overall, the ratio of funds on bank accounts to income rose markedly last year. The funds remained on the accounts due to weak consumer demand and the desire to have savings in times of uncertainty. Last year, a large portion of income remained on current accounts with the banks, as interest rates on term deposits were low. This year's increase in the yield on hryvnia deposits contributed to the growth in term deposits, reducing demand for cash and FX deposits. However, due to the slower growth in nominal incomes, total savings are barely growing. Going forward, growth in savings will be restrained by the recovery of consumer demand.

Part 3. Banking Sector Conditions and Risks

3.1. Financial Sector Risk Map

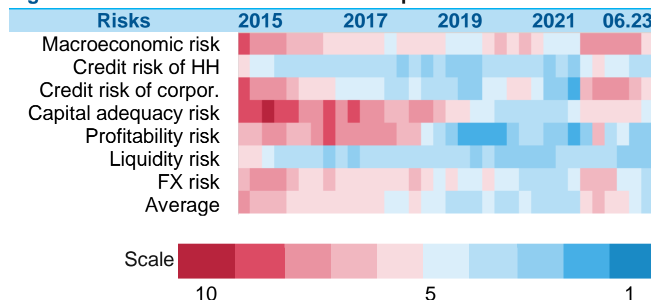
Figure 3.1.1. Financial Sector Risk Map*



* The NBU assesses risks on a scale from 1 to 10, with 1 being the lowest level of risk, and 10 the highest. The assessment reflects the outlook for the next 12 months. The methodology for building this risk map has been adjusted to factor in data availability.

Source: NBU estimates.

Figure 3.1.2. Financial sector risk heatmap



Source: NBU estimates.

Description:

- Macroeconomic risk indicates the level of threats arising in the real economy or the fiscal area.
- Credit risks of households and of corporates reflects expected changes in the share of non-performing loans in bank loan portfolios and the need for extra provisions for those loans.
- Capital adequacy risk measures the ability of banks to maintain an adequate level of capital.
- Profitability risk measures the ability of banks to generate net profit.
- Liquidity risk is a measure of the ability of banks to meet their liabilities to depositors and creditors in full and on time.
- FX risk is the risk that foreign exchange market trends will affect the resilience of banks.

Macroeconomic risk: decreased

The 2023 GDP growth forecast has improved thanks to the energy system being more resilient than expected and the revival of domestic demand. At the same time, the significant state budget deficit was largely financed with international financial assistance. The ratio of public and external debt to GDP has increased somewhat and will remain high.

Credit risk of households: dropped

The credit risk of households has dropped primarily due to the actual improvement in the loan portfolio quality, and the banks' more optimistic expectations of this quality. Households' economic expectations are also optimistic. The debt burden of households has somewhat decreased due to the contraction of the loan portfolio.

Credit risk of corporates: decreased

The rapid decline in power shortages and the gradual revival of domestic demand improved the situation for businesses. The debt burden of corporates fell somewhat. Although guarded, business activity expectations were positive for the first time since the start of the invasion. That said, the migration rate of loans to NPLs remains high throughout the year.

Capital adequacy risk: declined

Capital has risen thanks to the profits generated by the banks. In view of the increased capital, the reduction of the loan portfolio and the NBU's cancelling increased risk weights for unsecured consumer loans, capital indicators remain high. Pressure on the capital could arise from the loans that turned into NPLs during the war and that were only partially provisioned.

Profitability risk: decreased

Profitability risk has decreased to a moderate level. The sector's high profitability results primarily from a significant rise in interest income due to the investment of free liquidity in securities and a decrease in provisioning compared to last year. The banks' operational efficiency remains high.

Liquidity risk: unchanged

Liquidity risk has remained moderate. The banks retained their high liquidity and increased client deposits.

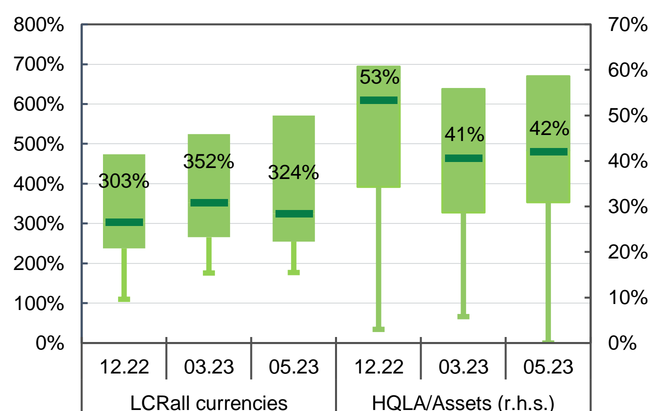
FX risk: dropped

FX risk has decreased to moderate. The situation on the FX market has improved, while the cash exchange rate has come close to the cashless one. Substantial international financial aid enabled the state to build up its international reserves further. Exchange rate expectations have improved.

3.2. Liquidity and Funding Risk

The banks have maintained a significant stock of highly liquid assets despite the NBU's tightened reserve requirements. The banks' liquidity ratios, both in all currencies and in foreign currency, are more than triple their minimum required levels. The structure of highly liquid assets shifted towards instruments with longer maturities: the banks made significant investments into three-month certificates of deposit and benchmark domestic government debt securities. Corporate deposits have recently become the main source of new funding, while retail deposit inflows to the banks have slowed significantly. However, the banks have improved the term structure of their retail deposits. As a result, the liquidity risk to the system is generally moderate.

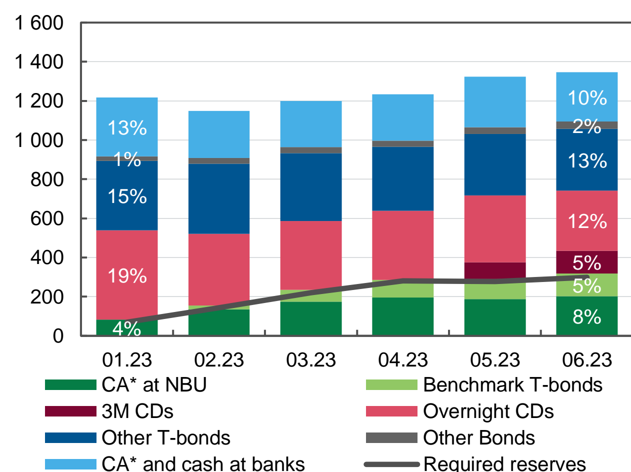
Figure 3.2.1. **Distribution of LCR in all currencies and the share of high-quality liquid assets (HQLA) in all currencies in net assets***



* 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. Lower dashes outside the rectangle show the minimum.

Source: NBU.

Figure 3.2.2. **Highly liquid assets and their share in net assets*, UAH billions**



At solvent banks at each date. The percentage indicates the share in structure. Benchmark government bonds data do not include LCR based adjustments. * Corresponding accounts.

Source: NBU.

The banking sector remains highly liquid

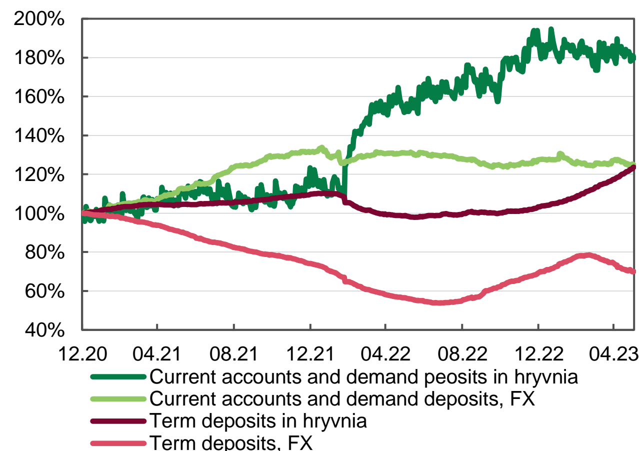
The banking sector remains highly liquid. The sector's average LCR in all currencies is more than triple the required minimum. The banks in all of the groups have a sufficient supply of high-quality hryvnia liquid assets thanks to further inflows of client deposits. The latter make up more than 90% of liabilities. As the banks are in no need of other funding, they are repaying the NBU's refinancing loans and cutting back on external debt. The share of refinancing loans in liabilities shrank and was already less than 1% in June. Since the beginning of 2022, the banks' external debts have also dropped by almost 14% – they account for less than 2% of liabilities – the lowest level since H1 2004. Because of the war, the global debt market is all but closed to Ukrainian banks. However, domestic financial institutions do not feel any funding shortage on the domestic market, including FX funding.

Highly liquid hryvnia assets are changing in structure as they respond to NBU decisions

At the end of May, the volume of high-quality liquid assets decreased by 9% compared to the beginning of the year. The NBU's measures to tie up liquidity were the main reason for this change. First and foremost, the NBU significantly tightened its reserve requirements (RR) starting in 2023, most noticeably for short-term retail deposits. Thus, the banks had to convert part of their high-quality liquid assets into funds in correspondent accounts with the NBU. At the same time, the banks were able to partially meet the RR by using benchmark domestic government debt securities with market-based yields. Most of the banks have therefore almost exhausted their limits on purchases of benchmark domestic government debt securities that can be used to meet the RR. The banks now hold UAH 116 billion, or 4.7% of their net assets by volume, in these instruments. Foreign banks have been less active in buying benchmark domestic government debt securities due to restrictions imposed by their parent banks on investing in government securities.

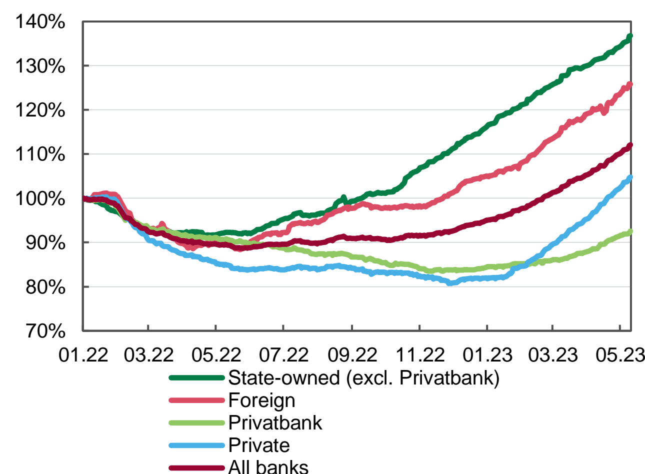
In addition, the NBU in April 2023 changed the operational design of its monetary policy and introduced three-month certificates of deposit with higher yields than those on overnight instruments. So, the banks have already invested UAH 117 billion in a new, longer instrument. To retain access to this tool, the banks are making efforts to take retail deposits for longer than three months. The rise in the share of highly liquid assets represented by longer-term instruments is not generating additional pressure on the banks' liquidity, as refinancing loans from the NBU are readily available if these securities are pledged as collateral.

Figure 3.2.3. Retail deposits, 31 December 2020 = 100%*



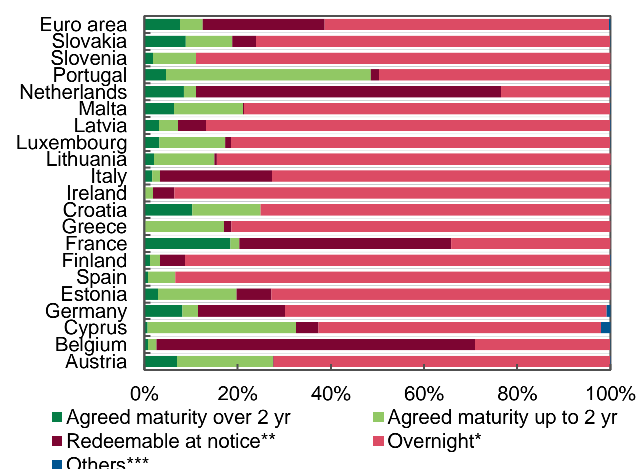
Source: NBU.

Figure 3.2.4. Hryvnia retail term deposits, 23 February 2022 = 100%*



Source: NBU.

Figure 3.2.5. Household deposits in Euroarea as of end-2022



* Current accounts and sight deposits.
** Deposits redeemable at notice up to 3 months.
*** Deposits redeemable at notice over 3 months, repos.
Source: ECB.

Highly liquid FX assets consist mainly of funds on correspondent accounts in foreign investment-grade banks, FX-denominated domestic government bonds, and cash. A rule took effect on 1 January 2023 that mandates that the share of non-current accounts in investment-grade banks be no more than 80% of the highly liquid assets used in the calculation of the FX LCR. This prompted the banks to invest part of the funds sitting in foreign bank accounts into sovereign bonds, primarily U.S.-issued ones. As yields on these securities are currently high, this effort has not reduced the profitability of the banks' FX transactions. The LCR in FX is rising. Its median value for the sector is more than three times the required minimum. Most of the highly liquid FX assets are concentrated in banks with foreign capital.

Hryvnia retail deposits have barely grown, but their term structure is improving

Since the beginning of the year, hryvnia retail deposits in the banks have increased only slightly. This is primarily a result of changes to the remuneration policy for military personnel, whose paychecks were the driver of liquidity last year. The uneven distribution of retail deposit inflows across groups of banks persists: most of this funding goes to state-owned and private banks. A recent inflow of term deposits contributed to the slight increase in deposits.

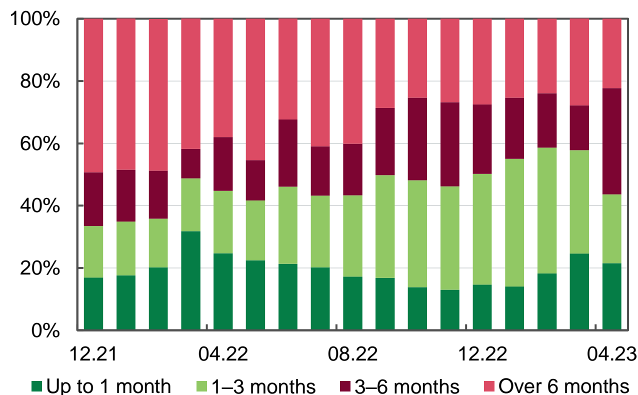
Since the start of the year, the growth in hryvnia retail term deposits has accelerated significantly. The uptick in growth was driven by the banks' raising interest rates on longer deposits (and sometimes by cutting those on shorter deposits in parallel) in response to changes in the NBU's monetary policy. Hryvnia retail term deposits have grown by 19% since the start of the year, while their share has risen by about 5 pp, to 35%. This uptrend is in line with the NBU's goal of increasing the share of term deposits among overall retail deposits.

Generally, a low share of term deposits in retail deposits is typical for most EU countries. On average, the share of current accounts and demand deposits in the euro area is about 61%. For the EU, it is 76%. According to EU directives, in the calculation of liquidity ratios, even current retail deposits are treated as stable. Only in three countries does the share of term deposits surpass 50%, most of them are redeemable at notice. Ukrainian banks also offer such deposits. They account for close to 14% of all retail term deposits. About four-fifths of such deposits are concentrated in six systemically important banks, one of which is state-owned. The share of these deposits has recently edged higher. Depositors may find the early termination option attractive amid considerable uncertainty. Clients usually trade off part of their revenue for this option.

FX deposits decline in popularity

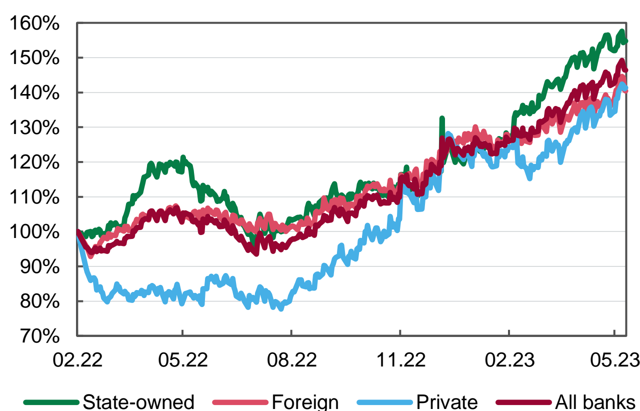
With the stabilization of the FX market and the narrowing of spreads between the cash and official exchange rates, households are losing the incentive to buy cashless foreign currency for deposits. In addition, because of the hike in rates on deposits, hryvnia term deposits look more attractive than FX ones. The expiration of old deposits and the slowdown in new deposit inflows have therefore resulted in the volume of

Figure 3.2.6. New retail deposits breakdown



Source: NBU.

Figure 3.2.7. Hryvnia corporate deposits by group of banks, 23 February 2022 = 100%



Source: NBU.

FX term deposits trending down. However, no withdrawals are being made from current accounts. As a result, the banks have seen almost no change in FX retail funding. As before, the banks keep most of these funds in highly liquid assets, as FX lending is practically non-existent. So, the banks are not interested in increasing FX deposits, and place near-zero interest rates on them. However, this funding component poses no additional liquidity risks to the banks.

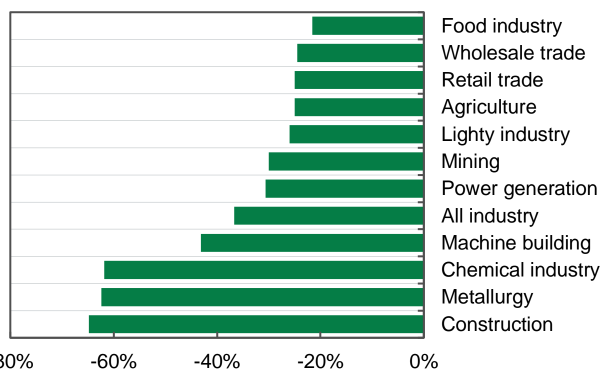
Funding grows due to corporate deposits inflow

Corporate deposits have recently increased more quickly than retail ones. This is due, on the one hand, to the recovery in income, and on the other hand, to businesses' moderate need for cash. In the Bank Lending Survey, the banks highlight the supply of funding from businesses themselves as the major driver of this increase. In June, both hryvnia and FX corporate deposits increased by almost 20% from the start of the year. These deposits are growing in all groups of banks. The share of corporate deposits in the banks' overall funding has expanded by 5 pp since January, to more than 49%, and for the first time since the full-scale war broke out this share exceeds the proportion of retail deposits. Corporate deposits are primarily accumulating at the banks that use businesses as their main source of funding. Competition for corporate money between the banks is tight enough that they are compelled to raise rates to retain customers. In the absence of significant economic shocks, corporate deposit inflows will continue.

3.3. Corporate Lending Risk

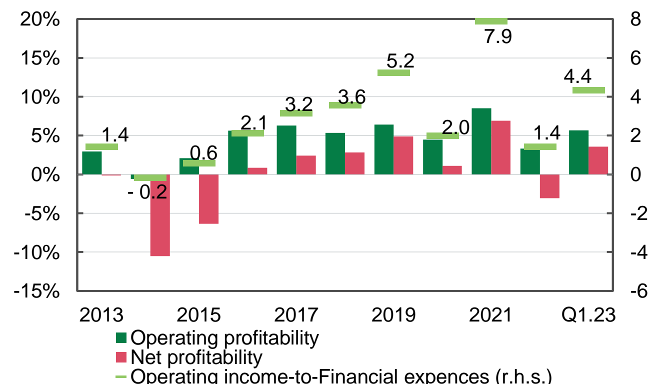
Most real sector borrowers have been showing resilience to the crisis through adapting to working under conditions of uncertainty. Although the real incomes and production volumes of most industries have fallen significantly compared to their levels before the full-scale war, the financial performance of businesses is for the most part acceptable – and it has improved markedly this year. Loan demand remains weak: working capital needs are moderate, while investments are too risky. The banks are primarily willing to lend under state support programs and only in the hryvnia. Meanwhile, repayments prevail over new lending, reducing the loan portfolio further on. The banks have already recognized a significant portion of their war-related loan losses. However, these losses may increase further, especially, on account of some of restructured loans. The NBU will conduct an asset quality review to identify the level of credit risk.

Figure 3.3.1.Production volume by industry, in 2022, yoy change



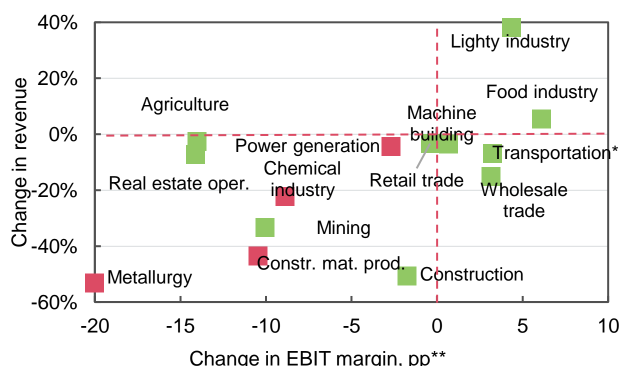
Source: SSSU.

Figure 3.3.2. Profitability and debt load* of the real sector



Sources: data.gov.ua, SSSU, NBU estimates.

Figure 3.3.3. Change in revenue and operating margin in the 12 months ended March 2023, by industry*, yoy



Light green marks indicate the industry's operating profit, while light red marks indicate the industry's operating loss over the past 12 months.
* Excluding pipeline transport.
** Calculated as difference between values.
Source: data.gov.ua, NBU estimates.

The real sector is adapting to crisis conditions, but not all industries are recovering from the shock of the war

Since the middle of last year, businesses have been recovering from the sharp slump in the spring. In the fall of 2022, however, companies were hit by a new shock – energy supply disruptions. The energy system's resilience and businesses' adaptability exceeded expectations, which resulted in activity indicators already starting to improve again in 2023.

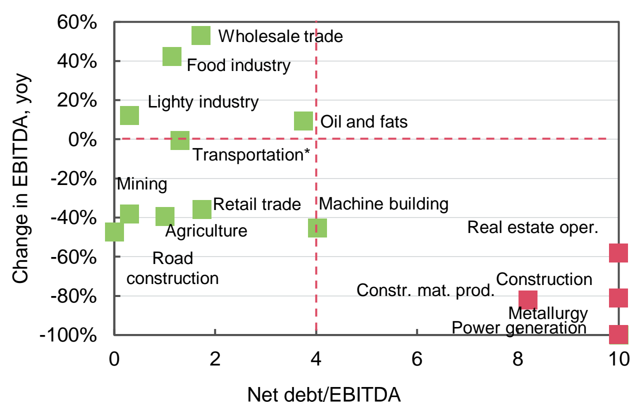
In the 12 months through March 2023, the revenues of real-sector enterprises[1] had declined by 14%. However, this indicator is unevenly distributed across industries and is mainly due to the sharp drop in revenues in metallurgy, construction, chemicals, and mining. Metallurgy likely declined the most, primarily due to the destruction of the largest plants. The recovery of output at production capacities that have sustained no damage is being held back by export chain disruptions. An additional risk factor was the destruction of the Kakhovka dam: production volumes at the largest metallurgical plant significantly declined due to the resulting reduction in its water supplies. Residential and commercial construction is stagnating because of declining consumer demand and security risks.

On the other hand, operating incomes in machine building, transport, and retail trade remained almost unchanged. Because of the oversaturation of the domestic market and low prices for raw materials used in the production of food, companies in the food industry were able to maintain their revenues despite more complicated logistics, and even to increase their operating profitability. The government's defense supply orders increased the revenues of light industry and the wholesale trade. But the drop in real revenues indicates a significant reduction in production volumes in every sector.

Despite export disruptions, reduced crop yields, and low domestic prices, agriculture is adjusting to the new operating conditions. State support programs enabled agricultural businesses to meet their needs for working capital, allowing them time to adjust their operations to the new conditions. Complicated and expensive logistics, including the threat of grain corridor disruptions and EU restrictions on imports of agricultural goods, continue to pose risks to the industry.

[1] Here and below the financial performance indicators of companies do not include data from small enterprises.

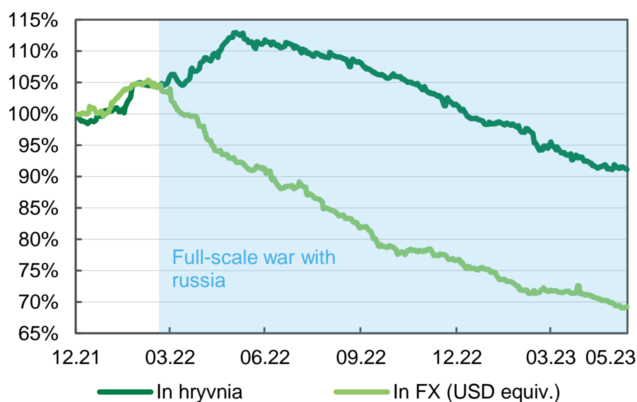
Figure 3.3.4. Debt burden in 2022 and change in EBITDA from 2021 to 2022 by industry*



* Excluding pipeline transport.

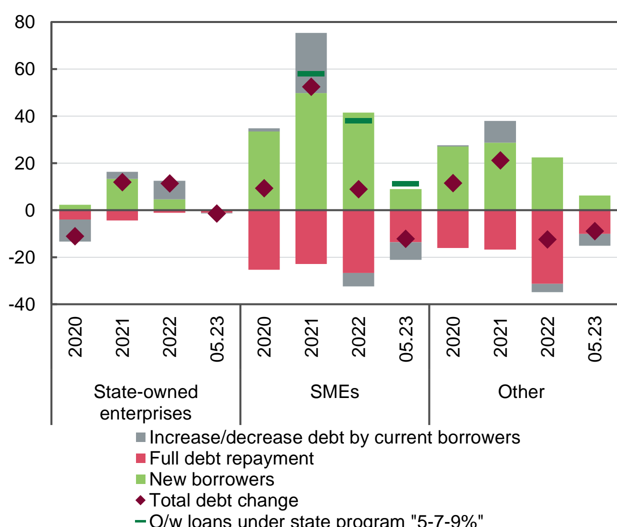
Source: data.gov.ua, NBU estimates.

Figure 3.3.5. Net corporate loans, December 2021 = 100%



Source: NBU.

Figure 3.3.6. New corporate hryvnia loans, UAH billions



Loans exceeding UAH 2 million. Based on net book value.

Source: NBU.

Companies have shown resilience to the crisis

Operating profit for the year since the invasion was down by two-thirds compared to 2021, primarily due to a drop in the indicators of the most affected industries. However, the beginning of 2023 signaled a noticeable improvement in performance. A number of real sector companies have proved resilient to the effects of the full-scale war. The reasons include high pre-war performance, the rapid adaptation of businesses to current conditions, and switching to new markets since russia invaded in 2014. In the first three months of 2023, operating profitability and net operating profitability were 6% and 4%, respectively – up from 3% and a negative level in 2022, and close to the levels of the pre-COVID-19 year 2019. Industries that together hold the largest share of Ukrainian banks' loan portfolio maintained an acceptable debt burden, while the debt burden in wholesale trade and the food industry actually improved.

The corporate loan portfolio is shrinking due to weak demand for loans

The net hryvnia corporate loan portfolio continued to decline, having peaked in June 2022. Since martial law was imposed, the net hryvnia loan portfolio has declined by 12.4%, and the net FX loan portfolio has decreased by one-third in dollar terms. While the hryvnia portfolio continues to shrink at an almost constant pace, the decline in the FX portfolio has recently slowed. This year, the volume of loan repayments has exceeded new lending, a gap that is especially noticeable in the agricultural sector, among others. Provisioning has decelerated greatly, and is no longer driving the dynamics of the net portfolio.

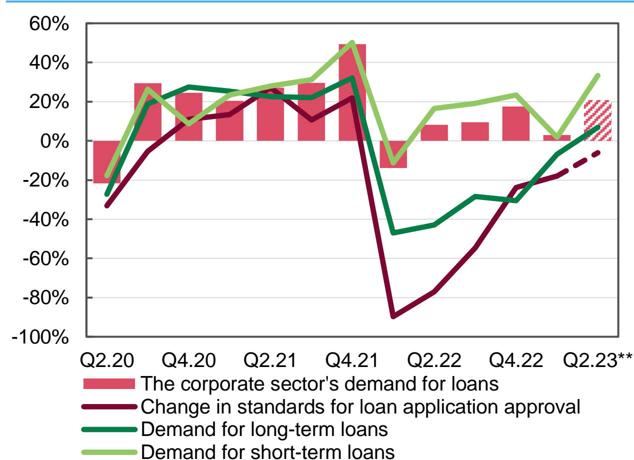
To meet existing consumer demand, businesses do not have to ramp up working capital, and investments are restrained by security risks. In addition, a number of companies have accumulated liquidity cushions by maintaining sufficient operating efficiency and generating operational cash flow. In contrast, the solvency of businesses that have no such reserves often falls short of meeting the banks' current lending standards. Still, the banks expect that the demand for all types of corporate loans will grow going forward as economic activity and working-capital needs increase. Demand for SME, short-term, and hryvnia loans is expected to rise the most (see the Bank Lending Survey for Q2 2023).

Banks are willing to provide corporate loans primarily under state support programs

To a certain extent, lending has been restrained by the tightening of the banks' lending standards and the reduction in their risk appetite. The banks polled in the Bank Lending Survey previously said that lending standards had tightened and loan application approvals had declined since the outbreak of the invasion. At this time, however, this trend has nearly stopped. It can be inferred from the survey conducted by the NBU that the largest banks[2] have incorporated in their business plans an almost 10% increase in the gross hryvnia loan portfolio in 2023. Regarding the FX portfolio, the banks are expecting a further reduction of about 5%. The banks expect that the expansion of the hryvnia portfolio will primarily

[2] The largest 24 banks by gross corporate loans as of 1 May 2023.

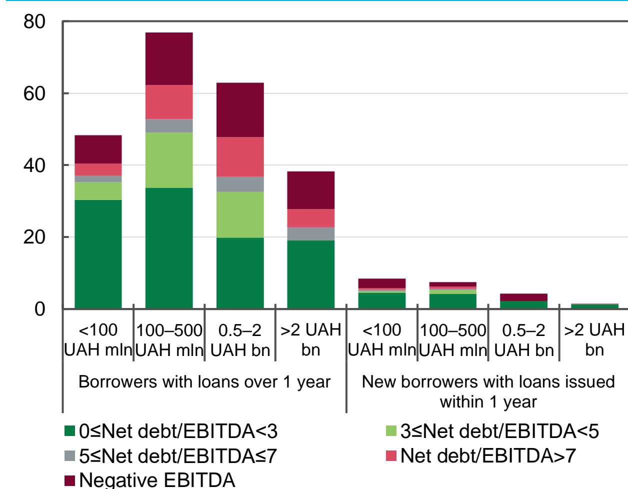
Figure 3.3.7. Change in loan demand of the corporates (balance of responses*)



* Based on the normalized balance of responses from the Bank Lending Survey.
Positive values indicate an increase in demand and an easing of lending standards.
** Values for Q2 2023 are from a forecast.

Source: NBU.

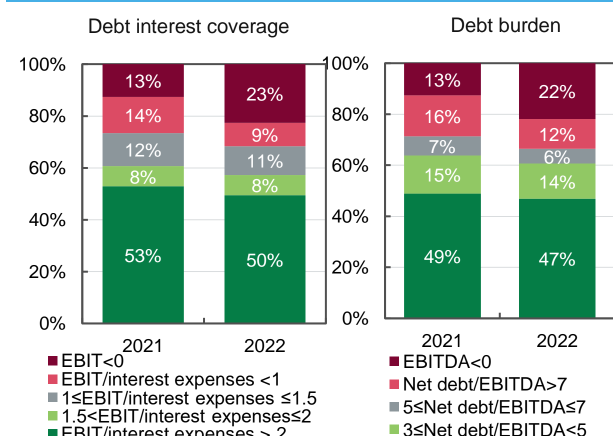
Figure 3.3.8. Breakdown of performing corporate loans* by debt burden and loan amount, as of 1 June 2023, UAH billions



Loans over UAH 2 million. Except for state-owned enterprises.

Source: NBU, data.gov.ua.

Figure 3.3.9. Distribution of performing corporate loans* by debt metric, as of 1 June 2023



* Loans exceeding UAH 2 million. With the exception of state-owned companies.

Source: NBU estimates, data.gov.ua.

be driven by state support programs, mainly Affordable Loans 5–7–9%. The banks projected that in 2024, the portfolio will grow at a similar pace, but that the state program will play a smaller role. Lending will begin to develop more actively once the appropriate conditions, primarily security-related ones, are established.

Most of the loans the banks are currently providing are small. At the same time, the share of business groups in the loan portfolio is gradually shrinking, making it more diverse. The main recipients of new loans are agricultural and wholesale businesses that qualify for the Affordable Loans 5–7–9% program.

In March 2023, the government optimized the program's design. Support is now provided for investment purposes and working-capital needs. The major increase in the portfolio during the spring – about UAH 10 billion – was driven by loans taken out to replenish working capital. Loans to finance the sowing of crops and overcome the fallout from the war increased by half as much. The outstanding loan portfolio under the Affordable Loans 5–7–9% program currently stands at UAH 108 billion, or about one-third of the net hryvnia loan portfolio.

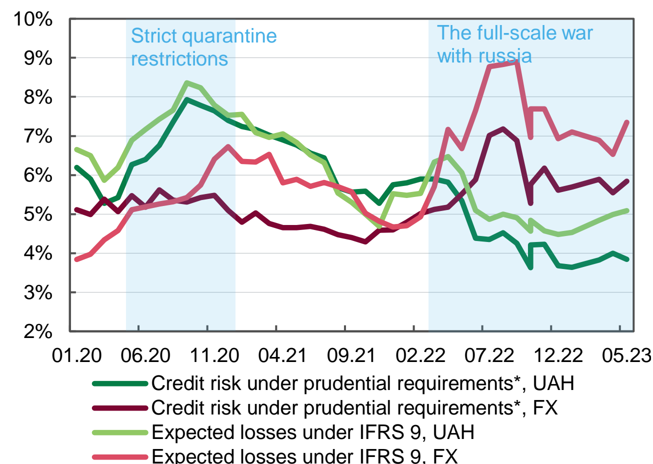
Corporate borrowers maintain an acceptable debt burden

The prudent credit policy the banks pursued in previous years ensured the relative resilience of many borrowers even to war-related shocks. The debt metrics of the companies whose loans remained performing became slightly worse. The debt performance of some borrowers actually improved as they repaid their loans. Borrowers with small loans have the lowest debt burden. Burdens are rising for customers with larger loans, but they remain acceptable for most customers even by peacetime standards. The weighted average ratio of operation profit to financial expenses for 2022 was 1.5x, down from 1.8x in 2021.

Banks' credit losses from the war are expected to surpass 20% of their portfolios

Losses from credit risk have grown less noticeably this year than in the first months of the full-scale russian invasion. In May 2023, the NPL ratio reached 45%. About 14% of loans to business clients that at the start of the full-scale war were performing turned into NPLs. In total, provisioning for corporate loans exceeded 13% of the performing portfolio's net value in early February 2022. This is below the NBU's last-year estimates of potential losses. However, part of the credit losses should "ripen" over time. Currently, performing loans that have been restructured after 24 February 2022 make up 13% of the portfolio (this percentage varies considerably across the banks: from 1% to almost 25%). It can be difficult for companies with restructured loans to get back on the pre-war debt-servicing track. What is more, the protracted war is making it more likely for some industries and enterprises to be hit by new shocks. It is therefore expected that a significant portion of restructured loans may become NPLs going forward. As a result, total losses from credit risk due to the war will approach the NBU's previous estimate –

Figure 3.3.10. Provision coverage of performing corporate loans



Provisioning equals the ratio of provisions to gross loans.* Credit risk according to Regulation No. 351.

Source: NBU.

more than 20% of the portfolio. Aggregate credit losses will most likely come in below the NBU's upper estimate of 30%. That conservative estimate assumed that russian attacks on the energy infrastructure would have a lasting adverse effect, which Ukraine has managed to avoid.

To prevent an accumulation of hidden risks and losses on the banks' balance sheets, ascertain the real quality of the loan portfolio, and identify the need for capital, the NBU is launching a resilience assessment of the 20 largest banks. Upon the assessment, some banks are expected to have to recognize additional losses from credit risk.

Table 1. State of corporate loan portfolio as of 1 June 2023

No	Industry	Gross performing loans			Loan migrating* to NPLs in 12 months*		NPL ratio**, %	Interest coverage ratio (EBIT/Financial expenses)*		Debt burden ratio (net debt to EBITDA)*		Break-down of loans under "5-7-9 %" (out of 108 UAH bn), %
		total, UAH bn	SMEs in UAH bn	credit risk coverage, %	by quantity, %	by debt amount, %		2021	2022	2021	2022	
1	Agriculture	94	78	4.1%	15.2%	12.3%	14.7%	2.6	2.1	2.3	3.5	56.9%
2	Mining	2	1	6.7%	26.5%	27.8%	48.4%	2.4	1.5	1.9	4.1	0.5%
3	Food industry	47	19	4.1%	11.4%	16.5%	23.4%	1.4	2.0	6.1	4.5	6.9%
4	Light industry	2	2	2.9%	4.5%	1.2%	16.6%	1.8	1.2	3.3	7.7	0.5%
5	Chemical industry	6	5	2.2%	11.2%	21.7%	30.0%	2.1	1.7	3.3	4.6	2.9%
6	Production of construction materials	5	1	4.5%	17.9%	17.2%	22.1%	2.0	1.5	4.7	5.2	0.6%
7	Metallurgy	6	4	3.8%	13.8%	30.6%	55.6%	2.3	1.8	3.0	4.3	1.5%
8	Machine building	6	4	3.5%	19.0%	27.2%	46.8%	1.6	2.0	5.3	4.5	1.9%
9	Electricity supply and other utilities	6	4	6.5%	10.8%	30.0%	55.1%	2.3	1.9	7.4	6.8	0.2%
10	Green power generation	17	12	5.2%	18.9%	45.9%	50.8%	2.4	1.1	3.1	7.1	0.7%
11	Construction	6	4	4.4%	26.2%	22.2%	65.2%	1.0	0.6	3.9	6.4	1.6%
12	Sale of vehicles	4	3	1.8%	6.5%	4.5%	17.2%	2.3	2.3	2.7	2.4	1.5%
13	Wholesale trade	78	43	6.0%	12.2%	20.0%	23.2%	1.8	1.5	5.2	5.6	15.0%
14	Retail trade	21	5	9.2%	7.2%	2.6%	18.0%	1.2	1.5	4.7	4.1	2.7%
15	Transportation	10	5	4.5%	12.2%	17.5%	25.5%	2.1	1.8	3.7	4.3	1.8%
16	Hotels	0	0	1.0%	35.7%	95.7%	95.8%	1.8	0.6	6.8	6.3	0.0%
17	Real estate transactions	11	7	8.4%	15.5%	26.7%	37.1%	1.0	0.6	8.2	9.2	0.4%
18	Commercial real estate	9	5	4.1%	22.5%	64.3%	83.7%	1.4	1.8	7.0	4.6	0.3%
19	Financial services	4	4	7.3%	15.6%	14.9%	24.7%	1.2	1.1	8.5	8.4	0.1%
20	Other	18	9	3.5%	14.2%	16.5%	19.4%	2.0	1.7	2.5	3.1	4.1%
21	State-owned enterprises	64	1	2.3%	24.2%	7.9%	8.7%	1.3	0.7	5.3	6.6	0.0%
	Total	**418**	**216**	**4.6%**	**14.4%**	**20.7%**	**30.8%**	**1.8**	**1.5**	**4.7**	**5.1**	**100%**

* The ratio of the number or amount of debt of borrowers whose loans have changed from performing to non-performing within 12 months, in accordance with the requirements of Regulation No. 351. ** The calculation of the NPL ratio does not include Privatbank loans granted to companies related to former shareholders and individuals affiliated with them (taking into account such loans, the total NPL ratio is 45%).
*** For large and medium-sized borrowers (about 70% of the performing loan portfolio) whose loans are performing according to 1 May 2023 data. Weighted by loan amount.

Source: NBU estimates, data.gov.ua.

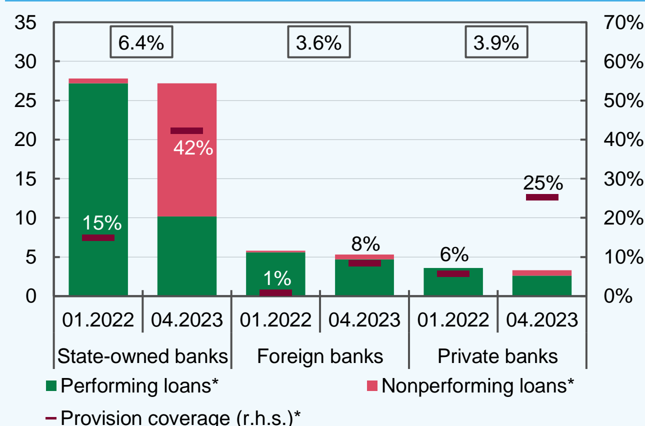
Box 1. Banks Suffer Losses Due to Crisis in Green Energy Sector

Ukrainian banks, especially the state-owned banks, have been actively lending to the green energy sector. The sector has not fully recovered from the underfinancing crisis, when the shock of the war caused a sharp rise in the ratio of nonperforming loans (NPLs).

A third of green energy capacity was built using credit

In the period when the sector boomed, the banks were actively lending to green generation companies. Loans to the green energy sector account for almost 4% of the gross loan portfolio. The share is much higher for state-owned banks, which issued more than three quarters of the loans to the sector. In some banks, it is up to 13% of their portfolio.

Figure B.1.1. Gross loans to the green energy sector, UAH billions



At the exchange rate effective as of 1 May 2023. The percentages in frames reflect the share of the green energy sector in the corporate loan portfolio of groups of banks as of 1 May 2023.
* Pursuant to Regulation No. 351.

Source: NBU.

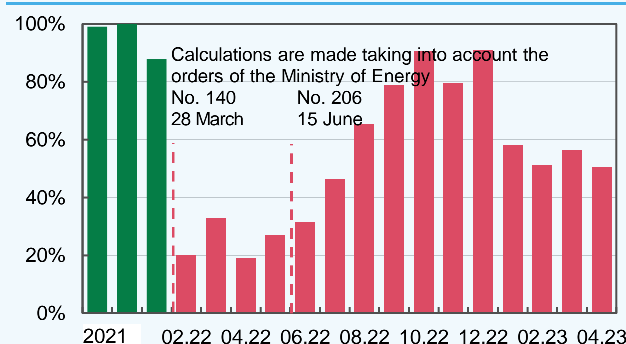
Green energy generation has been facing problems for years, and the war has aggravated them

The crisis on the green energy market started several years ago. Renewable energy output increased, but proceeds from selling electricity at the high feed-in tariff were still not sufficient to pay for generation. A change in the rules for the sector, which foresaw selling electricity through the state-owned Guaranteed Buyer (GB) at the feed-in tariff, did not solve the problem. Debts were piling up, leading to new arrangements between the state and renewable energy producers. The arrangements included a slightly lower feed-in tariff and the gradual repayment of debts (read more in Box 2 *How Energy Crisis Affected Banks*, in the June 2020 Financial Stability Report).

From March 2022, the Ministry of Energy imposed limits on payments for electricity to renewable energy producers due to a lack of funds. The limits ranged from 15% to 60% of the feed-in tariff depending on the type of generation. This level was determined by the need to cover operating expenses. As early as June 2022, producers were to receive all funds earned by the GB from selling electricity – this increased producers' revenues. As of now, producers receive around a half of the feed-in tariff on average. The accumulated debt for purchased electricity was UAH 18.6 billion as of the start of May 2023.

Experts estimate that around 20% of solar power facilities and around 80% of wind power facilities have been damaged, destroyed, or occupied. Reconstruction of the facilities is problematic: companies' own resources are limited, and lending has almost stopped. Due to electricity supply disruptions, the previous model for balancing the system inflicted disproportionately high fines on producers for failing to maintain the balance. Producers took the situation to court.

Figure B.1.2. Payments by the Guaranteed Buyer to renewable energy producers, % of the feed-in tariff



Source: Guaranteed Buyer State Enterprise.

Certain prospects for the sector are seen in the option for renewable energy producers to quit the GB group and sell electricity on the domestic market at the terms that are standard for other types of power generation. So far only a few producers have dared to do so, but this option will become more attractive if market prices for electricity increase. Some producers are working to improve the balancing characteristics of green generation by using means of energy storage. Going forward, provided the origin of renewable power is guaranteed, it will be beneficial to export it through the European ENTSO-E electricity transmission network.

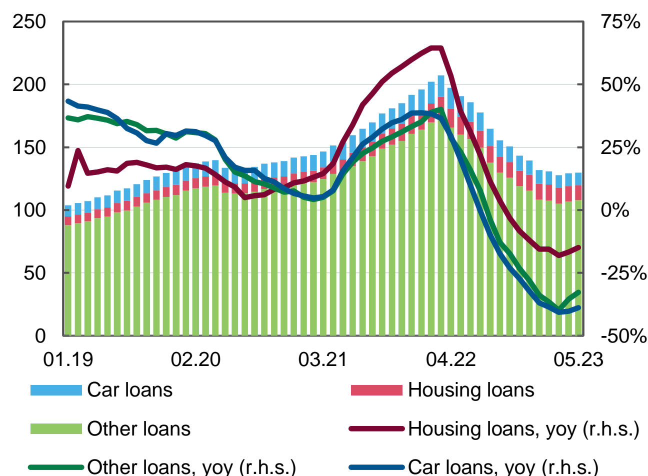
The banks' losses grew to half of their portfolios

Due to the shortfall of income and damage and loss of capacity, a number of companies are unable to service their debts. As of the start of May, the sector's NPL ratio soared to 51%, up from less than 3% before the russian invasion. During the war, the partial proceeds of the feed-in tariff and accumulated financial funds were sufficient for some renewable energy producers to pay interest. Moreover, the banks usually control companies' accounts, so they made sure debts were repaid in the first place from inflows to the accounts, if there were any. At the same time, feed-in tariff payments remain low, and the sector's prospects are uncertain. The absence of a margin of safety could lead to a new wave of defaults after companies exit the temporary grace period for their debt payments.

3.4. Retail Lending Risk

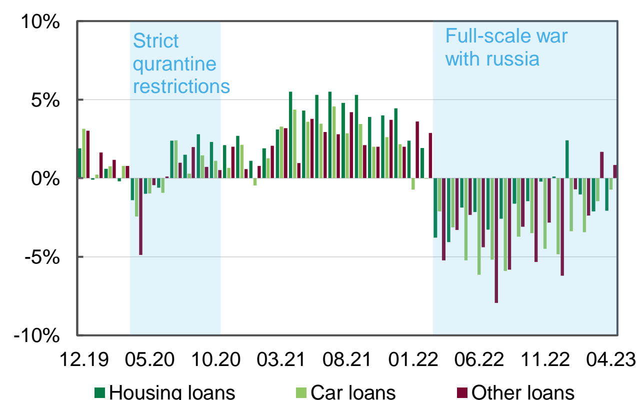
The decline in the retail loan portfolio, which had continued since the start of the full-scale invasion, has now stopped. However, a full recovery is not yet in sight: lending dynamics vary greatly by loan type. Not all banks have managed to stabilize their portfolios, far less return them to growth. Banks with developed online sales channels and specialization in credit cards are leading the way. In contrast, cash lending, car loans, and mortgages have yet to recover. At the same time, the quality of the retail loan portfolio is improving: the share of nonperforming loans is slightly down, as is the share of past due loans. This means that the peak of credit losses caused by the war has passed.

Figure 3.4.1. Net hryvnia retail loans, UAH billions



Source: NBU.

Figure 3.4.2. Month-on-month change in net loans



Source: NBU.

The decline in the retail loan portfolio halted

The decline in the retail loan portfolio, which began at the start of the full-scale war, stopped in spring. In April 2023, the volume of such loans increased compared to the previous month for the first time since February 2022. At the same time, it was 32% lower than in April 2022. The portfolio seems to have stabilized, but it is too early to talk about an upward trend. During the full-scale war, the share of retail loans in the banks' assets almost halved, to 5%.

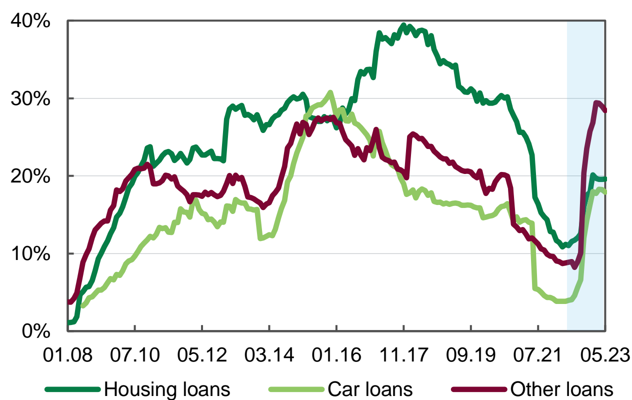
The dynamics of the loan portfolio varies by loan product, region, and from bank to bank. In particular, unsecured consumer loans have been growing for two months in a row, while car loans and mortgages have continued to decline. According to the banks, lending in the western oblasts and in Kyiv is recovering faster than in the eastern and southern regions. The loan portfolio is not growing at all banks, but only at market leaders.

In order to better understand the current state of consumer lending, the NBU interviewed the banks that are active in various retail segments. All of the interviewed financial institutions indicated that they had not changed their business models or priority retail business segments. In each retail segment, the two or three financial institutions that were the leaders before the invasion remained the most active. The banks are making almost no attempts to enter market segments in which they are not already present. According to the banks, the advantages of working in the retail market have not changed either. High interest income remains the main advantage. Some banks also noted that they have substantial accompanying fee and commission income from card transactions. In addition, over the past 18 months, the banks have received significant income from FX transactions, in particular from card transactions when purchases abroad were paid for from hryvnia accounts, or when clients withdrew cash. However, the financial institutions view income other than interest income merely as an occasional gain.

Card loans have been recovering the most rapidly

Credit cards remain the main driver of retail lending. Clients take out card loans mainly to finance their current basic expenses. This segment of the portfolio is currently the most active. This was facilitated by the recent increases in credit limits by the banks. Credit limits on cards rose by an average of 10%–20% compared to pre-war levels. Although the utilization of credit funds is significantly lower than the limit, the increase in the limit has led to an almost proportional increase in the average loan amount. In this segment, the banks are trying to actively attract new clients, although their number is many times lower than before the war. That said, the banks are also trying to encourage the use of credit funds

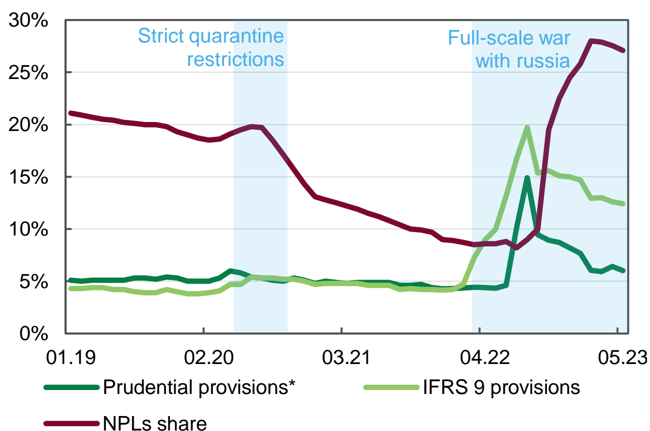
Figure 3.4.3. **Share of nonperforming hryvnia retail loans**



The blue field shows the period of the full-scale war. One-off statistic outliers are excluded.

Source: NBU.

Figure 3.4.4. **Provisioning for performing loans and the share of nonperforming hryvnia retail loans**



Provisioning equals the ratio of provisions to gross loans.

* Credit risk, as measured according to Resolution No. 351.

Source: NBU.

by those clients who do not actively borrow. The banks often promote card lending among clients with payroll projects.

A convenient and multifunctional mobile application is a key competitive advantage in card lending. Without having full-fledged mobile banking, it is extremely difficult for banks to expand their client base and grow their portfolios. That is why the banks are investing heavily in improving their mobile applications, in particular to facilitate remote customer verification.

Although risks of cyber fraud increased with the outbreak of the full-scale war, the financial institutions consider online channels to be well protected. The banks are mostly developing their online banking services in-house, without involving third-party developers. The costs of developing and maintaining online services are high, but they are generally much lower than the operating costs of an offline banking network. Nevertheless, the banks plan to maintain and in some cases increase their physical presence. After all, unimpeded cash withdrawals and the accessibility of branches are elements of high-quality service that are still critically important to clients.

The majority of retail segments will remain subdued

Cash lending[3], in which more and more banks engaged before the full-scale war, has barely recovered after suffering a sharp decline since the start of the invasion. Clients took out loans mainly to purchase expensive goods. The war has changed consumer demand: the purpose of using credit funds has shifted from buying luxury goods to meeting clients' basic needs. The main sales channel for cash loans is also online. A growing percentage of clients arrive through bank websites or applications. On the other hand, the banks have stopped attracting clients from partner networks. Previously, under such partner agreements, with a client's consent, the banks would transfer loan applications to each other if they could not approve the applications themselves.

The car loan portfolio continues to decline, albeit slower than last year. Demand for car purchases is slowly recovering. However, since the start of the full-scale war, the percentage of new car purchases made on credit has almost halved, to about 10%. According to Ukravtoprom, sales of new cars in the first five months of this year accounted for only 55% of sales volumes in the first five months of pre-war 2021. The average loan amount increased due to the hryvnia depreciation. Sales outlets in showrooms remain the key channel for selling car loans.

Mortgage lending is still almost absent. There were temporary signs of revival thanks to the government's *eOselia* program, which involved mainly state-owned banks. However, lending under the program has been suspended since March (read more in the section *Real Estate Market and Mortgage Lending*).

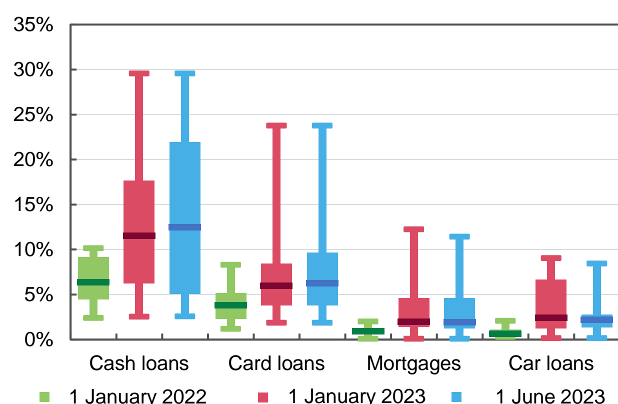
[3] A cash loan is a loan issued by a bank as a one-time lump sum pursuant to contractually specified terms, either in cash or as a cashless transfer.

Figure 3.4.5. Lending standards for households

* The line reflects the cumulative change in the balances of responses to the quarterly Lending Survey question about how the criteria for approving retail loan applications have changed during the current quarter. An increase in the indicator points to a tightening in lending standards.

Source: NBU.

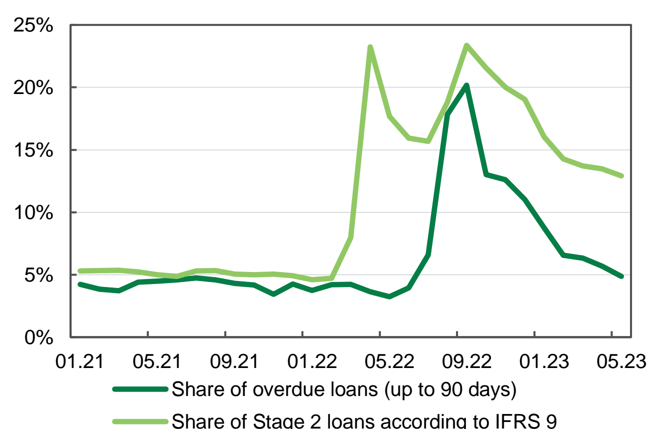
Figure 3.4.6. Distribution of expected losses on hryvnia retail loans at stage one under IFRS 9



The faces of the rectangles correspond to the distribution's first and third quartiles. The lines inside the rectangles are medians. The lines extending above and below the rectangles indicate maximum and minimum values.

Source: data from 18 banks surveyed in January 2022 and in January and June 2023; NBU estimates.

Figure 3.4.7. Portions of gross hryvnia retail loans



Source: NBU.

The banks revised their scoring models

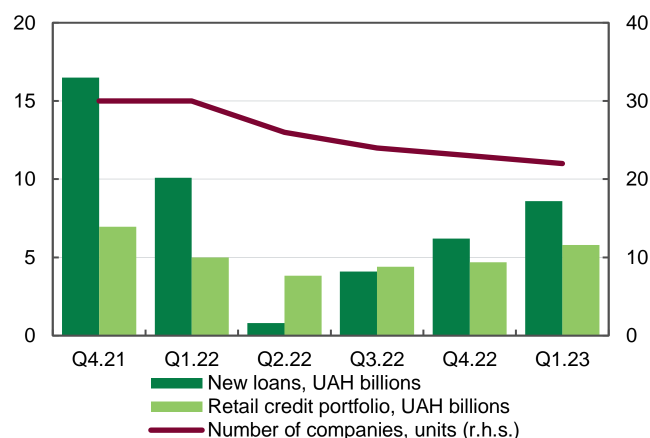
The full-scale war has brought major changes to households' incomes, employment characteristics, and consumer preferences. That prompted the banks to revise their scoring models for making lending decisions. First of all, the banks temporarily excluded the timeliness of loan servicing from the list of factors that determine client risks, as debtors had the right not to make payments during loan repayment holidays. Therefore, information on past due debts obtained from credit bureaus was not used during these periods. The factor of foreign travel activity, which used to indicate the wealth of clients, has lost its relevance for scoring due to increased migration and restrictions on the movement of certain categories of the population. In the regions most affected by hostilities, the banks stopped relying solely on scoring models and automatically assigned higher risk to borrowers from these regions. Some financial institutions temporarily considered loan applications individually without using statistical models. While revising their scoring models, the banks retained conservative lending standards. This is evidenced by the findings of the Bank Lending Survey. Lending standards tightened after February 2022, and only in early 2023 did the financial institutions report some easing.

The almost unchanged share of the borrowers who pay off their loans within the grace period of low or even zero interest rates shows that the profile of clients remains the same. As before the outbreak of the full-scale war, the share of such borrowers was around 20%–30% of all card loan users. Some of the financial institutions identify higher-risk categories of clients to whom they are reluctant to lend. Such clients include, for example, emigrants, although their payment discipline does not differ significantly from those who stayed in Ukraine. For some banks, military personnel are also a high-risk category, although other financial institutions actively and readily lend to them.

Credit risk assessments are mostly optimistic

Overall, about 20% of retail loans have turned nonperforming since February 2022. Another 5% of loans are now slightly overdue, which corresponds to 2021 levels. Therefore, total portfolio losses from the war are unlikely to exceed 25%. The banks are currently optimistic about the present debt servicing situation. With the peak of the crisis having been passed in Q2–Q3 2022, most of retail clients, both regular and new, are now servicing their debts properly. The stabilization of the loan portfolio quality is evidenced by the share of nonperforming loans (NPLs): it has not increased since March 2023. The ratio of provisions for performing loans to the amount of such loans is slowly declining. Expected losses for hryvnia retail loans at stage one under IFRS 9 have stabilized, and the reason for the reduction in provisioning coverage is a decrease in the share of past due loans and those assessed to be at stage two. In general, the peak of losses due to the materialization of credit risk that occurred at the end of 2022 has already passed.

Figure 3.4.8. Lending to households by biggest finance companies*



The calculation includes 30 biggest finance companies from Q4 2021 based on new loans to households per quarter.

Source: NBU.

Retail lending by finance companies almost stopped, and is now recovering slowly

With the outbreak of the full-scale war, it was not only bank retail lending that came to a halt. The volume of loans to households by finance companies also plummeted, primarily because new lending was almost at a standstill. As during the coronavirus crisis, few clients switched from the banks to the nonbank segment. The decline in nonbank lending was driven by both weaker demand and the unwillingness of some market participants to continue operations in the first months of the war. Nonbank lenders also suffered material portfolio losses. In some cases, the deterioration in payment discipline provoked companies to use bad-faith interest accrual and collection practices. In 2023, some large companies had their licenses revoked for violating consumer protection laws. A number of other companies ceased operations after failing to cope with operational challenges. Nevertheless, lending is slowly recovering. Loan disbursements are still lower than in 2021, but the portfolio grew in Q1 2023.

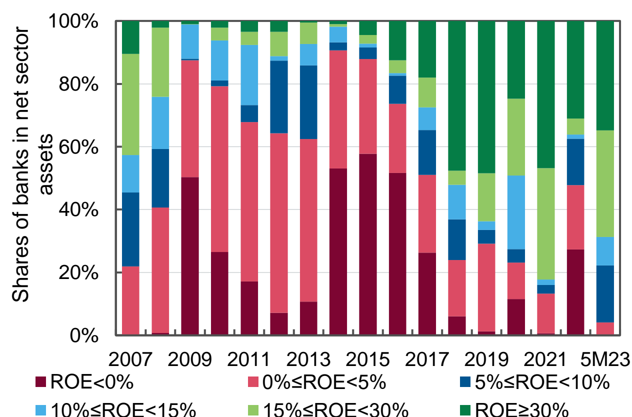
Financial institutions should lend responsibly

During the full-scale war, the financial institutions lost a significant portion of their retail business, so they are now trying to grow their loan portfolios again whenever possible. This is facilitated by the gradual recovery in private consumption by households. In an effort to increase business volumes, lenders may resort to aggressive marketing programs and intrusive offers of credit products that are not always necessary or optimal for clients. Such practices may cause financial difficulties for borrowers, especially those from vulnerable social groups, the sizes of which have expanded significantly since the start of the full-scale war. The banks and other lending institutions should follow best practices for responsible lending and avoid intrusive offers that are not suitable for clients.

3.5. Profitability Risk

The banks have taken full advantage of the high interest rate environment, generating strong operating and net profits. Net interest income grew significantly last year and remains high due to investments in NBU certificates of deposit and resilient interest income from corporate lending. A sufficiently high net interest margin means that the transition to the cycle of easing interest rates will not have a critical impact on profitability. Thanks to strong net interest income and controlled administrative expenses, the banks are maintaining high operational efficiency, despite the decline in fee and commission income and foreign exchange income. The resulting profits and capital cushion add to the banks' resilience during the war, and could be used to cover credit losses and support lending during the post-war recovery.

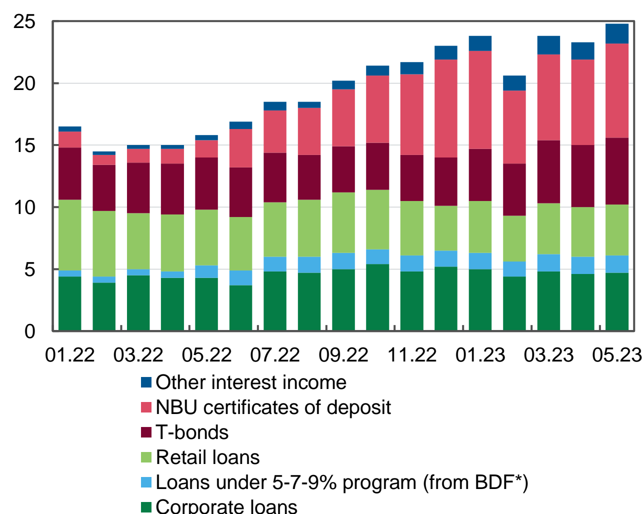
Figure 3.5.1. Distribution of ROE by banks' assets



Here and below in this section, data for solvent banks for each reporting date.

Source: NBU.

Figure 3.5.2. Interest income components, UAH billions



* Business Development Fund.

Source: NBU.

Banks' profits and capital are increasing

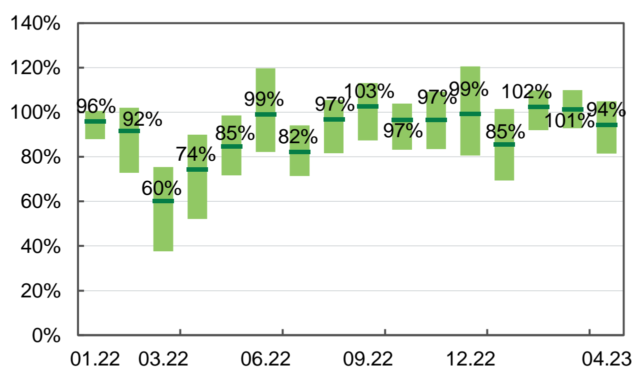
Despite significant losses related to the war, primarily from credit risk, the banking sector as a whole posted a profit last year. The beginning of 2023 was marked by a significant improvement in financial performance. Interest rates remaining high and the banks' access to high-quality liquid instruments helped them increase their operating income. The number of institutions generating an operating loss was minor in the first five months of this year, and corresponded to the level of 2021. These were small banks whose total assets did not exceed 1% of the sector's assets. The sector's annualized return on equity for this period was 54%. The banks are using their current profits to build up capital, which they can then use to cover potential losses of assets and maintain lending.

Growth in interest income slowed

The banks' interest income remained high following the rapid growth seen in H2 2022. In the first five months of this year, interest income was 51% higher than in the same period last year. Last year, among the banks' income sources, the fastest growth was seen in income from holdings of NBU certificates of deposit, in which the financial institutions invested their spare liquidity. This year, several revisions of the NBU's required reserves requirements limited the banks' investments in certificates of deposit and somewhat reduced their income from these instruments. At the same time, the permission to partially cover required reserves with benchmark domestic government debt securities spurred purchases of sovereign debt. Compared to December 2022, in May 2023 the share of income from domestic government debt securities in monthly interest income increased by 5 pp, to 22%. The combined share of interest income from NBU certificates of deposit and domestic government debt securities reached 53% in May.

Interest income from corporate lending in the first five months of the year was 23% higher year-on-year. This was driven by loan rates being higher than before the war and the portfolio remaining larger, despite its recent decline. About a quarter of total interest income comes from interest paid on corporate loans. The banks receive more than 20% of their interest income from corporate lending from the budget through the *Affordable Loans 5–7–9%* state program. Interest income from retail lending, on the other hand, has been declining, primarily due to the rapid decline in the portfolio, which continued until recently. In May, its share in interest income was as low as 17%.

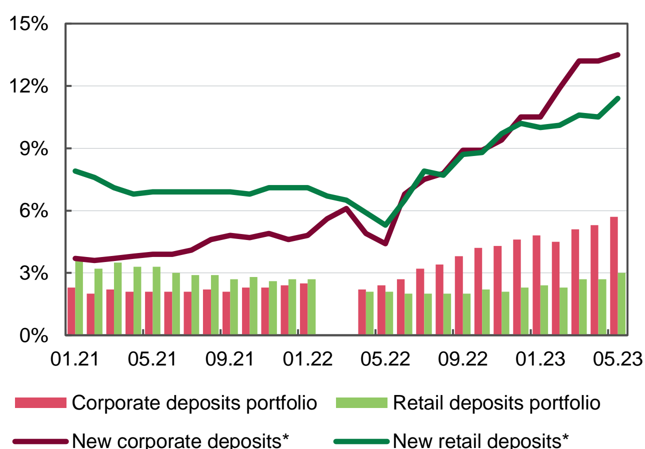
Figure 3.5.3. Ratio of actually received and accrued interest income on loans to clients



The faces of the rectangles correspond to the distribution's first and third quartiles. The lines inside the rectangles are medians.

Source: NBU.

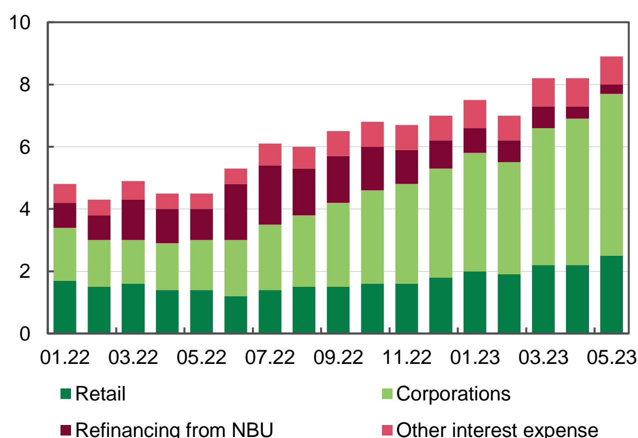
Figure 3.5.4. Cost of new deposits and existing retail and corporate deposit portfolios, % per annum



No data was submitted on the cost of deposit portfolio for February–March 2022. * Without loan rescheduling or any other changes in contractual terms.

Source: NBU.

Figure 3.5.5. Interest expenses components, UAH billions



Source: NBU.

The ratio of interest received to interest accrued on loans continues to hover around 100%. This fluctuation is largely due to uneven interest compensations under the *Affordable Loans 5–7–9%* state program, whereas payments from clients are more regular. Therefore, the accrued interest income reported by the banks mostly accurately reflects the inflows of funds.

Funding costs are increasing, with the fastest growth in the cost of corporate funding

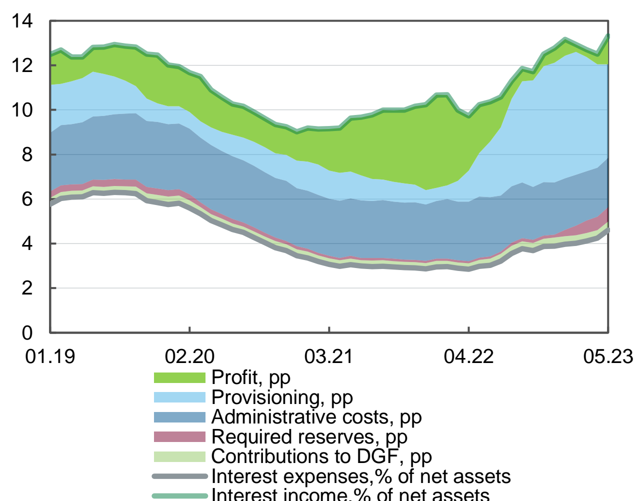
Over the past six months, financial institutions have been trying to increase the maturity of retail deposits. The banks were encouraged to do so by the NBU, which raised required reserves for deposits of up to three months and changed the design of its monetary policy. As a result, the banks raised their deposit rates on term deposits. Overall, since the end of 2022, the cost of hryvnia retail deposits has increased by about 2.5 pp: the UIRD for 12-month deposits rose to 15% per annum, and that for three-month deposits to 14% per annum. At the same time, the financial institutions increased the relative attractiveness of longer-term deposits by lowering yields on and reducing the range of shorter-term instruments. The combination of these steps resulted in an increase in retail term deposits. That said, the cost of new retail deposits increased only slightly over this period, thanks to lower rates on demand and short-term deposits. The banks' interest expenses on retail funding have started to grow slowly due to slightly higher volumes of term deposits taken and the gradual replacement of cheaper deposits attracted last year with new ones.

The banks have less space to manage the cost of corporate deposits compared to retail ones. In the corporate segment, competition between banks is high, clients have stronger bargaining power, and the difference between rates on demand and term deposit is small. To retain clients, the banks have to pay extra on all corporate deposits. In recent months, corporate funding has become more expensive for the banks than retail deposits. The cost of corporate funding has almost doubled compared to last year's figures. Volumes of corporate deposits grew as well. Thus, the structure of interest expenses has changed markedly over the past year. In the first five months of the year, the banks made around 56% of their interest payments to businesses, which is 22 pp more than a year ago.

High interest margins will secure the banks' profitability when the key policy rate starts to decline

The sharp rise in interest rates in the economy has turned out to be favorable for the banks. The yield on their interest-bearing assets grew much faster than the cost of funding. As a result, net interest margins widened rapidly throughout 2022. Such trends are typical of banking systems in many other economies that are going through the cycle of increasing interest rates. Only in early 2023 did the margins of Ukrainian banks narrow slightly. The main factor was a decline in weighted average interest rates on certificates of deposit due to a change in the design of monetary policy. Another factor was the rise in the cost of funding and the cost of maintaining required reserves.

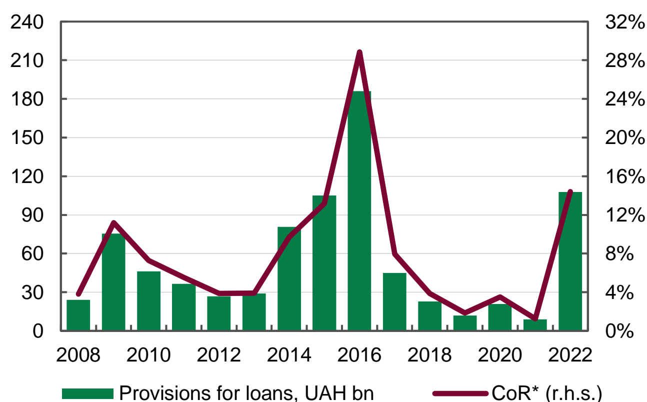
Figure 3.5.6. Decomposition of banks' net interest margin*



* Three-month trailing average. Calculated as the ratio of interest expenses and interest income to the average volume of net interest-bearing assets for the last three months. Administrative expenses were taken into account proportionally to the ratio of net interest income and net fee and commission income taken as an average for the past 12 months. Provisioning included loan loss provisions and provisions for debt securities taken as an average for the past 12 months. Profit was estimated on a residual basis. Issued by banks that were solvent as of the reporting date.

Source: NBU.

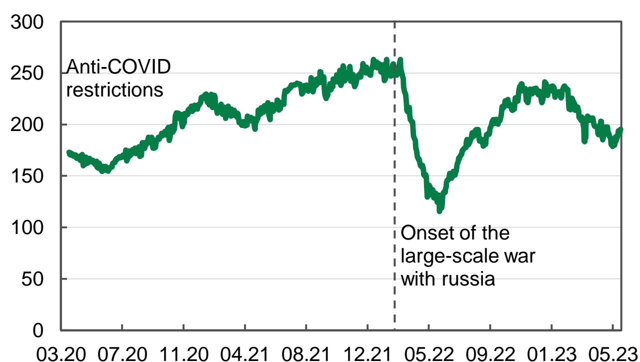
Figure 3.5.7. Cost of risk (CoR)



* Ratio of provisions for loans in respective period to net loan portfolio.

Source: NBU.

Figure 3.5.8.Banks' net fee and commission income per day*, UAH millions



* On daily balances; 60-day trailing average.

Source: NBU.

The expected key policy rate cuts in the future will lead to a decline in yields on assets, primarily on risk-free instruments. At the same time, the growing share of term deposits and zero interest rates on demand deposits is reducing the banks' flexibility in managing their funding costs. Therefore, net interest margins are expected to narrow. However, based on current forecasts, the key policy rate will change slowly, allowing the banks to adjust to the changes. The current levels of the banks' interest margins will ensure sufficient profitability for a long time.

Operating profits are sufficient to offset credit losses

Significant provisioning costs had a major impact on the banks' profitability last year. Taking into account credit risk losses incurred in 2022, main banking transactions barely generated income. This year, financial institutions have significantly slowed the pace of their provisioning. Over the first five months of the year, the annualized ratio of loan loss provisions to net loan portfolio (CoR) was less than 1%, compared to 14% for the whole of the previous year. The cost of risk is most likely to increase further during the year, although it will remain several times lower than last year. The NBU has started a resilience assessment of the twenty largest banks, which may reveal the need to increase prudential and financial provisions. However, the current high margins will allow this to be done without any material loss of profitability.

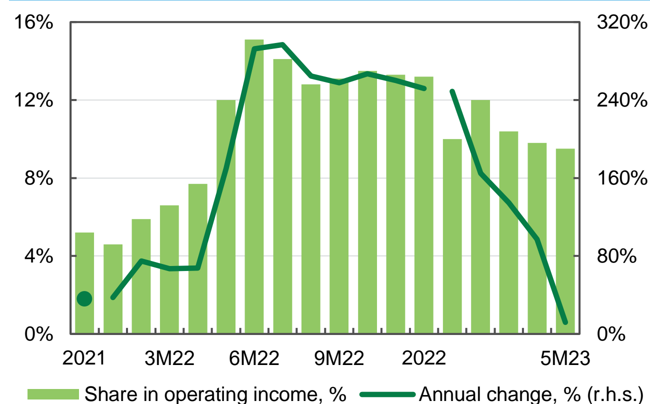
The banks lost a part of net fee and commission income

Despite the restrained economic activity in the autumn and winter due to damage to energy infrastructure, the volume of payment transactions and, accordingly, the net fee and commission income of the banks was almost unaffected. The number of transactions corresponded to the level of 2021, while the average transaction amount increased. Fee and commission income almost recovered to its pre-war level, but the banks did not manage to keep it as high. The volume of transactions with payment cards of Ukrainian migrants abroad has decreased recently. Cash transactions through self-service bank machines have also declined in Ukraine. Among other things, this was driven by the enhanced regulation of the gambling business. As a result, fee and commission income has been falling considerably.

The contribution of income from FX transactions in the banks' profitability is declining

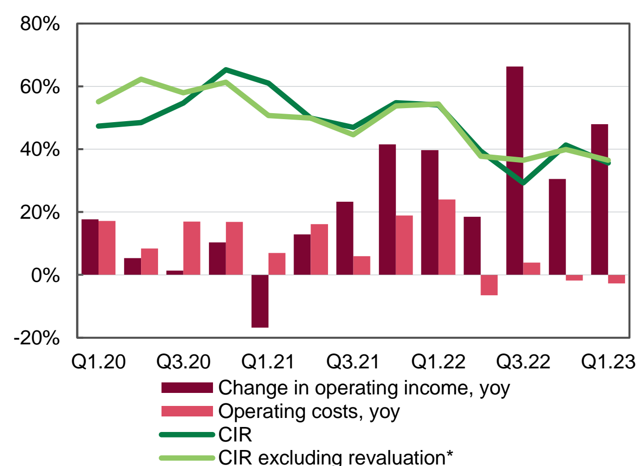
The banks' profits from FX transactions have been declining in recent months. Its share of net operating income has decreased threefold since June 2022, to 8% in May this year. After the FX market stabilized, the spread between the cash and official exchange rates narrowed, and households' demand for foreign currency weakened. Despite a slight decline in recent months, the volume of card-based FX transactions remains higher than before the war. Therefore, even if the spread remains low, profits from buying and selling foreign currency will remain higher than in the pre-war period.

Figure 3.5.9. **Profit from FX trading**



Cumulative from the start of the year.
Source: NBU.

Figure 3.5.10. **Banks' operational efficiency**



* Of securities, foreign currencies, and derivatives.
Source: NBU.

Operational efficiency remains high

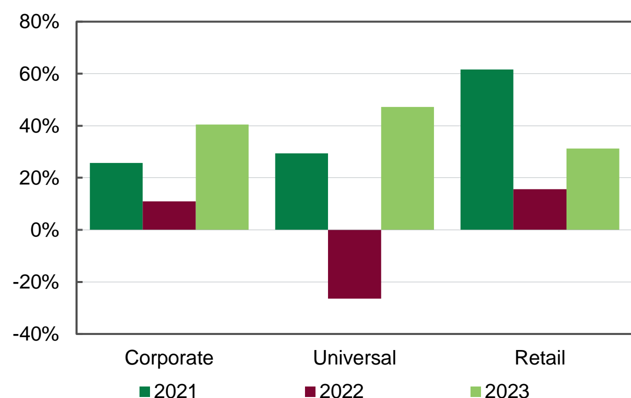
In the first five months of the year, operating expenses increased by 7.4% yoy. Ensuring the uninterrupted operation of branches during the period of massive missile strikes on energy infrastructure, as well as resumption of operations in the previously de-occupied regions, required additional resources. Therefore, over the past six months the banks' expenses on maintaining fixed and intangible assets have been growing more than twice as fast as total operating expenses. These expenses account for about a fifth of all operating expenses. At the same time, the banks continued to optimize their network of operating branches, reducing their number in certain regions. Meanwhile, staff costs remained almost unchanged, while the headcount has decreased since the start of the year.

Given the sizeable growth in operating income, the cost-to-income ratio (CIR) remained considerably better than before the full-scale aggression. In the first five months of the year, the ratio was 38%. This is the best result in more than fifteen years. The current operational efficiency provides banks with a strong margin of safety to absorb credit losses and other losses that might occur during the war.

3.6. Risks of Banks' Business Models

Large Ukrainian banks can be classified into three business models: corporate, retail and universal ones. Despite the challenges of the war, all banks have retained their key business lines, and therefore, have not changed their business models. What is more, while adapting to the current challenges, they expanded their holdings of risk-free assets, continued to make profits on loans, and even enhanced their operating efficiency. This year, the banks' profitability is recovering, despite persisting risks to each of their business models.

Figure 3.6.1. **Return on capital by banks' business model**



Source: NBU.

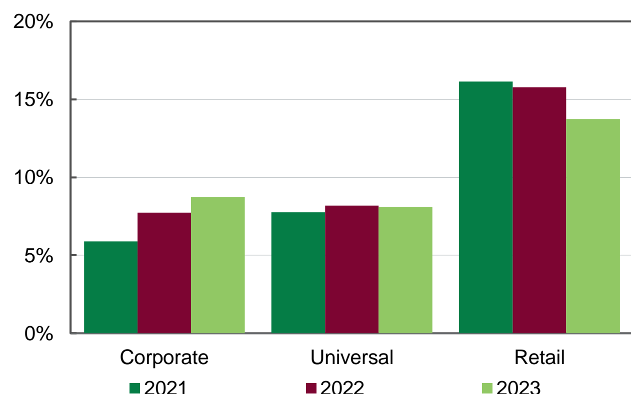
The business models of large Ukrainian banks fall into three types

A bank's clear designation and understanding of its business model, which informs its strategy and daily business decisions, is key to the bank's successful operation. The choice of business model is determined both by a bank's capabilities and by the list of the most significant risks that the bank will have to manage. It makes sense to assess the operating efficiency of a bank by comparing it to other financial institutions that have a similar business model. Therefore, in the EU's supervisory practices under the SREP process (Supervisory Review and Evaluation Process), the division of banks by business models is the starting point of any analysis.

The NBU classifies banks into five business models: retail, universal, corporate, corporate retail-funded, and limited credit intermediation. This classification is based on the structure of assets, funding sources, and income. Classification for SREP purposes is rather complicated, but it can be simplified to ease analysis and produce clear results.

Below are the results of a simplified classification of the 25 largest banks by the size of their risk-weighted assets as of the beginning of 2022, excluding state-owned banks. In view of the size and special status of the state-owned banks and the role they play under martial law, it is sensible to group them separately for the purpose of analysis (see Risks Caused by a High Share of State Capital in the Banking Sector). The business models of all of the analyzed banks were broken down into three groups: retail, corporate and universal. The banks in which corporate or retail loans make up over 70% of their portfolios were classified as corporate or retail respectively, with the remaining banks are seen as universal banks. Corporate and retail banks are mostly corporate- or retail-funded respectively. Universal banks have mostly mixed funding.

Figure 3.6.2. **Net interest margin**

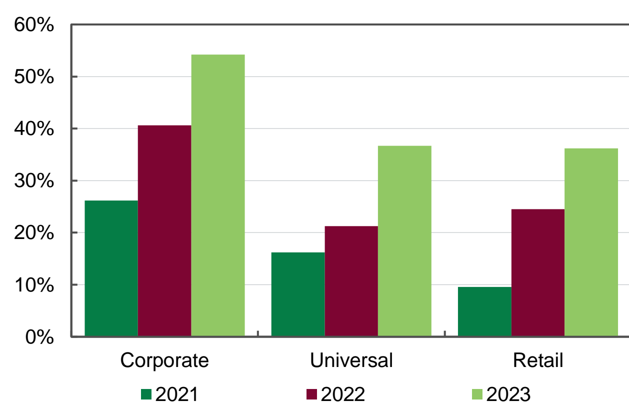


Source: NBU.

The banks of all business models continue to operate in the segments they have chosen

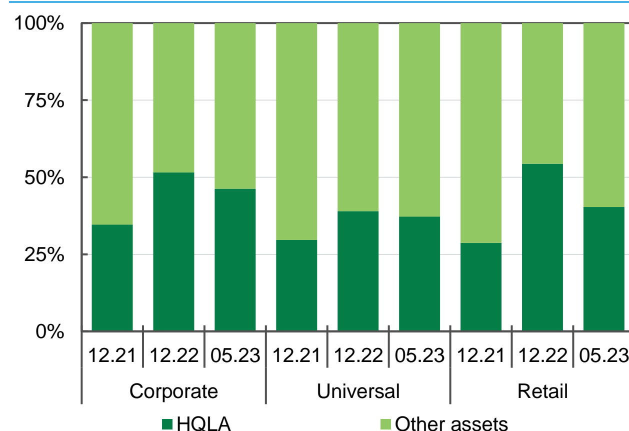
The full-scale invasion was a true stress test for the effectiveness of the banks' business models. Most banks are successfully passing the test. The banks in the sample continue to operate in the segments in which they were operating before the start of the full-scale war. There were no sudden changes in the banks' business models, as the banks were able to retain or even improve their key performance indicators: liquidity, net interest margins and operating efficiency. The profitability of the banks of all business models declined in 2022 due to substantial credit losses, only to recover or even improve in 2023. Regardless of their business model, all banks flexibly adapted to the changing

Figure 3.6.3. Share of income from high-quality liquid assets in total interest income



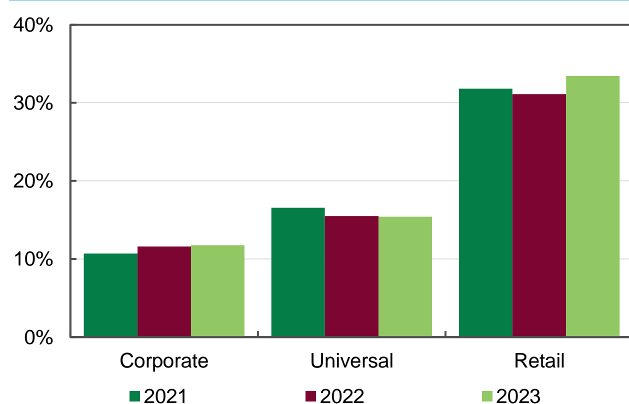
Source: NBU.

Figure 3.6.4. Share of high-quality liquid assets in banks' net assets



Source: NBU.

Figure 3.6.5. Interest rate spread on lending



The difference between returns on client loans and the cost of funding from clients.

Source: NBU.

market conditions: they managed their credit risks through restructuring, increased their income by investing in high-yield risk-free instruments, and optimized their operating costs. Even during the crisis, the banks were able to successfully maintain their business models.

Liquidity risks are moderate for all business models

The share of high-quality liquid assets in banks of all business models is about 40% of the banks' net assets. The banks' retail funding is stable, while corporate funding has even been surging in recent months. A potential threat to the liquidity of retail and universal banks could arise from unfavorable market developments leading to the outflow of retail deposits. That said, the improved term structure of deposits and existing restrictions reduce the banks' vulnerabilities to this scenario. For corporate banks, liquidity risks could arise from deposit concentrations and intensive competition for clients.

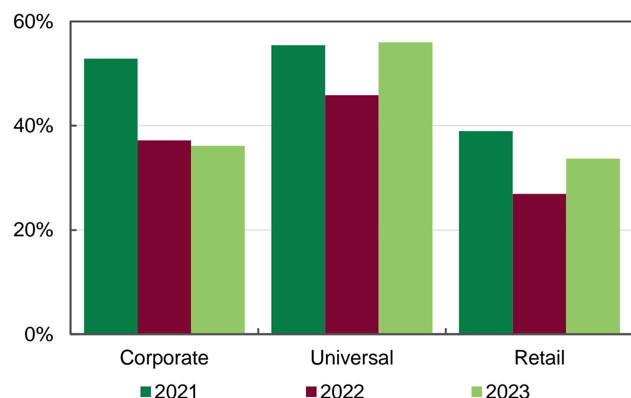
Banks of all business models have increased their interest income

The interest income of the banks of the different business models grew at a fast pace in 2022–2023, driven by investments in high-quality liquid assets, the yields on which rose rapidly. Banks of all business models increased the shares of risk-free instruments in their assets. This noticeably pushed up the portion of the interest income generated by these instruments in total interest income. At a time when substantial amounts of credit risk are being materialized, an increase in risk-free assets is to be expected. The returns on loans generated by banks using the different business models can be assessed by comparing their interest rate spreads on transactions with clients. The average return on lending and the cost of funding were used to calculate the spread. For most banks, regardless of their business model, this indicator increased compared to 2021. Only at banks of a universal model this figure edged down. The retail loan portfolio shrank more rapidly in these banks than the less profitable corporate loan portfolio.

Interest rate risks materialized to a greater extent for corporate and universal banks

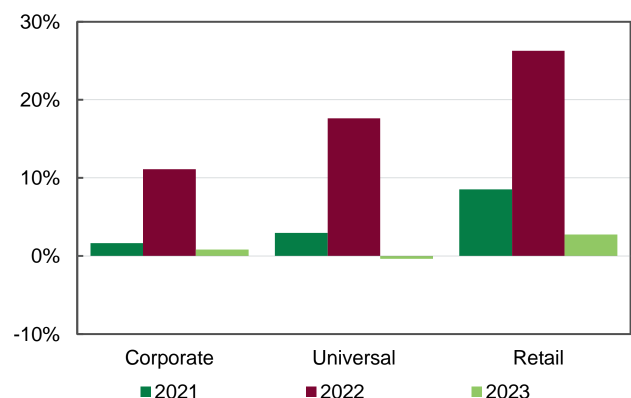
Since the start of the war, the cost of funding for corporate and universal business models has almost doubled to 4%–6%. The banks competed for corporate customers, who secured higher interest rates by using their bargaining power. However, thanks to their high returns on assets, most banks retained their interest rate spreads from this lending. In contrast, the cost of retail funding has been declining since the start of the war, mainly due to a large share of funds being kept on current accounts at virtually zero interest rate. The trend was reversed only in early 2023. High net interest margins and spreads under all business models provide a good starting point ahead of the expected decline in interest rates. Looking ahead, the cost of retail funding will be more sluggish in responding to changes in market interest rates. The ability to compensate for lower yields on risk-free assets, through increasing main operations with acceptable yields, will play a decisive role for banks.

Figure 3.6.6. Banks' cost-to-income ratio (CIR)



Source: NBU.

Figure 3.6.7. Share of losses on clients' loan portfolio



Loan loss provisions for a given period / net loan portfolio at the start of a given period.
Source: NBU.

Table 2. Comparative assessment of future risks for banks of different business models (compared to the sector average)

Risks	Retail	Universal	Corporate
Credit	Medium	Higher	Higher
Liquidity	Lower	Medium	Medium
Interest rate	Medium	Higher	Medium
FX	Lower	Medium	Higher
Operational	Higher	Higher	Medium

Risk assessment:
Higher
Medium
Lower

Source: NBU.

The materialization of operational risk is only partly determined by a bank's business model

The full-scale war has inflicted substantial losses from operational risk. All banks, regardless of their business models, sustained losses, mostly because of lost assets. However, the geographical location of a branch was key to the materialization of operational risk. Some banks also reported significant amounts of income lost because of the war, mostly fee and commission income. However, the losses caused by operational risk were not critical to any bank.

The banks are successfully ensuring continuity, despite this entailing additional costs. Operating expenses did not increase significantly in 2022, with the universal banks reporting the smallest growth. That said, the cost-to-income ratios of universal banks remained the lowest among all of the business models, even despite growing slightly compared to their pre-war levels. The reason for this is that these banks have margins that are lower than those for other groups of banks, while also having a considerable network of branches.

In future, risks of credit losses will be higher for corporate and universal banks

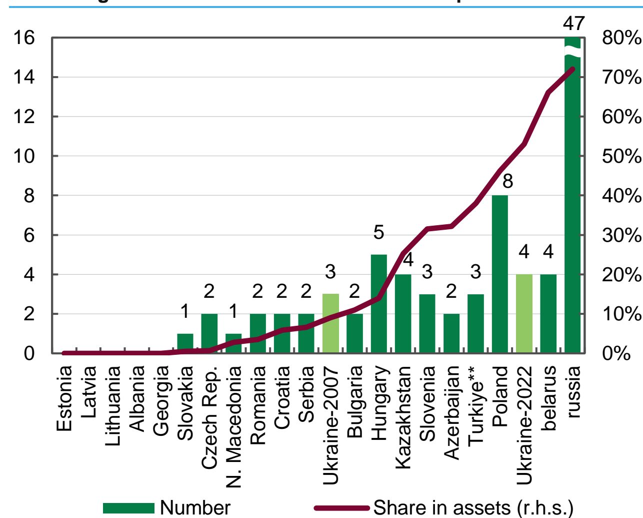
Overall, in 2022, the banks set aside provisions totaling 13% of their portfolio. The heaviest losses were sustained by retail banks – over 20% of their portfolio. However, they successfully covered these losses with higher interest margins. Universal banks incurred second largest losses driven by provisioning. Since the start of the full-scale war, banks of all business models have been actively offering loan restructurings to their clients. In the retail segment, the easing of most requirements was already cancelled in the autumn of 2022. Therefore, most losses from retail loans have already been recognized, so the quality of the retail loan portfolio will not deteriorate significantly in future, provided no new shocks arise. Conversely, in the corporate segment, the risks of the gradual materialization of credit losses are much higher due to a substantial portion of restructured loans.

Usually, the credit risk arising from the corporate portfolio is somewhat increased by the indirect effect of the FX risk: borrowers' debt burdens on FX loans will rise if the hryvnia depreciates. The share of FX loans in corporate and universal banks, in early June, slightly exceeded one third of their portfolio. Since retail banks have practically no FX loans in their portfolios, they are not threatened by this risk. Making provisions for FX loans leaves banks with short currency positions. Due to existing NBU-imposed restrictions, the banks cannot purchase FX to balance these positions. In June, these open currency positions accounted for 8% of the core capital of 25 large banks, mostly corporate and universal ones. If the hryvnia depreciates, these banks will suffer losses from currency revaluations.

3.7. Risks Caused by a High Share of State Capital in the Banking Sector

With the outbreak of russia's full-scale war against Ukraine, the role and tasks of state-owned banks have obviously changed. Amid high war risks and considerable uncertainty, state-owned banks are supporting lending, including to state-owned enterprises, maintaining accounts for government payments, and providing access to banking services through the widest of the branch networks. This leads to a sizeable increase in the share of state-owned banks across all of the key indicators of the banking system. Such growth is justified in times of deep crisis, but it poses high risks to competition in the banking market during the recovery period. Accordingly, the strategies of state-owned banks need to be updated now to address the key shortcomings of their operations, and to prepare most of them for privatization after the end of the war.

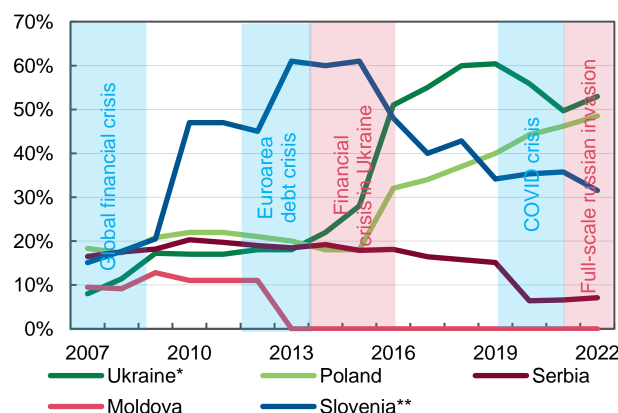
Figure 3.7.1. Market share and number of banks with state capital in banking sectors of Central and Eastern European countries



* In 2021–2022, depending on the data availability. ** Out of deposit banks.

Source: websites of national regulators, websites of state-owned banks, NBU staff estimates, Thebanks.eu.

Figure 3.7.2. Share of state-owned and state-controlled banks in total domestic banking assets



* In gross assets. ** The real share declined more after the drop in state equity in NLB bank by 65 pp to 25%.

Source: websites of national regulators, websites of state-owned banks, own estimates. Thebanks.eu.

The share of state capital in the banking sector often rises during a crisis and declines after the crisis is over

A significant share of state capital in the financial system mostly brings about additional risks. In particular, an EBRD study points to the vulnerability of state-owned banks to political influence, which sharply reduces their efficiency. Advanced economies, particularly those in Europe, are seeking to reduce the state's presence in the financial sector. This is driven, among other things, by EU requirements governing competition and state support. In Europe, it is mainly specialized institutions that remain state-owned: these are development banks or export-import institutions (as in the Czech Republic, Slovakia, or Romania), which offer financial services in segments where private players are not active enough.

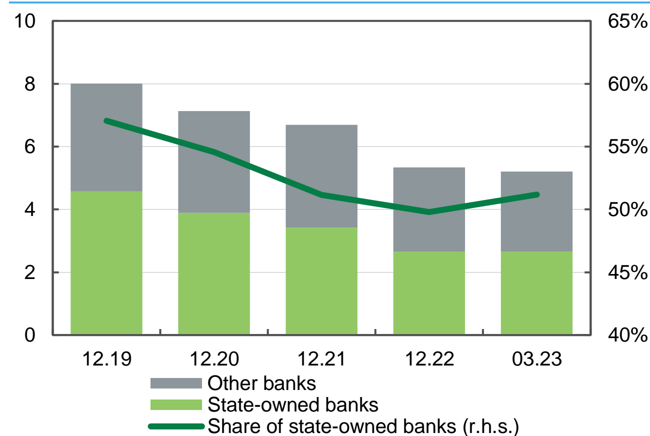
However, in times of crisis, the state may be the most reliable shareholder that has funds and is willing to support domestic banks. With this in mind, clients perceive state-owned banks as a safe haven and tend to re-deposit their savings in them during crises. Moreover, in crisis periods, governments often have to rescue private systemically important banks that are likely to fail. In the region of Eastern and Southeastern Europe, the most vivid examples were bank bailouts in Slovenia and Latvia following the global financial crisis of 2007–2009.

A few years after a crisis, when market conditions become favorable, the market shares of state-owned banks gradually decline in European countries. In a number of neighboring countries, including Moldova and the Baltic states, state-owned banks have been fully privatized. The exceptions in the region are Hungary, where the growth in the state-owned portion of the sector had political motives, and Poland, where the growth was due to private banks leaving the market.

The war has once again delayed plans to privatize Ukrainian state-owned banks

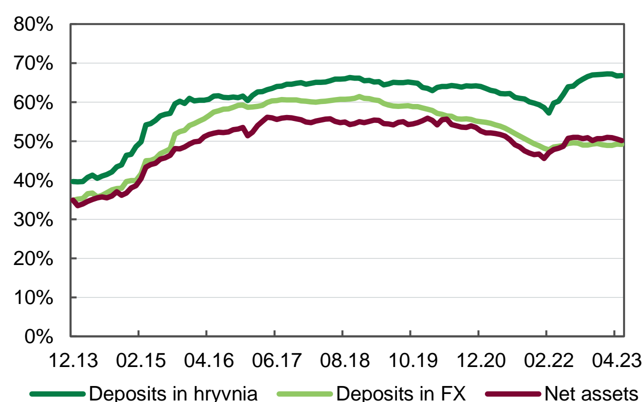
In Ukraine, the significant share of the state in the banking sector is primarily a legacy of past crises – large banks that the state rescued from failure became state-owned. At the same time, in 2016, the *Principles of Strategic Reform of the Public Banking Sector* (the strategy was later updated) foresaw the privatization of most of the state-owned banks. Since then, a number of measures have been taken to facilitate privatization. In particular, corporate governance has been improved, independent supervisory boards have been set up, strategies have been approved for each of the state-owned banks, and the banks started to clean their balance sheets of legacy nonperforming exposures.

Figure 3.7.3. Number (thousands) and share (%) of branches of state-owned banks



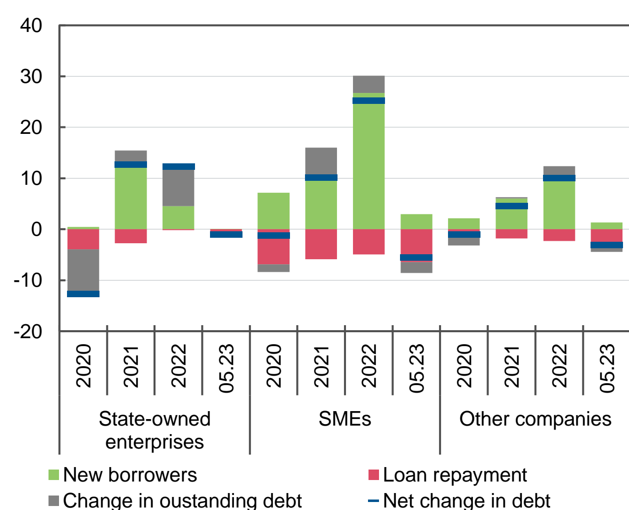
Source: NBU.

Figure 3.7.4. Share of sector's retail deposits and net assets at state-owned banks



Source: NBU.

Figure 3.7.5. New corporate loans from state-owned banks, UAH billions



* Based on microdata on loans exceeding UAH 2 million. On net loans.
Source: NBU.

Ukrgasbank received a EUR 30 million loan from the IFC with the option to convert it into equity. Before russia's invasion, Oschadbank was negotiating a EUR 100 million EBRD loan with the option to convert it into equity. The banks' strategies set target levels for efficiency and benchmarks for their market shares. Although none of the state-owned banks approached privatization per se, their share in the sector was declining naturally due to active competition from banks with private capital.

The outbreak of the full-scale war delayed the implementation of privatization plans. Instead, the activities of state-owned banks focused on wartime economic needs, including retaining deposits and servicing accounts in the public sector, as well as lending to enterprises, in particular those in strategically important industries. The quality of loan servicing by state-owned enterprises has always been high.

State-owned banks continue to lead the way by the size of their branch networks and by retail deposits

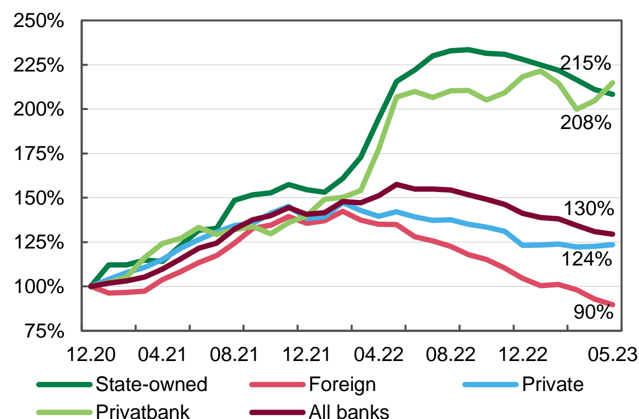
The two largest state-owned banks, Privatbank and Oschadbank, account for more than half of the country's banking network. On the eve of the invasion, state-owned banks were actively optimizing their networks in view of the rollout of cashless payments and in order to cut costs. Since February 2022, some bank branches, including branches of state-owned banks, have been forced to close due to the hostilities and russia's temporary occupation of certain territories. However, after some time, the number of state-owned bank branches stopped decreasing. Moreover, a large number of branches have been re-equipped so that they can continue operating even during prolonged power outages. Given the further optimization of branch networks by several other banks, the share of state-owned banks in terms of this indicator is growing.

At the end of 2021, state-owned banks held almost 56% of retail deposits, most of which were concentrated in Oschadbank and Privatbank. With the outbreak of the full-scale war, government payouts, particularly to the military, have increased multifold. Most of the accounts for such payments were opened at these two state-owned banks, so they became the main recipients of the funds. As a result, the share of retail deposits held in the state-owned banks now exceeds 60%. Few of these funds move to other banks in the system.

State-owned banks continued to lend

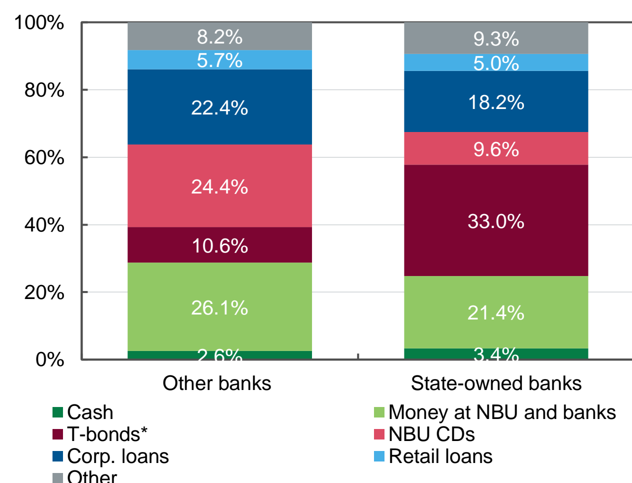
Last year, the huge economic downturn and unprecedented security threats caused by the war significantly dampened financial institutions' risk appetite and willingness to lend. At the same time, in May 2022, the government provided state-owned banks with recommendations for operating under martial law. These recommendations, among other things, supported further financial support from state-owned banks to priority economic sectors and critical infrastructure enterprises. In the spring of 2022, the state-owned banks actively participated in financing the sowing of crops. The extensive network of branches, and access to the public program *Affordable Loans 5–7–9%*, helped the banks make loans to farmers. State-owned banks accounted for more

Figure 3.7.6. Net hryvnia corporate loans, 2020 = 100%



Source: NBU.

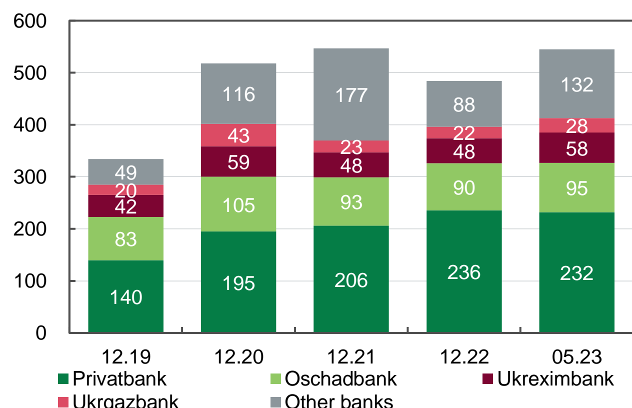
Figure 3.7.7. Composition of net assets as of 1 June 2023



* Government debt securities, including those used to recapitalize state-owned banks.

Source: NBU.

Figure 3.7.8. Holdings of domestic government debt securities by banks, UAH billions



* Government debt securities, including those used to recapitalize state-owned banks.

Source: NBU.

than half of the loans approved under the program. Privatbank was also quite active in lending to businesses, although previously its corporate loan portfolio had been growing slowly. As of now, the share of corporate loans in its loan portfolio is 36.7%, up from 26.4% at the start of 2022. State-owned banks are also the largest users of government guarantee programs: they received more than two-thirds of all government portfolio guarantee limits for lending.

Another area of lending supported by state-owned banks is the financing of state-owned enterprises. The share of such loans in the net corporate portfolio of state-owned banks is almost a third, which is three times higher than in the sector as a whole. Currently, only state-owned banks are ready to issue big enough loans to state-owned enterprises to provide the large amounts of financing they need, given the size of state-owned banks and the priorities set by the government.

State-owned banks are the most active participants in the state mortgage lending program *eOselia*. Since the recipients of loans under the program are privileged categories of the population (people serving in the military, law enforcement officers, medical workers, teachers, and scientists), the program reflects the social function of state support for these categories. At the same time, the spread received by banks under the program covers only operating expenses and part of the cost of credit risk, so the banks make no profits on these transactions.

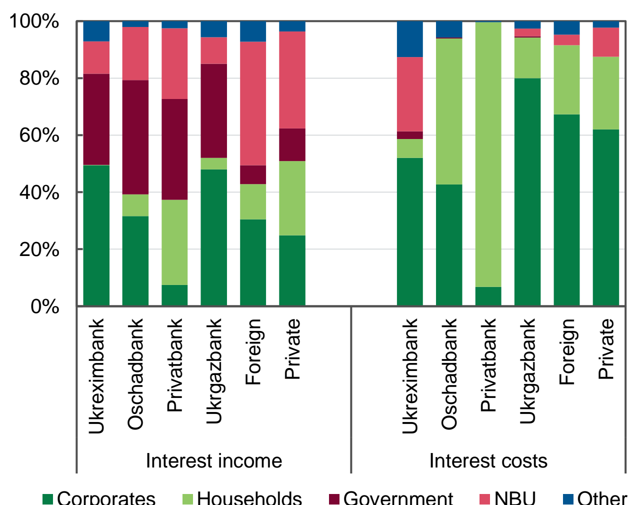
Margins and operational efficiency of the majority of state-owned banks are lower than those of private ones

As they dominate the market, state-owned banks are market makers in terms of a number of indicators. In particular, they set the benchmarks for interest rates on deposits. Until recently, large inflows of retail deposits allowed state-owned banks to keep deposit rates low. These dynamics of deposit rates improved the banks' margins. Privatbank and, to a lesser extent, Oschadbank took full advantage of the cheap funding. This year, these two banks only started raising their retail deposit rates in March–April in response to a number of measures taken by the NBU, but the cost of their funding remains the lowest on the market. In contrast, competing for corporate deposits to maintain liquidity and repay expensive refinancing, some state-owned banks overpaid for funding from businesses. Due to higher funding costs, Ukreximbank and Ukrgasbank had net interest margins significantly lower than those of private banks.

Credit risk materialized and caused some state-owned banks to suffer losses and lose capital

The legacy asset quality problems of state-owned banks were only partially resolved before the outbreak of full-scale war. The ratio of nonperforming loans (NPLs) and, accordingly, the provisioning rate of state-owned banks' portfolios were significantly higher than in other groups of banks. State-owned banks, as well as the sector as a whole, also suffered heavy credit risk losses as a result of the war. The high concentration of portfolios pushed up the level of risk. On the other hand, restructuring and the sizeable volumes of government guarantees for loans supported the

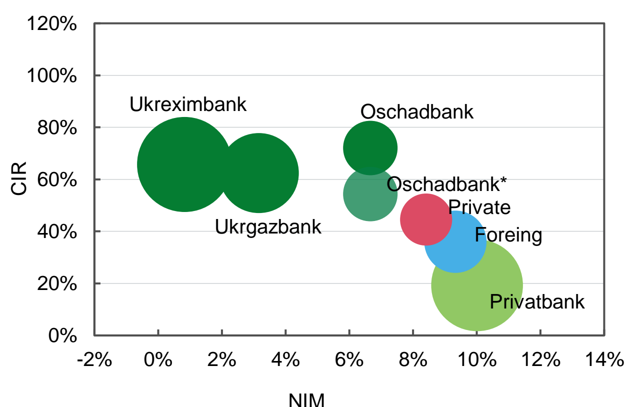
Figure 3.7.9. Composition of interest incomes and costs



For the first five months of 2023.

Source: NBU.

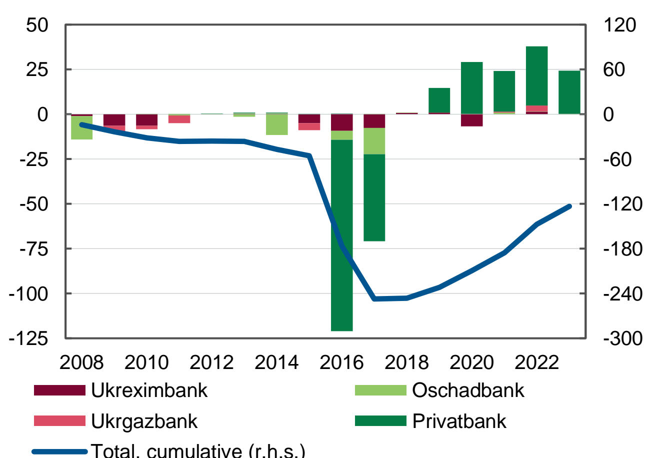
Figure 3.7.10. Margins and banks' financial performance over Q1 2023



* CIR is not adjusted for foreign currency, securities, and derivatives revaluation.

Source: NBU.

Figure 3.7.11. Payments received from and made to the budget by state-owned banks, UAH billions



* Negative readings mark recapitalization, and positive ones reflect dividends and income tax paid.

Source: NBU.

performing portfolio of the state-owned banks. However, due to lower margins and operating efficiency, Ukreximbank and Ukrgasbank incurred losses last year, while Oschadbank's profitability was low. Ukreximbank is the only bank currently in violation of capital adequacy requirements. In May, three state-owned banks were among the ten worst performers in the sector in terms of core capital adequacy. Based on the results of a bank resilience assessment, a number of state-owned banks may need a capital increase. The NBU will give the banks time to meet this need, including through using their own profits. So far, almost two-thirds of the funds invested by the state have been used to cover losses accumulated by the financial institutions. Ukraine's experience is that owning a bank is more of a cost to the state than an investment.

The strategies of state-owned banks must be updated

The concise *Main (Strategic) Guidelines for State-Owned Banks under Martial Law and during Post-War Economy Recovery* should be supplemented with more specific goals for the banks in the near future. Based on these goals, the newly elected supervisory boards of state-owned banks should approve full-fledged strategies that define the role and tasks of each bank under the conditions of a protracted war.

Nationalization of a bank owned by shareholders sanctioned in relation to russian aggression can become a new challenge.

Changes to the strategies should take into account Ukraine's commitments to the IMF and the standard EU practice of a gradual post-crisis reduction of the state's share of the banking sector. Given the war-related risks, reducing the state's participation in the sector is likely to take a long time. Nevertheless, the banks should adjust their operations with a view to this goal. That said, during this time, the state, as the largest shareholder, should carefully avoid creating uncompetitive conditions in the sector. Weaker competition and the monopolization of certain types of lending will continue to impede investors' entry into the market, including through the acquisition of state-owned banks.

Box 2. Could a U.S. Bank Failure Scenario Happen in Ukraine?

The failures of small banks in the United States have highlighted the risks of not including unrealized revaluations of financial instruments in regulatory ratios. These events are likely to affect regulatory approaches to interest rate risk measurement in many countries. Ukrainian banks, like U.S. banks, hold significant amounts of government securities on their balance sheets. However, the threats of hidden revaluation are low, primarily because the banks have significant liquidity buffers. Revaluation amounts relative to regulatory capital are also several times lower than those of U.S. banks.

Specifics of securities accounting might conceal asset value problems

Under IFRS, banks are required to account for securities depending on the purpose for which they hold them. Securities intended to be actively traded are carried at fair value through profit or loss (FVPL). Their revaluation is immediately recognized in the regulatory capital. The portfolio of opposite purpose – securities to be held to maturity – is carried at amortized cost (AC), that is close to face value, adjusted for credit risk provisions. The carrying value of this portfolio is not affected by market price fluctuations. Securities for which business model provides for receiving cash flows from either sale or redemption are carried at fair value through other comprehensive income (FVOCI). Under regulatory approaches in some jurisdictions, their price fluctuations may not impact the regulatory capital if the securities are not sold.

Therefore, depending on the accounting models, there may be differences between the book value that impacts the capital and the market price of debt securities. These differences reflect potential gains or losses that banks could realize if they were to sell the securities in the market at a given point in time. Until these sales take place, gains or losses remain unrealized.

How did banks' interest rate risk materialize in the United States?

As interest rates rose around the globe, securities lost value. Financial institutions did not record capital losses on securities that they planned to hold to maturity. However, the lack of liquidity forced some U.S. banks to sell the securities contrary to their plans. This immediately turned hypothetical losses into real ones, leading to the failure of big banks in the United States. For U.S. banks, the amount of revaluation not recognized in capital is estimated at USD 620 billion as of the end of 2022, which is close to 28% of the total regulatory capital. The insolvent Silicon Valley Bank had this ratio of more than 90%. At European banks, the amount of unrealized revaluation is smaller, but it is material for banks in Italy, Spain, Portugal, and Greece.

Ukrainian banks incur moderate losses from revaluation of domestic government debt securities

Domestic government debt securities account for more than a third of Ukrainian banks' assets, and interest rates have risen sharply over the past year. Therefore, interest rate risk on government securities could potentially lead to significant losses (see Box 2 How the Interest Rate Risk of Investments in Domestic Government Debt Securities Materializes, Financial Stability Report, December 2022). The banks hold the majority of securities in the FVOCI basket, so their revaluation, according to NBU rules, does not impact regulatory capital. The total accumulated amount of revaluation losses in this portfolio is UAH 18 billion, or 8% of regulatory capital. This ratio could reach 30% for some banks. The difference between the book value of securities in the AC portfolio and their market value is another UAH 5 billion. The relatively lower amount of potential revaluation in the AC portfolio is due to the short duration of these instruments. Therefore, a total of UAH 23 billion of losses remain unrealized, which is around a tenth of the banking system's regulatory capital. The FVPL portfolio consists almost entirely of exchange-rate-indexed securities, which were issued to capitalize state-owned banks. These securities can only be carried at FVPL. The value of these securities depends on the exchange rate, and increases in the event of a depreciation. So this positive effect offset the negative effect of the increase in interest rates. In general, in 2022 the banks incurred almost no losses from the revaluation of domestic government debt securities in the FVPL basket.

Table 3. **Banks' portfolios of domestic government debt securities*, by accounting models, UAH billions**

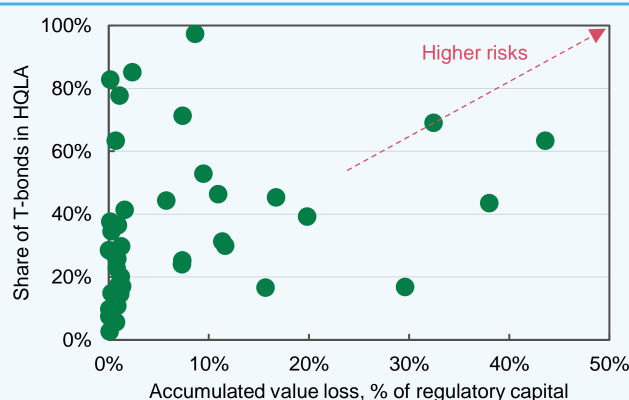
Portfolio	As of 1 Feb 2022		As of 1 Jan 2023	
UAH securities:				
FVPL	134.5	30%	126.2	32%
- exchange rate indexed**	120.3	27%	120.3	30%
- other	14.2	3%	6.2	2%
FVOCI	229.0	51%	194.7	49%
AC	86.8	19%	79.7	20%
Total	**450.3**	**100%**	**400.6**	**100%**
FX securities:				
FVPL	1.6	2%	2.2	3%
FVOCI	61.6	67%	65.2	80%
AC	28.2	31%	14.6	18%
Total	**91.4**	**100%**	**82.0**	**100%**

* At face value at banks that were solvent as of 1 May 2023.
** Exchange-rate-indexed domestic government debt securities.
Source: NBU.

The choice of accounting model for domestic government debt securities does not influence liquidity indicators

Domestic government debt securities are a part of high quality liquid assets, in the numerator of the liquidity coverage ratio (LCR). In LCR calculation, all investments in domestic government debt securities, regardless of the accounting model, are accounted at fair value. Therefore, all market revaluation results are already reflected in the banks' LCRs. Nevertheless, the system's average LCR is currently three times higher than the minimum requirements. Domestic government debt securities make less than half of high-quality liquid assets in most financial institutions. The rest is mainly certificates of deposit.

Figure B.2.1. Accumulated revaluation losses for securities carried at FVOCI and AC and the share of domestic government debt securities in the banks' HQLA



HQLA – high-quality liquid assets; RC – regulatory capital.
Source: NBU.

Liquidity support is a mitigating factor for interest rate risk of securities

The materialization of interest rate risk across the globe this year has triggered a search for ways to minimize its consequences. These events prompted regulators to simplify access to liquidity instruments. In particular, the Fed provided banks with access to funding against collateral of debt securities valued at par. Indeed, the risks of a scenario in which banks are forced to sell securities from their portfolios and record losses are reduced by banks having access to refinancing. It can help banks bridge their liquidity needs. On the other hand, as the maturity of securities approaches, revaluation amounts will gradually decrease. Also, in the event of a downward correction of market rates, securities will rise in price again, reducing potential losses.

In Ukraine, the full-scale russian invasion motivated the NBU to expand access to refinancing. Thus, in 2022, the NBU offered banks unsecured refinancing and relaxed a number of requirements for standard refinancing loans. Banks quickly repaid unsecured refinancing they took at the start of the invasion, and the NBU gradually phased out this instrument. However, access to standard refinancing for banks remains ensured going forward. For the period of martial law, the banks can receive funds from the NBU at the fair value of domestic government debt securities without additional adjustments. By using refinancing, the banks can cover their liquidity needs and prevent the realization of losses on domestic government debt securities.

The reclassification of domestic government debt securities does not reduce revaluation risks

In accordance with IFRS practice, reclassification between models is an exception in response to a fundamental change in portfolio management approaches. Nevertheless, six banks reclassified securities due to highly uncertain market conditions, the trading restrictions in place at the start of martial law, and expectations of further potential interest rate increases. Most of the banks reclassified hryvnia-denominated domestic government debt securities from portfolios carried at fair value. There were four such banks.

In total, in 2022, the banks reclassified about UAH 5 billion of domestic government debt securities from the FVPL portfolio to the AC portfolio. This accounted for almost a third of the hryvnia FVPL portfolio as of 1 February 2022, excluding exchange-rate-indexed securities. Securities worth UAH 700 million were moved between these portfolios by one bank as a result of two transactions: the sale of domestic government debt securities from the FVPL portfolio and the purchase of domestic government debt securities to the AC portfolio. Instruments worth a total of UAH 6 billion were reclassified from the FVOCI portfolio to the AC portfolio, which was less than 3% of the total amount in the portfolio. One bank reclassified government debt securities carried at fair value before the restrictions on the secondary market for these securities were lifted, and three banks reclassified them after.

Table 4. Matrix of domestic government debt securities reclassification by banks in 2022*, UAH billions

		To portfolio		
		FVPL	FVOCI	AC
From portfolio	FVPL	x	0.01	4.98
	FVOCI	-	X	6.30
	AC	-	0.07	x

* At face value.
Source: bank survey.

The reclassification of domestic government debt securities to the AC portfolio were made at a cost higher than nominal. The total premium amounted to UAH 200 million. Of this amount, UAH 130 million was held by one small bank, which amounts to 13% of its regulatory capital. Such reclassification is rather a deferral of risk recognition to the future, as the banks will have to gradually amortize this premium until the domestic government debt securities mature. In late 2022, the median maturity of reclassified domestic government debt securities was 1.4 years, and the maximum was 4.4 years.

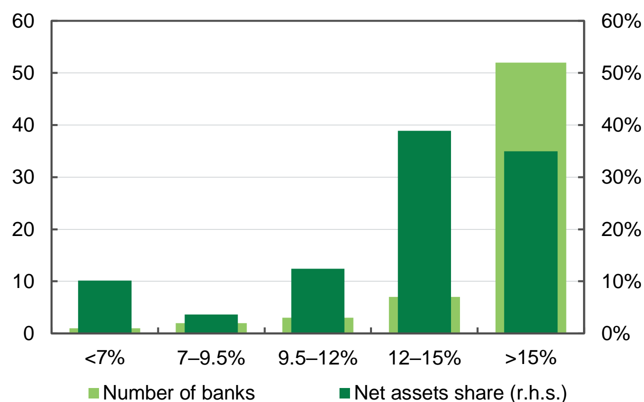
Bank regulation will be enhanced in response to the crisis

Leading banking regulators have drawn lessons from recent bank failures and are considering how to improve capital requirements for covering interest rate risk. In particular, the Fed is considering including accumulated revaluation of instruments in the FVOCI portfolio in the regulatory capital for all banks. Currently, only the largest U.S. banks reflect such revaluation in their capital. The question arises as to whether interest rate risk in the banking book (IRRBB) should be included in the minimum capital requirements under Pillar I. To this end, discussions on potential further improvements of approaches to the assessment and inclusion of interest rate risk in capital will intensify in the coming years at the main global regulatory platforms.

3.8. Capital Adequacy Risk

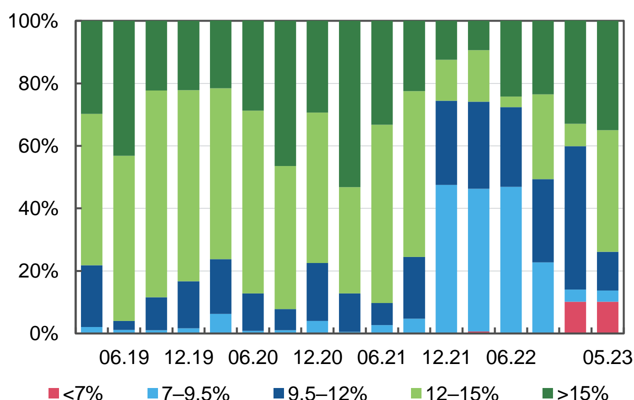
The banks continue to have sufficient capital cushions, exceeding the minimum requirements. The main reason is the system's profitability, which has increased significantly this year. In addition, the banks' capital adequacy was improved by the NBU's regulatory forbearance measures: the cancellation of increased risk weights for unsecured consumer loans, and the postponement of requirements for capital coverage of operational and market risks. The structure of bank assets has also undergone changes: the loan portfolio requiring capital coverage has decreased, while the share of risk-free instruments has grown. As a result, the banking system's core capital adequacy has increased to more than double the minimum requirements. The banks will need this capital to cover unexpected losses, to meet postponed requirements for the calculation of risk-weighted assets, and to build up capital buffers going forward. Therefore, capital distribution constraints will stay in place.

Figure 3.8.1. Distribution of banks' core capital adequacy ratios as of 1 June 2023



Source: NBU.

Figure 3.8.2. Distribution of core capital adequacy ratios by share of bank assets



Source: NBU.

The banks' capital adequacy is growing despite the war

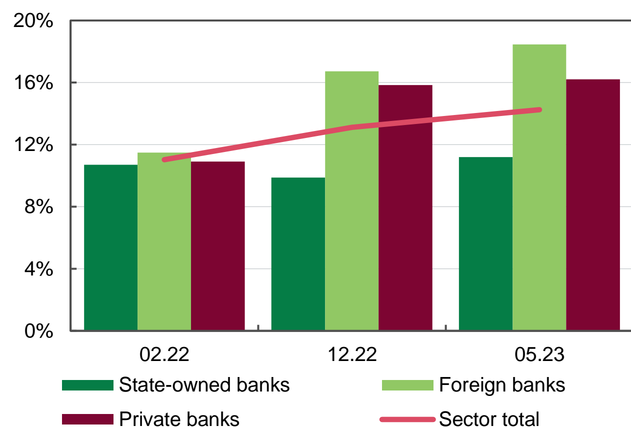
Ukrainian banks continue to build up capital. Since the onset of the full-scale war, the growth in core and regulatory capital of solvent banks has exceeded 13% and 17%, respectively. This year, the banks have posted the fastest growth. Its main driver is the sector's maintained profitability, despite all the challenges. All banks except state-owned ones have retained most of their earnings due to the ban on dividend payouts.

Capital adequacy ratios of most banks have also improved. Relative to February 2022, the weighted average capital adequacy ratio of the banks has increased by more than 3 pp, to 14.3%. This is more than twice the required minimum. The banks with core capital adequacy above 10% together hold more than 86% of the system's net assets. The capital adequacy of banks with foreign capital has increased most noticeably during the full-scale war, while that of state-owned banks rose the least, including due to the distribution of dividends. Ukreximbank is the only bank in the system that is in breach of the minimum requirements for capital adequacy, because of the losses it took last year. A few more banks are operating with capital adequacy ratios close to the minimum required levels. Two small banks are in violation of the minimum regulatory capital requirement (at least UAH 200 million).

Regulatory and macroprudential easing contributed to the maintenance of high capital adequacy

In addition to the increase in capital, micro- and macroprudential relaxations introduced by the NBU during martial law have contributed to the growth in capital adequacy ratios. Specifically, increased risk weights for unsecured consumer loans were canceled, and the full inclusion of operational risk in the assessment of capital adequacy was postponed. The banks are now covering only half of their estimated risk with capital, as they did before the full-scale invasion. The raising of risk weights for FX domestic government debt securities was also delayed. The risk weights currently stand at 50%, while the required level is 100%. The introduction of requirements for the capital coverage of market risk has been postponed as well. The further schedule for the implementation of the requirements noted above will depend on the outcome of this year's resilience assessment. The shift in the structure of the banks' assets – a decrease in the loan portfolio and an increase in the share of risk-free assets – is also helping maintain capital adequacy ratios at high levels.

Figure 3.8.3. Banks' core capital adequacy ratios since the full-scale war started



Source: NBU.

Table 5. Prioritization of uses for the banks' accumulated profits

Order of priorities:	
1	Coverage of unexpected losses from risks that materialize during war
2	Compliance with deferred requirements for capital coverage of risks: ▪ coverage of operational risk in full (currently the banks keep capital to cover 50% of operational risk) ▪ market risk (implementation of requirements is expected after the test period) ▪ 100% risk weights for FX domestic government debt securities (taking into account the adjustment coefficients, the current risk weight is 50%).
3	Compliance with new requirements (to be approved in 2023–2024) for: ▪ the updated regulatory capital structure ▪ updated credit risk weights for certain asset categories ▪ the leverage ratio.
4	Building up capital buffers
5	Distribution of dividends

Source: NBU.

Potential needs for capital will be identified on the basis of the banks' resilience assessment

Although the system as a whole has significant capital, risks to individual banks persist, primarily due to possible additional credit losses from the war. What is more, the banks are at risk of underestimating the credit losses that have materialized already. To ensure that the banks' provisions are adequate, the NBU has launched a resilience assessment of the largest banks (See Box 3 on Peculiarities of Bank Resilience Assessment in 2023). The resilience assessment is designed to estimate the current quality of assets and form a vision of the banks' financial standing up to a three-year horizon. The outcome of the resilience assessment will be known by the end of this year. Financial institutions that are found to be in need of capital will have to work out plans for capital recovery through restructuring or recapitalization. Most banks will likely be able to recapitalize by drawing down their accumulated earnings. Only the financial institutions that have negative capital indicators and no capacity to generate profits may end up needing external capital injections from shareholders.

This year's resilience assessment will differ from a regular exercise, in particular because it will be conducted exclusively by the NBU. With the stabilization of security and economic conditions, the practice of independent asset quality reviews (AQRs) carried out by external experts will return next year. Independent AQRs will primarily focus on evaluating the quality of the banks' assets as per IFRS. The methodology for such assessments will be developed in advance, with help from international partners.

Current restrictions are helping the banks accumulate capital

The NBU will keep in place the restrictions on capital distribution by banks at least until the end of the NBU's resilience assessment and the independent AQR in 2024. Depending on the results of these assessments, capital distribution restrictions may be extended. Accordingly, profitable financial institutions will continue to accumulate capital.

By the time the restrictions on capital distribution are lifted, the NBU plans to fully implement new regulations for risk-weighted assets assessments, and a new structure of regulatory capital. The full-scale war has delayed these plans. So, the banks will use their accumulated capital stock to meet the updated risk coverage requirements, with operational and market risks having to be covered in full. Furthermore, based on the resilience assessment, the NBU may reimpose the capital conservation buffer and systemic importance buffer requirements on the banks. It will therefore be possible to pay dividends only using excess capital after the banks have met all of the new requirements.

Box 3. Peculiarities of Bank Resilience Assessment in 2023

Asset quality review and stress testing are classic tools for analyzing banking risks that are used by most regulators around the globe. In Ukraine, regular bank resilience assessments have been carried out since 2018, but with interruptions: in 2020 due to the pandemic and in 2022 due to the outbreak of the full-scale war. In 2023, the NBU is resuming its resilience assessments. The war has introduced a number of peculiarities to this exercise: the start of the assessment had to be postponed due to the consequences of massive air strikes, the NBU will conduct the assessment using in-house resources, the assessment will cover fewer banks, and more time will be given to fulfill the requirements that are set on the basis of the assessment findings.

Since April, the NBU resumed assessing the resilience of banks and the banking system after a nearly two-year break caused by the full-scale war. This year's exercise is based on the approaches of previous annual resilience assessments, but in some aspects it will differ significantly from the regular one.

As usual, the resilience assessment is conducted in three stages:
1) asset quality review (AQR)
2) extrapolation of AQR results to loans that were not included in the sample
3) estimation of the bank's performance and capital over a three-year horizon.

In the past, auditors were involved in the AQR, and this assessment was performed as part of the annual audit of financial statements. In periods when significant risks materialize, the NBU is inclined to conduct AQRs on its own, as it did in 2015–2016. This helps to ensure unified approaches. In addition, the legislative waiver of deadlines for submitting audit reports during martial law and the unpredictable security situation this year made it impossible to engage auditors. Therefore, in 2023, the NBU is conducting the AQR using its in-house resources.

To use the NBU's resources efficiently, the number of banks undergoing the resilience assessment was reduced to 20. The sample selection was based on three usual criteria with different weights: the amount of credit-risk-weighted assets, retail deposits, and retail loans. Together, the selected banks account for more than 90% of the sector's net assets. This is more than enough to assess the overall situation in the sector. The assessment date was 1 April 2023.

Several dozen loans from the retail and corporate loan segments were selected from each bank's portfolio for the AQR. The sample of corporate loans is larger and must comprise the largest loans. While measuring credit risk for corporate loans, the NBU will take into account the current regulatory forbearance. The ability of corporate borrowers to service their debt will be questioned if:
- the borrower's production facilities have been significantly damaged or destroyed, or cannot be accessed due to the location of the business in an area affected by the war
- the debtor has lost its sales markets
- the debtor has not resumed regular payments after restructuring
- the debtor's current financial standing implies its inability to pay off even interest on a loan.

The AQR will also verify the value of the largest items of real estate property provided as collateral to the banks.

Deviations in credit risk assessments detected during the AQR should be eliminated by banks. If the number of violations is significant, the results of the AQR will be extrapolated to loans outside the sample. For the unreviewed loans, the credit-risk-to-debt ratio will be increased by the same percentage points as the increase in the sample.

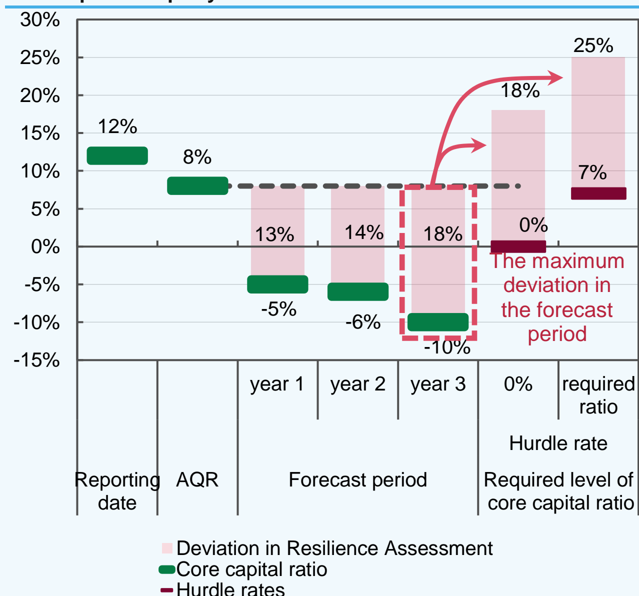
Traditionally, the third stage of the resilience assessment is stress testing of banks under baseline and adverse scenarios. This year, the adverse scenario will not be modeled. The use of the adverse scenario in the resilience assessment allows the NBU to estimate the banks' capital needs to cover potential losses during hypothetical crises. Ukrainian banks are going through an actual crisis and are already using their existing capital as required. Therefore, the current assessment aims to make sure that the banks will be able to hold capital at least at minimum required levels after absorbing all losses. So the banks' performance indicators will be projected under the baseline scenario only, which corresponds to the macroeconomic forecast.

The assumption of static balance sheets over the projection horizon is important for the resilience assessment. This means that the size of the loan portfolio does not change unless due to provisioning or revaluations because of exchange rate change. Under the current conditions of shrinking loan portfolio, this assumption contributes to overall conservatism.

As in previous years, the NBU sets required capital adequacy ratios for banks on the basis of the resilience assessment. The required levels of capital adequacy ratios are determined so that if a bank loses capital under the modeled scenario, its capital adequacy does not fall below the established thresholds. For this purpose, the estimated decrease in capital adequacy ratios in the modeled scenarios is added to the target hurdle rates (see Figure B.3.1). In the current resilience assessment, there will be two such hurdle rates: 0%, and the regulatory requirement value. In These required levels will be achieved consecutively.

The resilience assessment will continue until the end of this year. By 1 January 2024, the banks that are identified as having a need for capital will be required to draw up recapitalization or restructuring plans to cover their need. By April 2024, the NBU will approve the plans submitted by the banks and publish the results of the resilience assessment.

Figure B.3.1. Illustrative example of determining required levels of core capital adequacy ratios



Source: NBU.

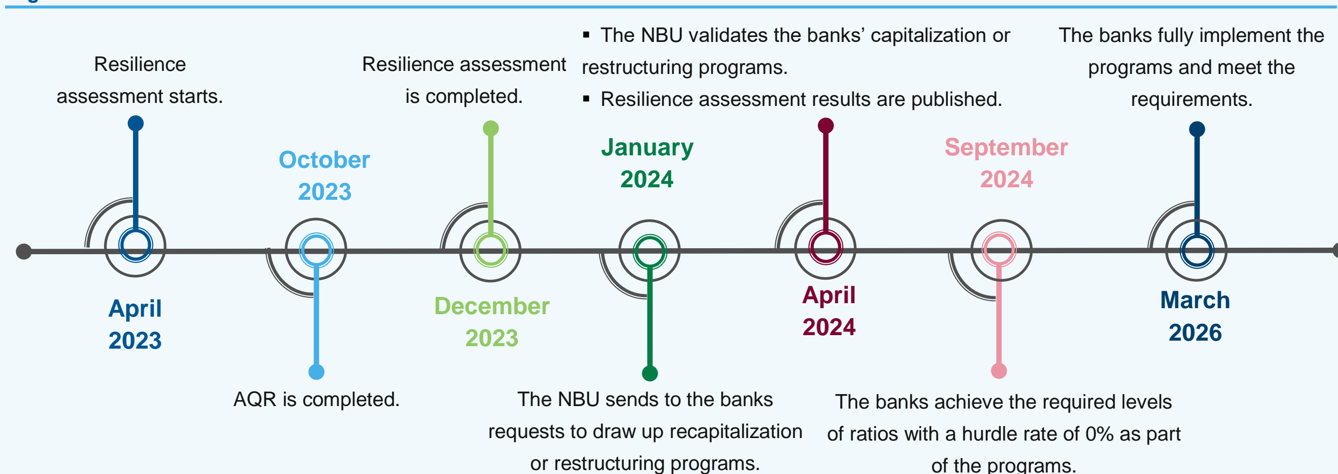
The banks will be given enough time to restore capital, if necessary – two years from the completion of the resilience assessment. The banks will meet the requirements for achieving the required capital levels in stages:

- by 30 September 2024, the banks must achieve the required level of capital ratios, determined at a hurdle rate of 0%
- by 31 March 2026, the banks must reach the required level of capital ratios, determined at the hurdle ratios equal to the regulatory requirements, which are 7% for core capital adequacy requirement and 10% for regulatory capital adequacy requirement.

The peculiarity of this year's resilience assessment is the requirement for banks to ensure a positive capital by 31 July 2024 if it has become negative as a result of the AQR.

Given the lengthy time required to implement their capital recovery programs, the banks will be able to increase capital from operating profits. As a standard practice, the banks will also be able to comply with the requirements by restructuring their balance sheets and, as a result, mitigating the risks identified in the resilience assessment. Capitalization may be required only as an extreme measure.

Figure B.3.2. Resilience assessment timeline

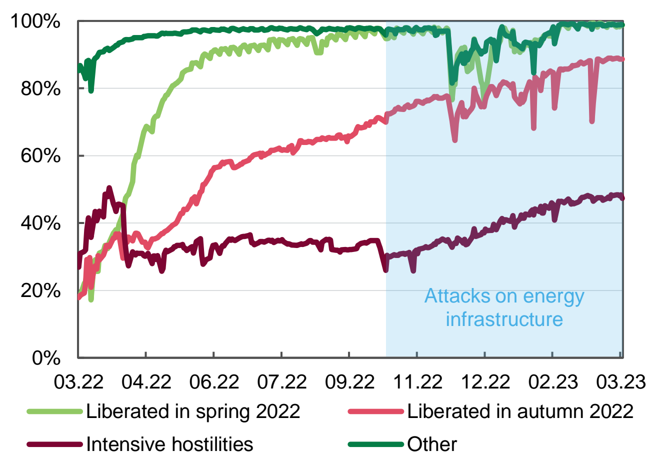


Source: NBU.

3.9. Operating Activity and Operational Risk

The banks successfully traversed the autumn and winter period of power outages and maintained business continuity. Although being small over the last six months, the banks' operating losses have almost hit UAH 15 billion since the start of the full-scale war. Cyber risk and fraud risk remain among the key sources of systemic threats.

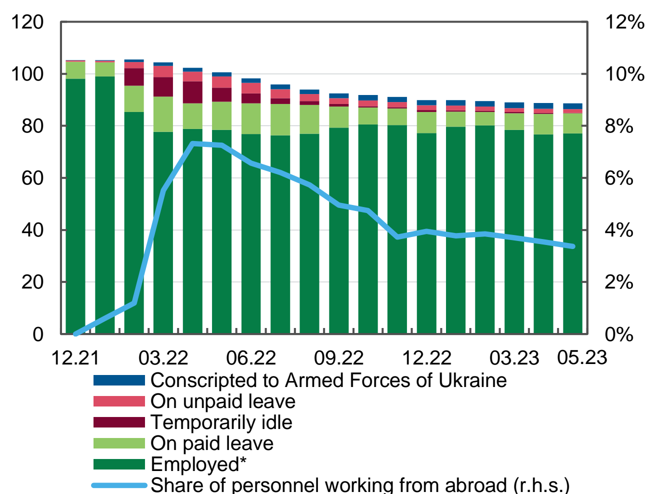
Figure 3.9.1.The proportion of working branches of systemically important banks by oblasts



Regions are classified into groups. "Liberated in spring 2022" comprise Kyiv, Sumy, Chernihiv oblasts, and the city of Kyiv. "Liberated in autumn 2022" comprise Mykolaiv and Kharkiv oblasts. "Intensive hostilities" comprise Donetsk, Luhansk, Zaporizhzhia, and Khesron oblasts.

Source: survey of systemically important banks.

Figure 3.9.2. Number of bank staff, thousands of persons



* Bank employees on maternity or paternity leave are excluded from the category.

Source: surveys of banks, NBU estimates.

The banks have successfully met the challenges posed by power cuts, and are operating without interruption

During the full-scale war and the war-related crisis, the banks should optimize network costs, while also making sure that their services are available to the greatest possible extent. Since 2022, the banks have shut down one out of five branches – almost 1,500 in total so far. The largest number of branches – about two thirds – were shut down in those oblasts where hostilities are ongoing. However, the number of closed bank branches is also significant in other regions: in Kherson and Mykolaiv oblasts the network contracted by over one third, while the remaining regions saw one out of eight branches closed. Foreign-owned banks curtailed the number of their branches the most, by 27%, while private banks decreased their branch number the least, by 19%.

That said, the banks are ensuring that the remaining branches are fully operational in the face of operational challenges. Despite long-term power outages in winter, the share of operating branches was rather high. The banks set up a network of on-duty branches – Power Banking – that can operate even during long-lasting power cuts. By mid-June, it comprised over 2,000 branches of 61 banks – about 45% of all bank branches.

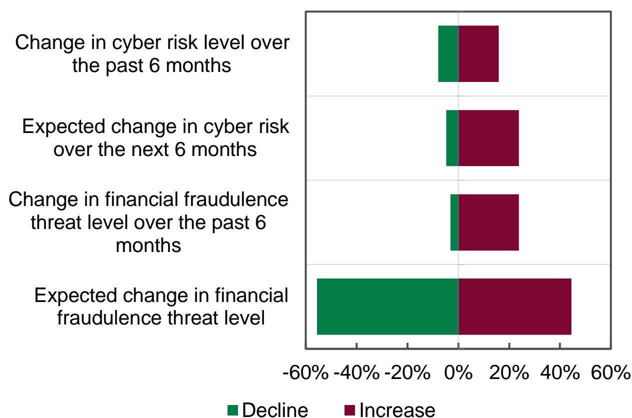
The banks are cutting their workforces at a slower rate

Bank network optimization entails staff cuts. In an attempt to soften this process, the banks offered their workers the opportunity to take time off work as a transitional stage. Over time, these workers were laid off. That said, over the last six months the number of bank employees has dropped by only 3%, which is three times less than over the preceding six-month period. The banks did not lay off staff due to the problems caused by power outages. If a bank had to suspend the operation of its branches, it either told its staff to take vacation time or relocated the staff. The number of bank staffers who are working from abroad continues to decrease, hitting about 3% of all staff employed in early June.

Cyber risk remains relevant for the banks despite their effective response to cyber threats

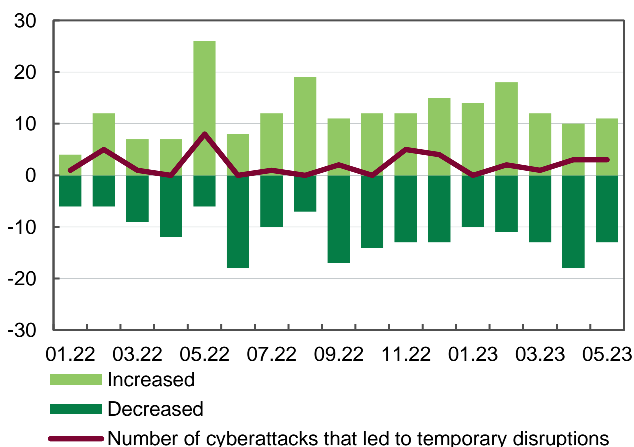
According to assessments made by the banks when replying to an NBU survey, cyber risk, after becoming less important for some time at the start of the full-scale war, has once again become one of the three largest systemic risks. The number of cyberattacks is very volatile. However, from time to time the number of effective cyberattacks increases, despite their percentage in total attacks being negligible. Since 2022, the nature of cyber threats to banks has changed somewhat. DDoS attacks remain the most common, but attacks on information infrastructure, in particular with the help of malicious software, also pose a significant threat. Nonbank financial institutions and developers of software for banks are also becoming new targets for cyber criminals. Failures in the

Figure 3.9.3 Assessment of cyber risk level by banks, response rate



Source: surveys of banks, NBU estimates.

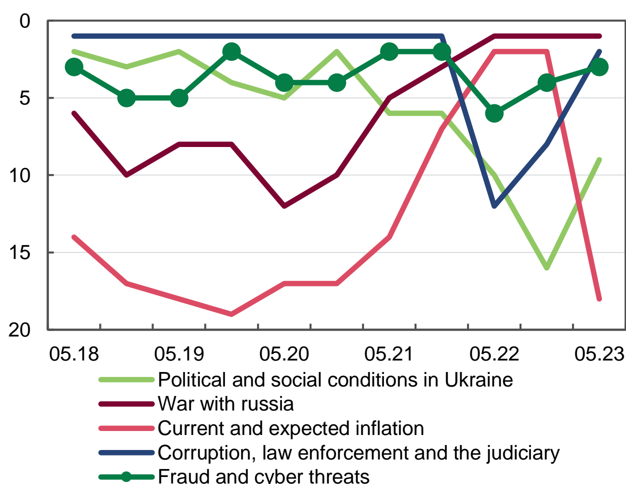
Figure 3.9.4. Distribution of banks depending on the change in the number of cyberattacks, mom



During the period, 51 bank experienced cyberattacks.

Source: surveys of banks, NBU estimates.

Figure 3.9.5. Rankings of major systemic risk factors in the financial sector*



* Based on the balances of responses in the Systemic Risk Survey.

Source: NBU.

operation of systems sometimes lead to delays in the operation of services, for instance, temporarily hindering clients from using online applications, making card transactions or withdrawing cash from ATMs. The NBU enhanced requirements for cyber risk management, with a view to encouraging the banks to take a more responsible approach to combating cyber risk. The banks are required to analyze the impact of adverse factors on their processes, systems and services, while also including cyberattack scenarios in their analysis.

External fraud also poses a threat to the banks and their clients. Since the start of 2022, the NBU's Cyber Security Incident Response Team CSIRT-NBU identified nearly 20,000 phishing domains, over two thirds of which were uncovered this year. Some banks said that the number of fraud attempts had risen over the last six months. Criminals have started using new schemes to defraud bank customers: phishing links to websites disguised as government portals, and fake links to social assistance from government or international organizations. The most common way of deceiving clients is through internet fraud, which last year accounted for 86% of all incidents and for more than 90% of total losses from fraudulent transactions.

The banks are suffering fewer and fewer losses from operational risk events

In June, the NBU conducted a third survey of all solvent banks regarding their war-inflicted operational losses. Sixty banks recorded non-zero losses from operational risk in their databases. The banks reported an almost three-times reduction in the losses they sustained over the last six months compared to the previous six months. However, since the start of the full-scale war, the banks' total operational losses have hit almost UAH 15 billion. As before, one large state-owned retail bank is responsible for about half of the total operational risk losses.

With the war grinding on, the banks are no longer recognizing part of their expenses as operational risk losses. These are expenses that the banks have to incur on a continuous basis, due to sweeping changes in the environment. Some expenses that were previously attributed to operational risk are now considered a component of regular operating expenses. For instance, over time, the banks have ceased to recognize expenses on the autonomous operation of their branches as operational risk losses, recording them rather as operating expenses. The banks have also stopped recording their lost income due to falling demand for some services and the closure of branches as operational risk events.

Recommendations

Ensuring financial stability in extremely difficult wartime conditions requires coordinated efforts and close coordination between all financial market players – the banks, NBFIs, the NBU, and other market regulators, as well as effective support from the state authorities. The NBU makes recommendations to the state authorities and financial institutions, and communicates its near-term goals and plans.

Recommendations for the state authorities

Continue to meet the commitments on the IMF program and on arrangements with other donors

The IMF's approval in March of a new extended fund facility for Ukraine was critical for securing more systematic and predictable external financial aid. Ukraine's timely meeting of its commitments to the IMF and other partners is key to locking in further financing during the war and for post-war reconstruction. Among other things, the facility envisages attaining financial stability and implementing anti-corruption reforms and ensuring the rule of law. The arrangements also require the adoption of certain laws, in particular draft law No. 5125 on credit unions, which takes into account international experience in regulating the sector. They also set forth the passing of a draft law that bolsters the independence and institutional capacity of the NSSMC.

Further develop the domestic borrowing market

The memorandum with the IMF provides for a 100% rollover of domestic debt. The current high rollover rates are caused to a large extent by the NBU's measures, in particular, by allowing the banks to use benchmark domestic government debt securities to meet a portion of the required reserves. At the same time, the opportunities for market borrowing remain high. This is due to, among other thing, the large amount of free liquidity in Ukrainian banks and to decelerating inflation, which increases real yields on hryvnia debt instruments.

Contribute to the implementation of a financial sector development strategy, which is to be adopted in the near future

The adoption of an updated document is set forth in the IMF Memorandum. Among other things, the Strategy will envisage the gradual winding down of emergency measures in the financial sector, the reimposition of pre-war requirements, and the gradual introduction of European prudential regulations to boost the sustainability of the sector. The updated financial sector development strategy will require revisions of the state-owned banks' strategies, with a view to factoring in the long-term uncertainty of security and macroeconomic conditions. The strategy should also contain a vision for the further development of state nonbank financial institutions, in particular the Export Credit Agency, the Ukrainian Financial Housing Company, and the Partial Guarantee Fund for Agricultural Loans.

Maintain the access of a wide range of SMEs and banks to state business support programs

State programs, such as Affordable Loans 5–7–9%, and portfolio guarantee programs are helping maintain access to state loans for a wide range of SMEs. A wide range of banks should also continue to enjoy access to these programs. Any initiatives to supplement or expand the programs should not jeopardize the fulfillment of obligations assumed under existing agreements. The program's focus on supporting small and medium-sized businesses should also be maintained.

Recommendations for financial institutions

Resume lending to businesses and households

The rebounding of the economy will revive demand for loans, at least in some economic segments. This will promote more active lending by both banks and nonbank financial institutions. At the same time, creditors must act prudently: they should monitor the debt burdens of borrowers and prevent them from becoming excessive. Creditors should also lend responsibly and observe consumers' rights. In order to prevent excessive debt burdens on household borrowers amid the war, the NBU initiated a cap on maximum interest rates for

microloans issued by finance companies. Specifically, it proposed that the maximum real daily interest rate should not exceed 0.8% per day.

Maintain conservative approaches to credit risk assessment

Credit risk assessment has become a very complicated since the start of the full-scale war. Corporate borrowers are not always able to prepare and submit financial statements in good time, while the audit of these statements is sometimes impossible, and is temporarily not required by law. Therefore, the quality of borrowers' financial statements has declined overall. Sometimes it is difficult to gauge how long a borrower will be experiencing war-inflicted difficulties. In view of the above, assessing the solvency of borrowers requires currently much more effort and time from bank specialists than before the full-scale war. In spite of that, the banks have to use sufficient resources in order to collect all of the required information about corporate borrowers, and to ensure that they have taken all of the key risk factors into account before making credit decisions.

Prepare for the assessment of market risk and meeting capital requirements to cover this risk

In December 2021, the NBU approved the methodology for calculating capital requirements to cover market risk. The NBU has recently clarified and strengthened the requirements for measuring and managing market risk, in particular, though clarifying the criteria for classifying instruments into the trading book. In November-December, the banks are to conduct test calculations of their minimum market risk, with a view to taking it into account when measuring their capital adequacy in future.

Pay closer attention to the management of information security and ICT risks

The NBU singled out information and communication technology (ICT) risks and information security risks, including cyber risks, as operational risk components. Banks and banking groups should put in place effective systems, which include policies, procedures and risk management tools, for managing these risks. This should ensure the uninterrupted functioning of ICT systems and servers.

Insurers must comply with IFRS and revised regulatory requirements

IFRS 17 Insurance Contracts came into effect from the start of 2023. Insurers should make further efforts to properly implement the standard, especially where it relates measuring insurance reserves. Due attention should also be paid to the quality of assets. Starting from 30 June, land plots will be excluded from the list of insurers' eligible assets, while housing will additionally be excluded from that of non-life insurers. In view of this, insurance companies will have to increase the share of liquid components in their assets.

It is also important that financial institutions continue to:

- strictly comply with NBU requirements while under martial law, in particular with regard to sanctions legislation and FX controls
- inform the NBU in good time about violations of capital and/or liquidity requirements and about the risks of such violations and
- keep their business continuity plans and business recovery plans up to date.

NBU's plans and intentions

The NBU will remain committed to the approach of flexibly responding to challenges, while also gradually restoring pre-war requirements and introducing new requirements for the activities of financial institutions.

Complete the assessment of the resilience of Ukrainian banks and Ukraine's banking system

In April, the NBU launched an assessment of the resilience of the 20 largest banks, which will continue until the end of 2023. The assessment will inform decisions about required capital adequacy ratios. If required, banks will draw up plans to recover capital or restructure their balance sheets, which they will have to implement by end-March 2026.

Gradually reintroduce standard requirements for measuring credit risk

The NBU will gradually reimpose its previous requirements for assessing credit risk, which were temporarily eased when the full-scale war broke out. So far, the NBU has reimposed the

requirements for counting the number of days a debt is past due, and for monitoring and reevaluating collateral in areas where it is sensible and possible to do so. Based on the results of the assessment of the banks' resilience, the NBU will decide whether or not to cancel other temporary regulatory easings.

Speed up the harmonization of regulatory requirements with EU acquis
In the near future, the NBU will focus on introducing the revised structure of regulatory capital, revised approaches to measuring the risk weights of certain asset types, the leverage ratio, the limit on large exposures, and information disclosure standards. The NBU, together with the DGF, is also preparing legislative changes to implement a new system for bank recovery and resolution, as set forth in the relevant European Directive (BRRD). The new requirements will be introduced step-by-step, with the introduction schedule depending on the results of the assessment of the banking sector's resilience.

The NBU is also working on a new package of regulatory requirements for the nonbank market, mainly the insurance segment. More specifically, new requirements for insurer solvency will come into force from the start of next year.

Abbreviations and Terms

The Report presents data for banks that were solvent as of 1 June 2023 unless stated otherwise.

War, invasion	Full-scale russian invasion to Ukraine since 24 February 2022
War-affected, warzone	Communities in areas of hostilities, under temporary occupation or surrounded, in line with definition of Ministry for Reintegration
Pre-war	Before the full-scale invasion
5-7-9%, 5-7-9% state program	State program Affordable Loans 5-7-9%
ATM	Automated teller machine
AQR	Asset quality review
BDF	Business Development Fund
CCAR	Core capital adequacy ratio
CD	Certificate of deposit
CIR	Cost-to-income ratio
CoR	Cost of risk
COVID, COVID-19	Coronavirus disease 2019
CPI	Consumer price index
DGF	Deposit Guarantee Fund
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation, and amortization
EBRD	European Bank for Reconstruction and Development
ECB	European Central Bank
EIB	European Investment Bank
EU	European Union
Fed	Federal Reserve Board
FX	Foreign currency/exchange
G7	Group of Seven
GDP	Gross Domestic Product
ICAAP	Internal Capital Adequacy Assessment Process
IFI	International Financial Institutions
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
ILO	International Labor Organization
HH	Households
HQLA	High-quality liquid assets
LCR	Liquidity coverage ratio
LTV	Loan-to-value ratio
SMEs	Small and medium enterprises
NBFI	Non-bank financial institution
NBU	National Bank of Ukraine
NFC	Non-financial corporations
NSFR	Net stable funding ratio
NPE/NPL	Nonperforming exposure / loan
OECD	Organization for Economic Co-operation and Development
o/w	Of which
Parliament	Verkhovna Rada of Ukraine (Supreme Council)
PD	Probability of default
Privatbank	Public Joint-Stock Company Commercial Bank "Privatbank"
Regulation No 351	Regulation of the NBU of 30 June 2016 No 351 approving Regulation on credit risk calculation by Ukrainian banks
ROE	Return on equity
SEP	System of electronic payments
SOE	State-owned enterprises
SREP	Supervisory Review and Evaluation Process
SSC	Single social contribution
SSSU	State Statistics Service of Ukraine
STSU	State Treasury Service of Ukraine
T-bonds	Domestic government debt securities
UFHC	Ukrainian Financial Housing Company
UIRD	Ukrainian Index of Retail Deposit Rates
UK	United Kingdom of Great Britain and Northern Ireland
U.S.	United States of America
w/o	without

mln	million
bn	billion
sq. m	square meters
EUR	euro
UAH	Ukrainian hryvnia
USD	US dollar
USD eq.	US dollar equivalent
pp	percentage points
yoy	year-on-year
qoq	quarter-on-quarter
mom	month-on-month
bp	basis point
r.h.s.	right hand scale
H	half of a year
Q	quarter
M	month
Y	year