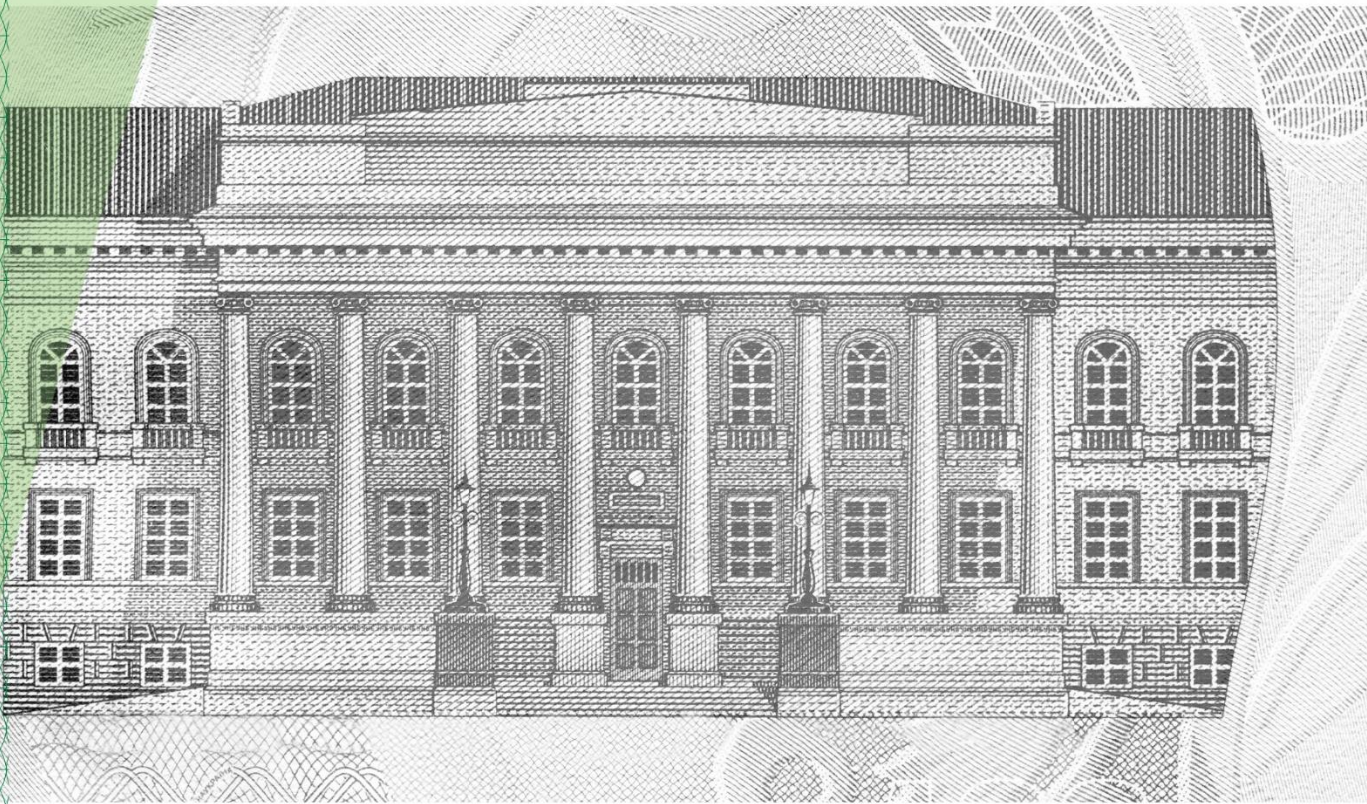
National Bank of Ukraine

Financial Stability Report

June 2020



The Financial Stability Report (hereinafter the report) is a key publication of the National Bank of Ukraine. It aims to inform about existing and potential risks that can undermine stability of Ukraine's financial system. The report primarily focuses on banking risks. The report makes recommendations to the authorities and banks on measures to mitigate risks and to enhance the resilience of the financial system to those risks.

The report is primarily aimed at financial market participants, and all those interested in financial stability issues. The report helps to understand better challenges that Ukrainian economy and financial system are facing as well as the impact that these challenges might have on financial stability in Ukraine. 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 report was approved for publication by the Financial Stability Committee of the NBU on 22 June 2020.

Contents

Summary

The Ukrainian banking sector is undergoing a real-time stress test. The crisis unfolding since mid-March has affected all countries and their financial sectors. It will have long-term implications for the solvency of borrowers, quality of loan portfolios, and banks' business models. This crisis is also testing the effectiveness of the new banking regulation model that started to be implemented internationally in 2009 and has been adopted in Ukraine since 2016. Early conclusions can already be made: the NBU's efforts to clean up the banking sector, implement internationally recognized capital and liquidity requirements, perform regular stress tests, introduce a risk-based supervisory approach, and encourage banks to build a safety cushion in good times have all yielded positive results.

Banks sailed into the crisis in good shape. Their capital adequacy significantly exceeded the minimum requirement. Banks can now use the excess to absorb credit losses and continue to issue loans. As financial institutions have become highly efficient and profitable, they are generating capital by themselves. The funding structure is also favorable: banks raised over 90% of their liabilities on the domestic market. Today the banking sector is not dependent on international capital markets. Its liquidity is high in both hryvnia and foreign currencies. In addition, the sector's long-standing problem of related-party lending has been fixed.

The NBU has applied all tools employed by global regulators in order to help banks be more flexible in their response to the crisis and continue lending. And like other regulators, the NBU sought to strike a balance between making temporary regulatory relaxations to mitigate the unfavorable external environment and maintaining the sector's financial stability. Capital buffers were deactivated in the first days of the crisis: currently banks must only comply with the minimum capital adequacy requirements. The NBU also recommended that banks refrain from paying dividends at least until October, by which time the fallout from the economic crisis can be assessed more accurately. Banks have generally followed the regulator's recommendations. In addition, the NBU ensured favorable regulatory conditions for loan restructurings. Financial institutions have granted additional latitude to borrowers while quarantine restrictions are in effect. Their temporary concessions are not leading to an increase in prudential provisions. The NBU is also using its standard refinancing instruments to provide banks with the liquidity they need.

Banks' solid margin of safety and timely action taken by the regulator helped the system make it through the most acute phase of the crisis in the spring. There was no disruption to any banking services, depositors could access their accounts at any time, and banks ensured a safe operating environment for their branches. Deposit outflows lasted for less than two weeks, followed by renewed growth: this stands in welcome contrast to what the Ukrainian banking sector endured during previous crises.

However, adverse effects of the current crisis may come to be felt in the coming year. The key forthcoming threats for banks are declining demand for banking services and deteriorating quality of debt service. To better evaluate their impact, the NBU conducted an express stress test of banks. This stress test assessed how the aforementioned threats would affect the capital of 26 banks under a macroeconomic scenario that is slightly worse than the NBU's current forecast. The diagnosed banks account for 91% of total sector assets.

The study found that the current crisis may result in noncompliance with the core or regulatory capital adequacy ratios for nine banks collectively accounting for 30% of total sector assets, including 25% attributable to two state-owned banks. Two institutions may end up with negative capital. These are the same banks that had demonstrated negative results during previous stress tests but failed to take sufficient measures to address the accumulated problems. They urgently need to restructure their balance sheets and revise their business models. Some of them will require capital injections from their shareholders. Overall, results of the express stress test were better than last year due to the difference in macroeconomic scenarios applied and a noticeable increase in banks' capital and efficiency over the period.

Banks currently boast the highest-quality corporate loan portfolio in a decade. In recent years, they have maintained generally accepted lending standards. In turn, the corporate sector became more transparent and profitable, with many companies and industries growing more resilient. Nevertheless, losses are inevitable: lower domestic and foreign demand, quarantine restrictions, and unresolved structural problems in many sectors will significantly affect borrower solvency. Banks need to monitor the financial standing of their debtors and take into account their temporary financial difficulties when offering loans. Once the crisis is over, financial institutions will play a key role in restoring economic growth. Borrowers, for their part, need to become more transparent in terms of financial disclosure, raise their corporate governance standards, and come out of the shadows.

Despite the rapid growth in retail lending in the last three years, households met the current crisis with a moderate debt burden. However, job losses and lower regular income mean many borrowers will find it difficult to service their loans. Mortgages make up less than 10% of the total net portfolio of retail loans. Therefore, losses due to deteriorating loan quality will mainly come from unsecured consumer loans. The NBU estimates that more than 10% of unsecured consumer loans may become nonperforming as a result of the crisis. These losses will materialize over the next several quarters. Banks’ belated recognition of the losses and failure to make timely provisions may lead to a sharp drop in the levels of capital and profitability after the NBU conducts an asset quality review.

Slowing inflation, stability in the foreign exchange market and the smooth operation of the banking sector are conducive to a further decrease in interest rates. For the first time since it gained independence, Ukraine is entering a period of single-digit deposit interest rates. This is a prerequisite for a significant reduction in interest rates on loans. Provided that there are no new macroeconomic shocks and protection of creditors’ rights continues to be reinforced, domestic interest rates on retail and corporate loans will hit the lowest level on record by the end of the year. The problem of insufficient long-term funding will be partially solved by providing banks with long-term refinancing loans at a floating rate.

At the same time, lower interest rates pose new challenges for banks. One of them is the compression of interest rate spreads and reduced scope for earning net interest income. Although this risk will materialize over the medium term only, banks should be prepared and adjust their strategies accordingly.

One of notable recent developments that significantly reduced risks to financial stability was the adoption of amendments to banking legislation. From now on, insolvent banks cannot come back to the market. In case a decision taken by the NBU to withdraw a bank from the market is ruled unlawful, the bank’s shareholders will only be able to claim monetary compensation for the damage. This new rule will bring radical changes to judicial practice and make zombie banks impossible.

Starting in July, the NBU will assume powers to regulate the majority of nonbank financial market participants including insurance companies, credit unions, and financial companies. The NBU will focus on credit unions and insurance companies, as they are the ones that actively work with the money of individuals and businesses. A preliminary analysis has shown that many players in these segments do not have sufficient financial resilience. Therefore, the rules of the game for them will be gradually overhauled. In particular, the NBU will initiate the introduction of regulatory and supervisory approaches in the insurance market, which will be based on the EU’s Solvency legislative package. This will strengthen the solvency and liquidity of insurance companies, improve the competitive environment, and enhance the protection of consumer rights in financial services. Moreover, the NBU will expand macroprudential regulation to cover the nonbank sector. That said, at present the sector does not pose significant systemic risks due to its small size and simplicity of its financial products.

MACRO LEVEL

Quarantine restrictions caused slowdown in economic activity

- Income and profits of companies declined
- Household solvency worsened
- Sentiments of businesses and households deteriorated
- Uncertainty surged

BANKS

Banks were ready for the crisis thanks to:

- Sufficient capital
- Profitability
- Stable funding
- High liquidity

Consequences of the crisis for the system:

LIQUIDITY

Deposit outflows started…

… banks covered them with the stock of **high quality liquid assets**…

… **continuous operation** of networks underpinned the confidence.

Liquidity risk **did not materialize**

SOLVENCY

Lower solvency of borrowers will make impact later...

… banks may **lose 10–15% of their portfolio**...

… lower demand **will depress incomes** of banks.

Most banks **will not need capital** thanks to accumulated buffers and operational efficiency

In the aftermath of the crisis:

- Interest rates and spreads are to shrink
- Long-term lending is to grow
- Competition for borrowers is to increase, with service quality and bank resilience in focus

NBU

The NBU expanded **liquidity support facilities** for banks...

… **released capital** (buffers) to absorb losses and maintain lending…

… encouraged **loan restructuring**.

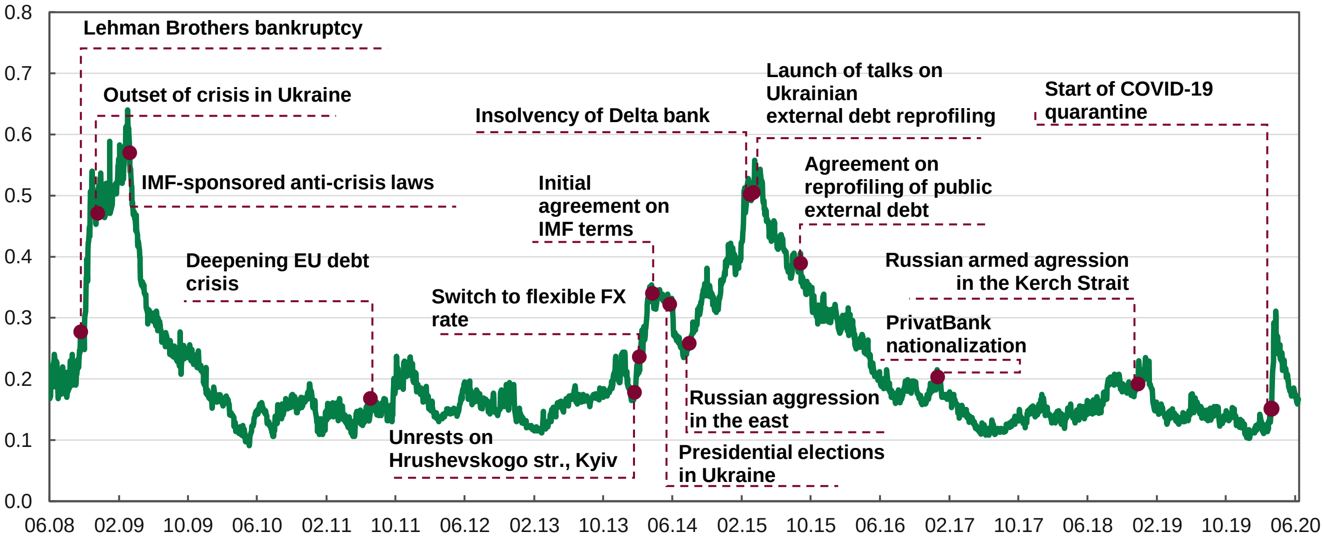
Further on, the NBU will promote **lending in a long term**.

Financial Stress Index

The Financial Stress Index (FSI)[1] immediately responded to the imposition of quarantine restrictions. During two weeks in March, it soared to the highest level since 2015, having doubled compared to the start of the year. This spike was mostly driven by the hryvnia's depreciation and uncertainty in the securities market. In particular, the sub-index of government securities rose sharply on the back of higher yields on Ukrainian Eurobonds. However, the shock did not last long, with the level of stress starting to trend lower in early April. All sub-indices dropped, while the corporate and FX indices returned to pre-crisis levels. This reversal was aided by a stable hryvnia and lower yields on both government and corporate securities.

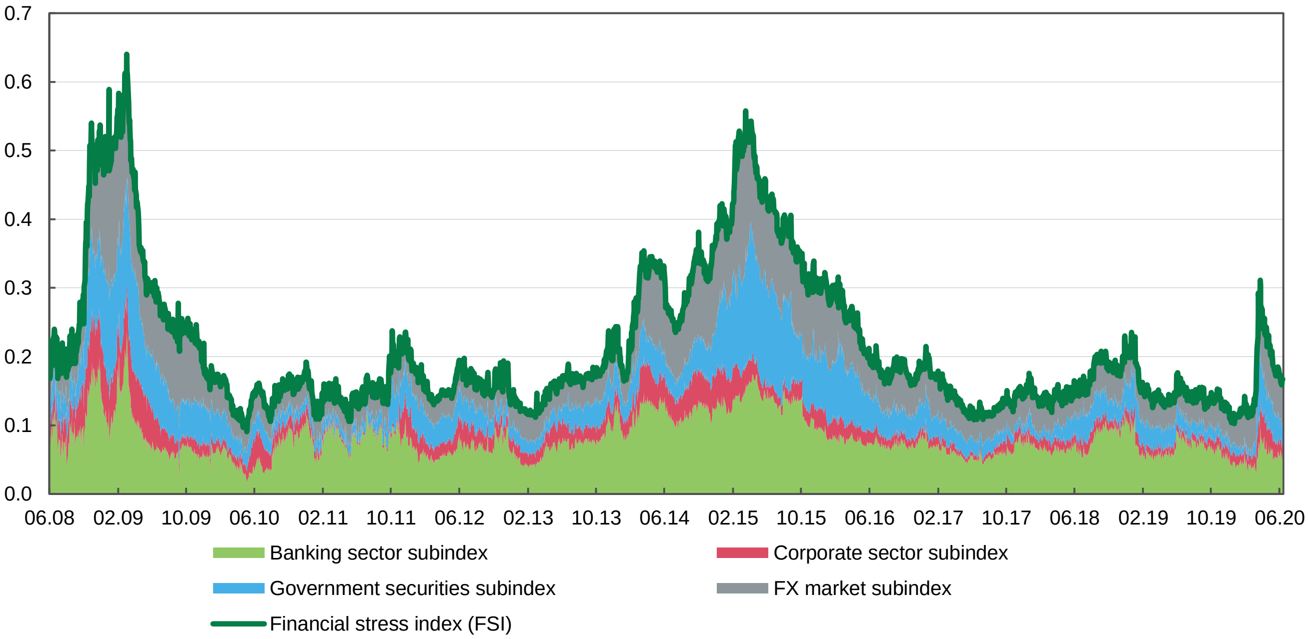
The FSI only reflects current conditions in the financial sector. It does not reflect any future risks in either the short or long run.

Figure FSI1. Financial Stress Index



Source: NBU.

Figure FSI2. Sub-index contributions to the FSI



Source: NBU.

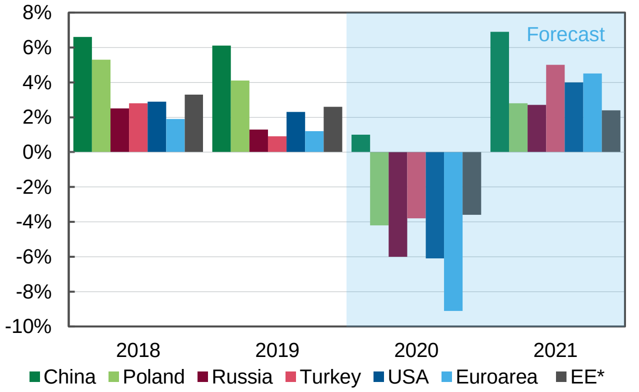
[1] The calculation method for Ukraine's Financial Stress Index is outlined in the December 2016 Financial Stability Report.

Part 1. External Conditions and Risks

1.1. External Developments

The outbreak of the coronavirus pandemic caused a global economic recession, depressed trade and commodity prices, and triggered capital flight from emerging markets. Thanks to large-scale stimulus measures, asset and commodity prices have partially recovered. The global economy is expected to rebound in H2, but a number of factors threaten this scenario. Geopolitical tensions eased for a short while, but in the meantime, economic uncertainty surged across the globe. Progress to end the war in the east of Ukraine halted.

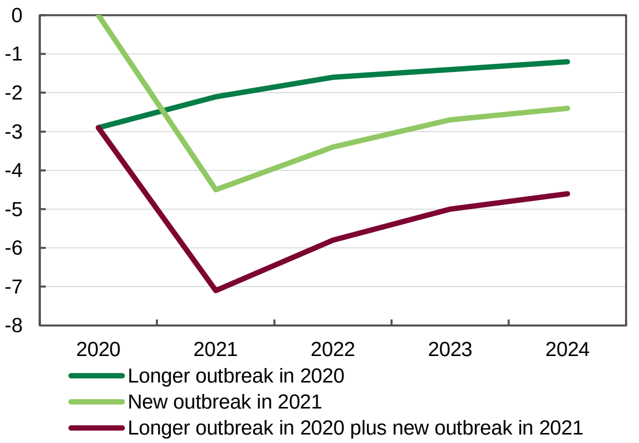
Figure 1.1.1. GDP of Ukraine's major trading partners



* Eastern Europe: Belarus, Ukraine, Moldova.

Source: World Bank, Global Economic Prospects, June 2020.

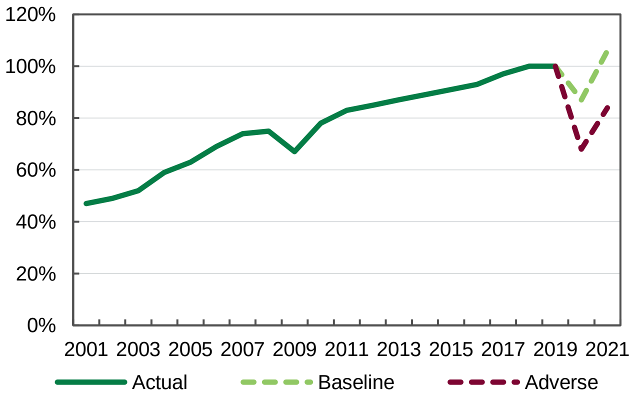
Figure 1.1.2. IMF-modeled adverse scenarios of coronavirus crisis for EMs*, GDP deviation from baseline scenario, pp



* Emerging markets.

Source: IMF World Economic Outlook, April 2020.

Figure 1.1.3. WTO scenarios for change in global goods trade*, yoy, 2019 = 100%



* Average of exports and imports of goods.

Source: WTO.

The global economy fell into a recession

This year, global GDP will suffer the worst contraction since World War II, with the World Bank projecting a 5.2% drop. The risks of further forecast downgrades are high. The World Bank expects the economies of virtually all of Ukraine's major trading partners to fall sharply. China, which was the first country to impose restrictions, will see its economic growth slow sharply. Tourism, air travel, and food services were hit hardest by the drop in economic activity, and their prospects are uncertain.

According to the baseline scenario, economic recovery will begin in H2. The majority of countries in Europe and across the globe have been gradually relaxing lockdown curbs. However, the novel coronavirus is yet to be properly studied, and the World Health Organization (WHO) forecasts that a vaccine and medicines to cure it will become available only next year. Therefore, new waves of the pandemic and reinstatement of tight restrictions are possible. That may lead to an even deeper and longer economic recession.

According to forecasts by the World Trade Organization (WTO), global trade will drop by 13%–32% in 2020 depending on underlying scenarios, or more than global GDP. The outlook for trade to recover in 2021 is uncertain.

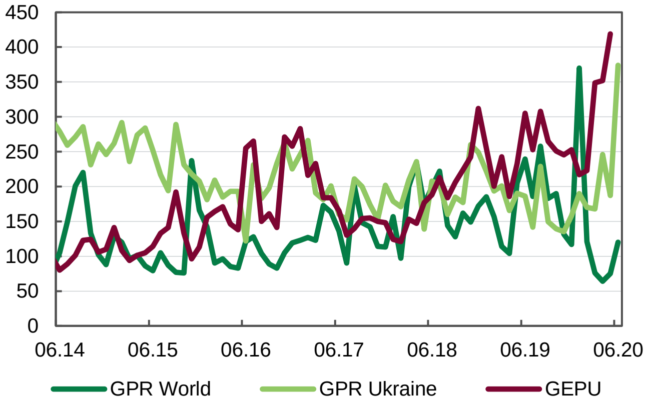
Foreign labor markets are down and may remain closed for long

Labor migrants returning to Ukraine and unemployment growth across leading economies may result in a sharp reduction in remittances sent to the country. Remittances totaled USD 12 billion in 2019, and the NBU expects a drop of USD 2 billion in 2020. According to McKinsey, 26% of total jobs are at risk in the EU and UK. Customer services and sales, the food services, and building occupations account for half of the projected job losses. Travel restrictions may last for a long time, and some jobs may disappear altogether. At the same time, unemployment in the EU countries with large numbers of Ukrainian labor migrants (particularly Poland, Spain, Italy, Hungary, and Germany) has increased somewhat but is still much lower than levels seen during the crises of 2008–2009 and 2013.

Global geopolitical risks declined while geoeconomic risks rose

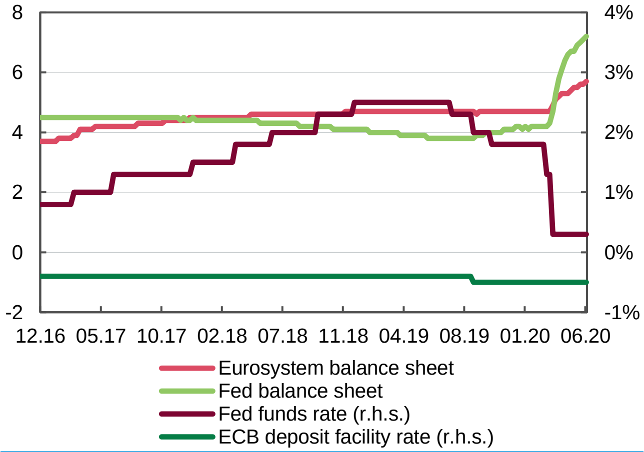
Due to the rapid spread of the pandemic, many conflicts became frozen, including the confrontation between the United States and Iran. However, new escalations are looming, particularly in the US-China and China-India

Figure 1.1.4. Geopolitical risk (GPR) index[2] and global economic policy uncertainty (GEPU) index[3]



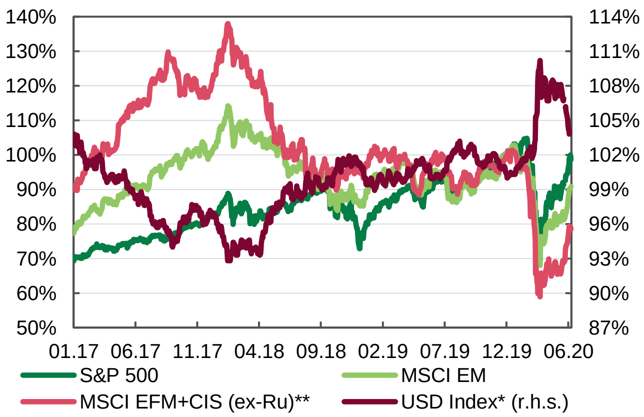
Source: Dario Caldara and Matteo Iacoviello; Davis, Steven J.

Figure 1.1.5. Eurosystem and Fed* balance sheets (trillions) and Fed and ECB key rates**



* In trillions of euros for Eurosystem and trillions of US dollars for Fed.
** Upper bound of range.
Source: US Fed, ECB.

Figure 1.1.6. Change in US and EM stock market indices and US dollar index, 1 January 2020 = 100%



* Weighted by trade in goods and services, US Fed.
** Frontier economies of Europe and CIS (ex-Russia).
Source: Federal Bank of St Louis, MS, US Fed.

geopolitical standoffs. Another uncertainty factor is this year's presidential elections and riots in the United States. At the same time, the pandemic gave rise to a great deal of uncertainty about economic policies of leading countries (the uncertainty index hit the highest level since 1997). The global economy may face structural changes and a temporary enhancing of states' role as a result of the crisis. Border closures and poor cooperation weakened economic blocs and revealed internal imbalances in the EU.

Governments and central banks across the globe have been fighting the crisis with large-scale stimuli

Many developed countries approved massive fiscal, monetary, and regulatory steps to support employment and business activity. In particular, the relief package to support the US economy amounted to USD 2.3 trillion. The Fed has cut its interest rate, expanded its asset purchase program, increased refinancing operations, and eased a number of regulatory requirements. The European Central Bank (ECB) proposed an asset purchase program and, together with other EU bodies, took a number of measures to provide regulatory support to financial institutions. The cost of fiscal measures and lending support programs is estimated at more than 15% of 2019 GDP in the Czech Republic, over 12% of GDP in Poland, and 5% of GDP in Romania (IMF database). Many countries in Ukraine's neighborhood cut their key interest rates and took steps to ease regulatory requirements (read more about regulatory anti-crisis measures in Box 1. Regulatory Response to the Crisis).

Governments' heavy borrowings to finance their anti-crisis measures will increase competition for capital on international markets. This will boost growth in public debt, affecting the sustainability of public finances in the long run.

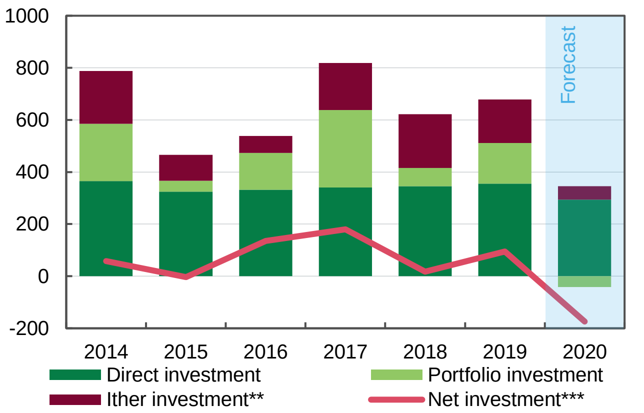
Emerging markets are actively competing for resources provided by international financial institutions (IFIs), particularly the IMF and the World Bank. The IMF introduced two new lending mechanisms to provide around USD 100 billion of financing. Over 100 countries have applied for IMF financing. It has already agreed emergency assistance for two thirds of these countries totaling a quarter of the mentioned amount. The Stand-by facility approved for Ukraine is one of the largest.

The anti-crisis measures and lockdown easing fueled a recovery in leading stock market indices, especially in the United States. This bolstered the stock markets of emerging markets. However, this growth still falls short of supporting the real sector.

After the pandemic was announced on 11 March and recession started, the currencies of emerging markets weakened sharply against the US dollar, which is typical of crisis periods. Most of the currencies are now recovering gradually.

[2] https://www2.bc.edu/matteo-iacoviello/gpr.htm
[3] http://www.policyuncertainty.com/global_monthly.html

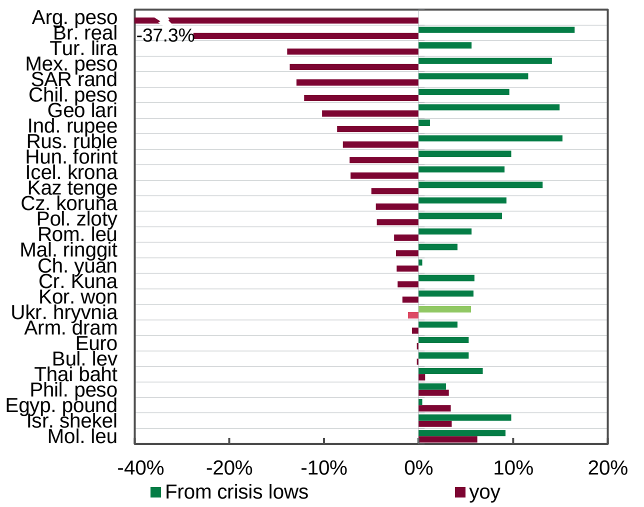
Figure 1.1.7. **Change in nonresident investment in emerging markets (except China), USD billions***



* ("-") Represents capital outflows.
** Mostly capital flowing between banks.
*** Difference between investments made by nonresidents and residents.

Source: IIF, Capital Flows Report Sudden Stop in Emerging Markets, 09.04.2020.

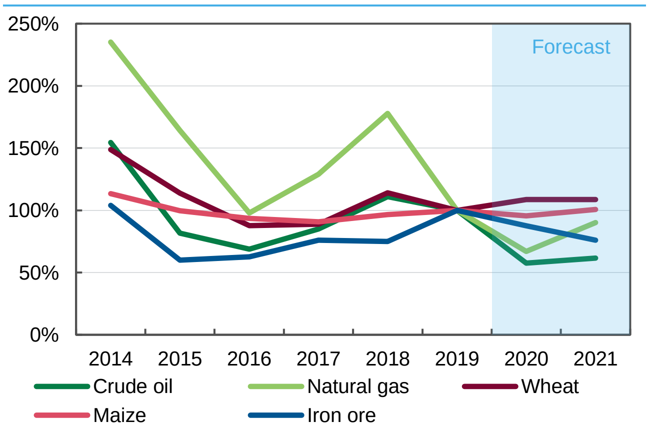
Figure 1.1.8. **Change in exchange rates of EM currencies, yoy and versus crisis minimums of spring 2020***



* Between mid-March and early May, depending on developments in particular country (early June for Argentina).

Source: Investing.com.

Figure 1.1.9. **Global commodity prices*, 2019 = 100%**



* Brent crude; Russian natural gas; Chinese iron ore concentrate; wheat and corn on US international markets.

Source: IMF World Economic Outlook, April 2020.

Foreign capital flees new market economies

Starting in March, international investors lost interest in new market economies. Inflows of foreign direct investment to Ukraine also ceased in March–April, while net inflows of portfolio investment totaled just USD 0.85 billion. The capital flight was driven by investors' appetite for safe instruments and by falling commodity prices. The Institute of International Finance (IIF) forecasts inflows of nonresident investment to emerging economies excluding China will slide to USD 304 billion in 2020, less than half of the 2019 level and the lowest since 2004. At the same time, capital relocations from China to other countries, which some investors have started to discuss, may provide Ukraine with new opportunities to attract capital.

Commodity prices have partially recovered since collapsing

The decline in energy prices was the most pronounced due to a slump in demand and stocked inventories. Crude oil prices have been recovering since late April, particularly on the back of an OPEC+ deal to cut production. Steel prices dropped due to weaker demand from a number of steel-consuming sectors. The current recovery in steel prices is being supported by renewed Chinese demand and production cuts in some countries. Iron ore prices partially recovered owing to reduced supply from Brazil and Australia. Expectations of bumper harvests and a drop in bioethanol production put pressure on grain prices. Wheat prices, however, were supported by low inventories and high demand. Overall, global prices for Ukrainian exports may fall deeper this year compared to 2019 due to a decrease in external demand, but energy prices may be headed for an even bigger plunge.

Ukraine's position in international courts has improved; there has been no progress on Donbas de-occupation

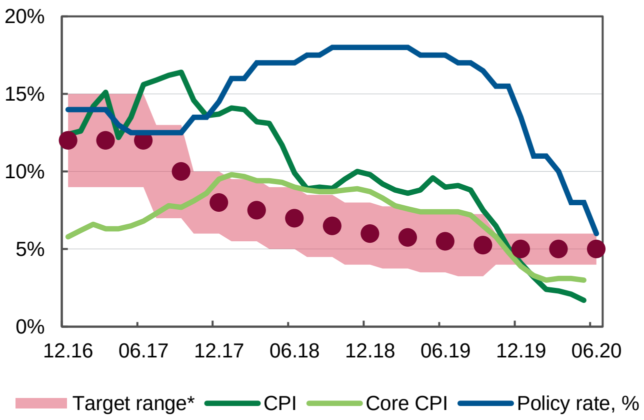
In early 2020, Ukraine scored several achievements in its litigation against Russia: an appeal against a ruling obliging Russia to pay Ukrainian companies that had incurred losses due to the annexation of Crimea was overturned in Switzerland; court hearings in the MH17 case started in the Hague; and the Hague tribunal recognized its jurisdiction over Ukraine's lawsuit against Russia regarding the latter's violation of the United Nations Convention on the Law of the Sea (except the aspect of sovereignty over Crimea). The pandemic put the active phase of court hearings on hold. In Germany, an application by the operator of the Nord Stream 2 pipeline to be exempted from EU regulations was rejected, which became a restraining factor for direct supplies of Russian gas to Europe bypassing Ukraine. Shooting across the line of contact in Donbas intensifies from time to time. The Minsk negotiations were also suspended due to the quarantine.

Part 2. Domestic Conditions and Risks

2.1. Macroeconomic and Fiscal Risks

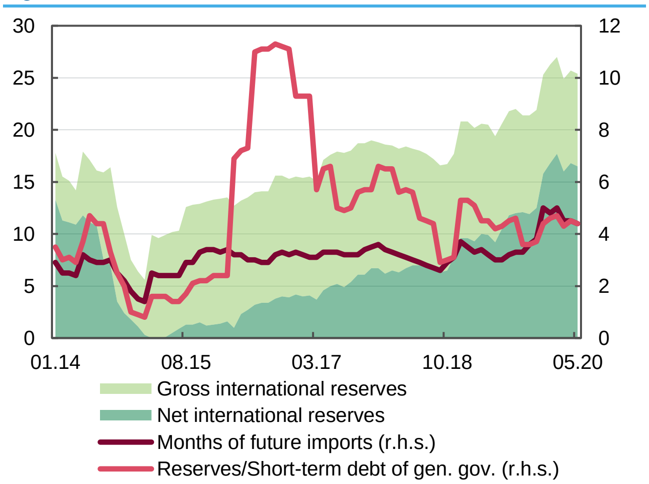
Ukraine entered the current economic crisis with a balanced macroeconomic environment. Relatively low incidence rates of COVID-19 in most regions have allowed for gradual relaxation of quarantine restrictions. Further abatement of inflationary pressures enabled the NBU to accelerate monetary easing and lay the groundwork for a significant reduction in the cost of credits. However, the economic contraction in 2020 will be substantial, and recovery may take longer than previously expected. A new cooperation program with the IMF significantly lessened debt repayment risks, opened access to funding from other donors, and improved the prospects for a successful Eurobond placement.

Figure 2.1.1. Consumer price indexes and NBU key policy rate, % yoy



* Red dots represent inflation targets.
Source: SSSU, NBU.

Figure 2.1.2. Gross and net international reserves, USD billions



* The ratio shows how many times the gross international reserves of Ukraine exceed the short-term external debt of the general government and the NBU by residual maturity.
Source: NBU.

Macroeconomic stability made room for fiscal and monetary stimuli

Ukraine confronted the ongoing crisis in a good macroeconomic position. The economy had enjoyed steady growth in the previous four years. In 2019, the ratio of public and publicly guaranteed debt to GDP fell sharply (to 50% from 81% in 2016), inflation decelerated, and the current account deficit was near a decade low. On the eve of the crisis, as of 1 March 2020, international reserves totaled USD 27 billion, which was equivalent to five months of future imports. A stable macroeconomic environment, combined with a sizeable drop in energy import prices, enabled Ukraine to go through the acute phase of the crisis without experiencing any considerable shocks in the foreign exchange market.

Subdued inflation risks contribute to lower bank rates

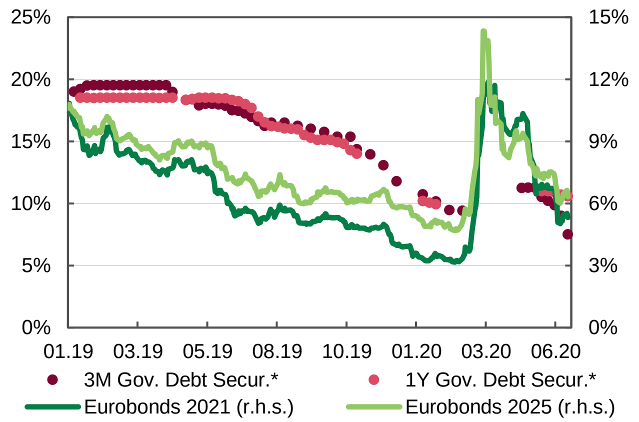
Inflation slowed sharply this year, to 1.7% yoy in May, remaining below the NBU's target range. This allowed the central bank to substantially ease monetary policy by cutting the key policy rate to 6%, or down 7.5 pp since the start of the year. The current key policy rate is the lowest on record. This marks a unique situation for Ukraine. During all previous crises, inflation surged, forcing the NBU to sharply tighten monetary policy. This time, however, the NBU was able to act in unison with other central banks, using monetary methods to stimulate the economy. In view of low inflation, anchored inflation expectations, stable funding, and a lower key policy rate, banks started to cut their loan and deposit interest rates. Interest rates on corporate loans are generally responsive to changes in the key policy rate (see Box 5. Interest Rates on Corporate Loans are Falling Gradually). Thus, in the absence of major shocks, borrowing costs for corporates will drop notably by the end of the year.

The lower key policy rate will also contribute to a further decline in the cost of domestic public debt. Yields on 3-month domestic government debt securities in hryvnia have compressed by 3.2 pp since the start of the year, to 7.5% as of mid-June. Yields have also shrunk, albeit more moderately, across longer-term government paper.

GDP will fall sharply, and recovery will take long

Ukraine's GDP contraction both in Q2 and by the end of the year may prove more severe than the NBU previously expected, while economic recovery may take longer. In particular, the downturn in economic activity in April pointed to a deeper slump. All key sectors except agriculture

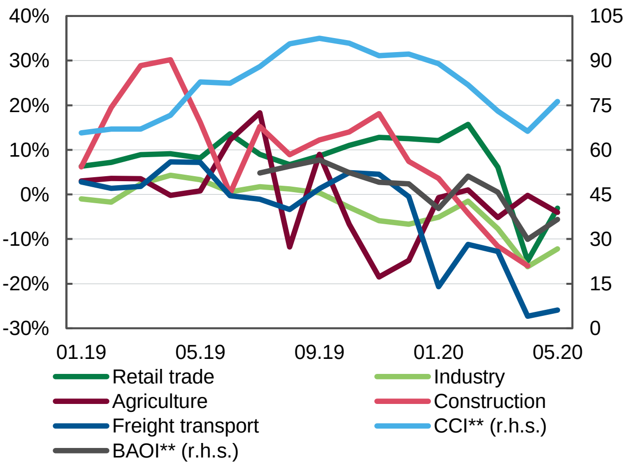
Figure 2.1.3. Ukrainian government debt securities and sovereign Eurobonds, yield-to-maturity



* Yield at primary placement of domestic government debt securities in hryvnia (data as of 16 June 2020).

Source: NBU, Bloomberg.

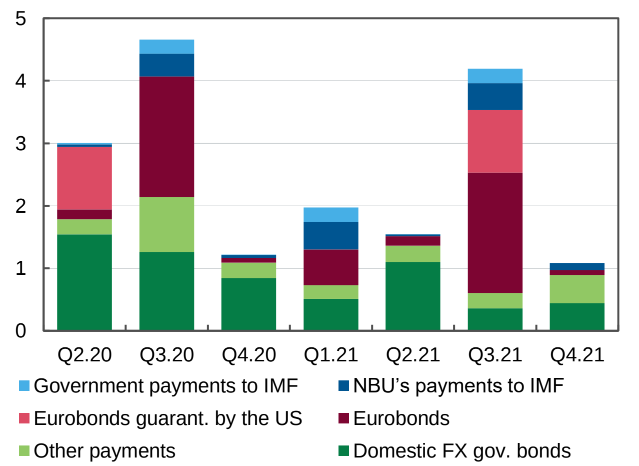
Figure 2.1.4. Economic dynamics* and expectations



* Versus the corresponding month of the previous year, %; ** CCI is the Consumer Confidence Index (calculated by Info Sapiens); BAOI is the Business Activity Outlook Index (calculated by the NBU and reflects the assessment by businesses of the current state of the economy; values below 50 signal that pessimistic expectations prevail).

Source: SSSU, NBU, Info Sapiens.

Figure 2.1.5. Foreign currency repayments on public and publicly guaranteed debt, USD billions eq.*



* Including interest.

Source: NBU estimates.

experienced heavy declines. At the same time, according to a recent Business Outlook Survey held among Ukrainian companies, businesses became less pessimistic in May due to the gradual lifting of quarantine restrictions. Construction companies were the most optimistic about resuming production, whereas service sector companies, hit hardest by the lockdown, had the gloomiest expectations. All respondents were mainly concerned about falling output and sales of products and services, fewer new orders, and staff cuts.

The crisis in the real sector has already affected manufacturing volumes, capital investment, and employment. This worsened the financial standing of a large segment of businesses and households, leading to early problems with debt service and weakening demand for services offered by financial institutions. Overall, the NBU estimates that banks may lose more than 10% of their performing loan portfolios due to the current crisis.

Access to external funding restored

It is vital for Ukraine to have access to external funding, as the country needs to refinance its external debt and finance the budget deficit. The schedule of payments on foreign currency liabilities remains tight. In the coming 18 months, the government and the NBU have to repay around USD 15 billion of public and publicly guaranteed debt. Risks to refinancing the public debt eased substantially after the IMF Executive Board approved in June a new 18-month Stand-by program equivalent to USD 5 billion. In addition to IMF financing, Ukraine stands to receive close to USD 4 billion from other international donors in 2020 and 2021 (EU, World Bank, governments of partner countries). The financing from other donors was either directly or indirectly linked to a resumption of cooperation with the IMF. In such a way, Ukraine will be able to cover all its liabilities without depleting its international reserves.

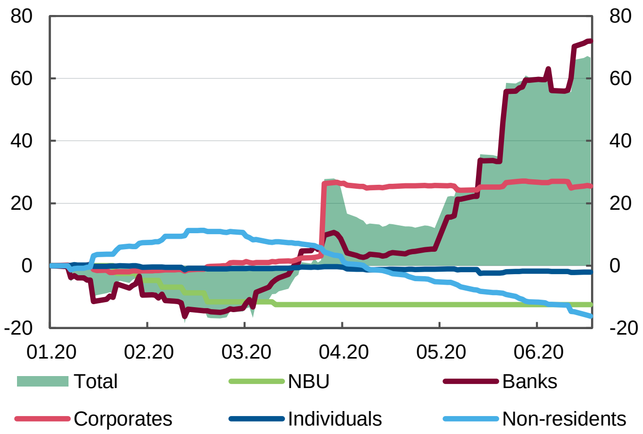
Further tranches of the Stand-by program are conditioned on the implementation of important reforms in the energy sector, fight against corruption, and reforms necessary to strengthen the resilience of the financial sector and public finances.

The prospects for a sovereign Eurobond placement became bleak after foreign capital markets virtually shut down in March but improved after cooperation with the IMF resumed. New Eurobond issuance would help to reduce the ambitious domestic borrowing target, and as such is advisable.

Crisis will drive public debt growth and complicate budget execution

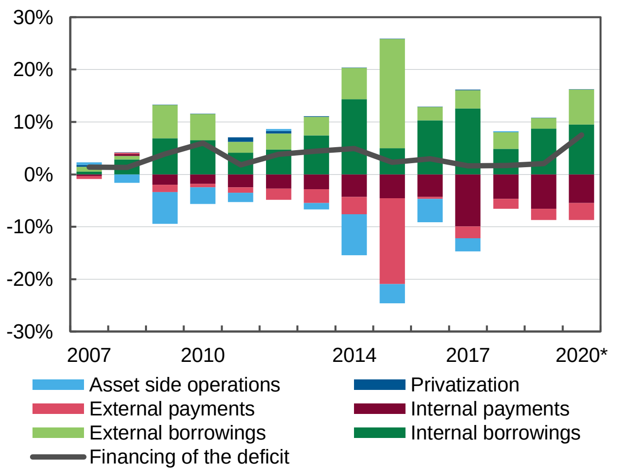
Public finances are especially at risk during the current crisis. Almost all governments around the globe have increased spending and budget deficits in order to support their economies and households in difficult times. The Ukrainian government set a deficit target of 7.5% of GDP in the updated state budget, ending a five-year streak of deficits that did not exceed 3% of GDP. However, the actual deficit in 2020 may be even higher due to the risk of a revenue shortfall and the

Figure 2.1.6. Total domestic government debt securities in circulation: change since start of 2020, UAH billions*



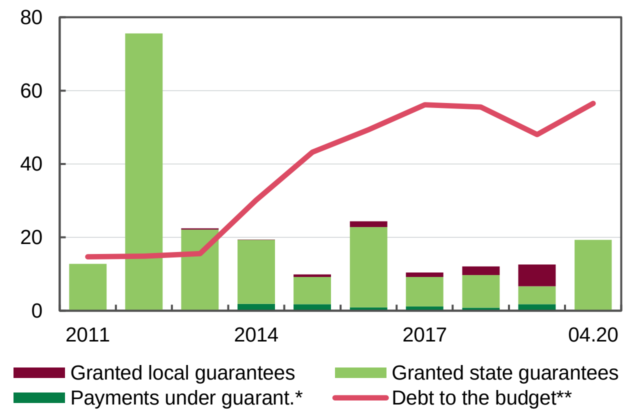
* At amortized nominal value. As of 17 June 2020.
Source: NBU.

Figure 2.1.7. Financing of state budget deficit, by type of debt obligation, % of GDP



* Law of Ukraine *On the State Budget of Ukraine for 2020* (as amended on 13 April 2020).
Source: STSU.

Figure 2.1.8. Amounts of issued state guarantees, amounts paid and outstanding, UAH billions eq.



* Fulfillment by the state its obligations for borrowers who received loans under state guarantees. ** Overdue debt to the state budget on loans raised by the state and under state guarantees (including debts of liquidated business entities with revoked state registration). Issued local guarantees and debts to the budget in 2020 – data as of Q1.
Source: STSU.

need to raise social spending, particularly to support the Pension Fund. Domestic borrowings – primarily from banks – have to be the main source of deficit financing. Banks have plenty of surplus liquidity and have been actively increasing their domestic government bond portfolios since late April. That said, the lion's share of bond purchases came from state-owned banks.

The state's active domestic borrowings also carry negative implications, as those often lead to a crowding-out effect for investments and reduce lending to the economy. At the same time, the excessive reliance on state-owned banks may cause major changes in their balance sheet structure and worsen their investment attractiveness (see Box 6. Crisis May Adversely Affect Business Models of State-Owned Banks).

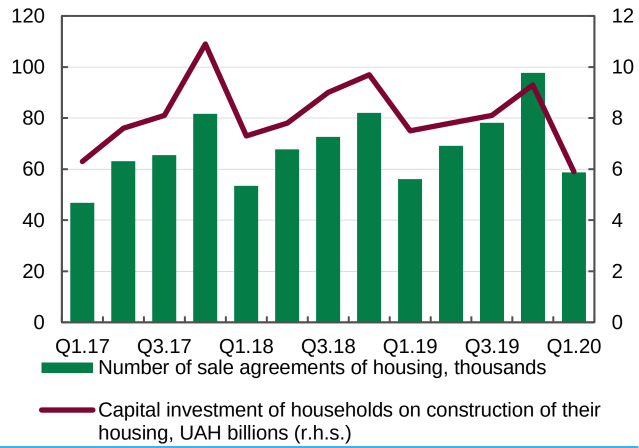
Governments around the globe are currently making active use of state guarantee instruments. These are mainly guarantees that cover credit risks under bank loans. The 2020 budget law allows the Ukrainian government to provide unlimited state guarantees. However, this instrument should be used advisedly. As Ukraine's prior experience demonstrates, corporate debt often turns into public liabilities when a crisis strikes. As of the end of Q1 2020, liquidated legal entities accounted for 20% of total debt to the budget on state-guaranteed loans. In order to mitigate such risks, the government should focus on small and potentially effective programs, primarily programs to support SMEs.

The budget deficit is expected to return to moderate values as early as next year. In June, the Parliament did not endorse the government's Program of Activities of the Cabinet of Ministers of Ukraine, which contained a significant number of potential budget commitments: guarantees, cheap loans, subsidies to some sectors, and tax benefits. However, these initiatives remain on the government's agenda. The economic benefits of such measures must be thoroughly evaluated and outweigh the potential budget losses.

2.2. Real Estate Market and Mortgage Lending

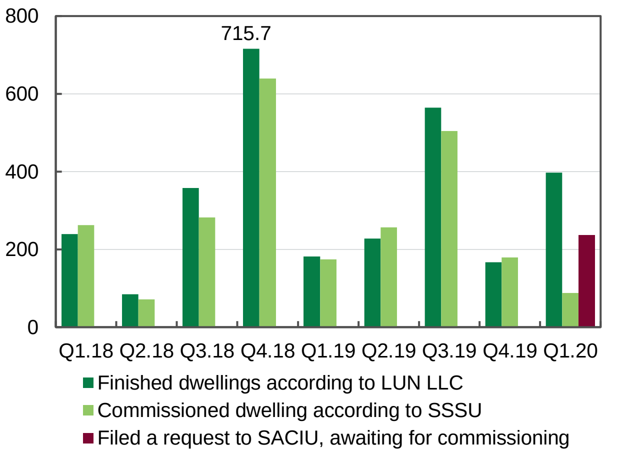
The pandemic has had a noticeable impact on the housing market, albeit short-lived and limited. Unlike in previous crisis episodes in Ukraine, this time no large-scale market transformation is expected. The market will go back to equilibrium as quarantine restrictions are gradually relaxed. Despite the crisis, housing demand will remain high but is unlikely to return to growth in the near future. The share of mortgage-financed agreements will still remain insignificant, but favorable conditions for a revival of mortgage lending are starting to emerge. Commercial real estate has been hit harder: vacancy rates are rising, rents are falling, and new construction is being postponed. This shock is expected to last longer, but the segment will gradually recover as business activity resumes.

Figure 2.2.1. Housing market activity



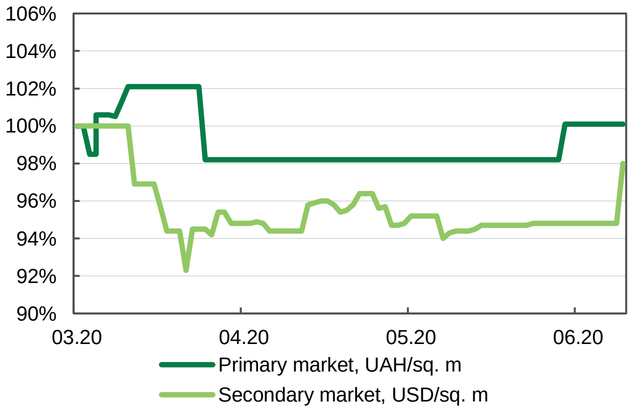
Source: Ministry of Justice, SSSU.

Figure 2.2.2. Supply of new housing in Kyiv, thousands of sq. m



Source: SSSU, LUN LLC, SACIU.

Figure 2.2.3. Housing prices in Kyiv, 17 March 2020 = 100%



Source: LUN LLC.

Buying activity has been recovering after brief slump

In Ukraine, demand is a key factor that determines housing market conditions. Buyers have been quick to respond to growing uncertainty around the pandemic, with purchasing activity falling by 40% during the quarantine, according to developers. This created a certain amount of pent-up demand, which is being gradually satisfied as a number of quarantine measures have been lifted. The market showed visible signs of recovery already in late May. Meanwhile, forced self-isolation has accelerated the transformation of demand. Investors are increasingly preferring high-comfort facilities designed according to the live-work-play concept, while their appetite for economy housing has fallen sharply.

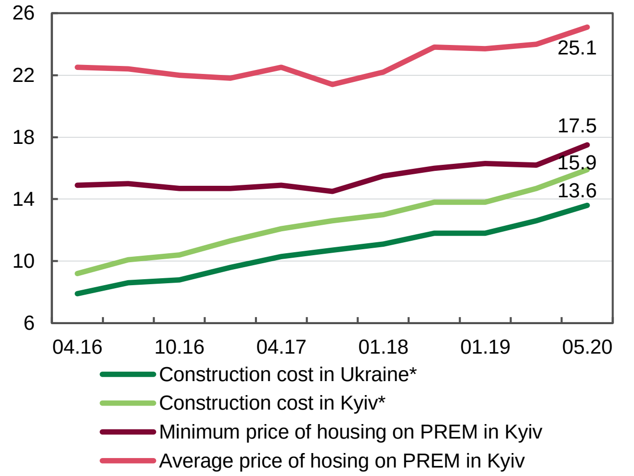
Overall, housing demand will hardly rise noticeably in the next two years due to falling household income and deteriorating consumer sentiment. However, demand is not expected to decline either, as housing became more affordable in recent years. In addition, thanks to lower inflation and mortgage rates, it will be easier to buy housing on credit.

Coronacrisis became stress test for developers

As the quarantine restrictions did not apply to construction, ongoing building projects were only affected by a sharp and short-term plunge in demand. Approximately 20% of construction sites, mostly in the economy segment, were temporarily frozen, primarily due to developers lacking liquidity. If they fail to raise additional financing, a number of construction projects may slow. However, delivery timeframes will not be fundamentally affected. Delays of more than six months or even a year beyond stated completion dates have long become the norm for the market.

Construction has generally been vibrant throughout the quarantine. In Q1 2020, work was completed on twice as many construction sites in Kyiv compared to a year ago, according to LUN LLC estimates. Yet the commissioning of new housing has slowed noticeably. In Q1 2020, according to the State Statistics Service of Ukraine, the volume of housing brought to the market fell by 22% yoy nationwide and almost halved yoy in Kyiv. The slump was due primarily to the reform of the State Architectural and Construction Inspection

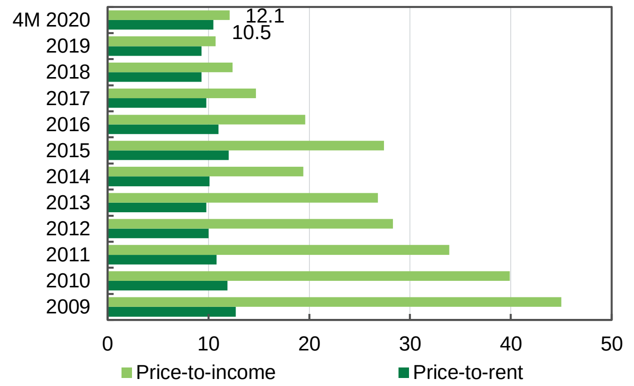
Figure 2.2.4. **Housing prices and construction costs, UAH '000/sq. m**



* Preliminary estimates by the Ministry for Communities and Territories Development, based on 2020 data.
PREM – primary real estate market.

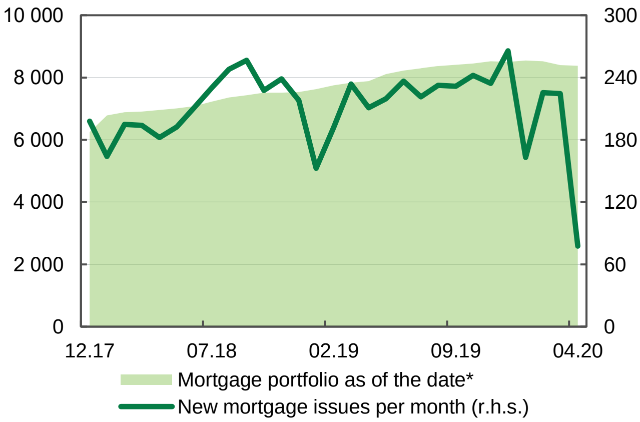
Source: Ministry for Communities and Territories Development, LUN LLC.

Figure 2.2.5. **Price-to-income and price-to-rent ratios in Kyiv in 2009 – 2020**



Source: SSSU, real estate agencies, NBU estimates.

Figure 2.2.6. **Net hryvnia mortgages to individuals, UAH millions**



* Without accrued interest.

Source: NBU.

of Ukraine (SACIU)[4], which slowed the issuance of certificates of occupancy for finished buildings.

In Q1 2020, only half the number of housing construction permits were issued compared to the same period last year. However, this decline should also be short-lived. Once the quarantine is lifted and reform of the SACIU is completed, construction dynamics will get closer to the usual pattern. In the long run, construction volumes should return to their historical high levels.

Housing prices have changed only moderately since crisis started

During the quarantine, real estate prices on the secondary market fell by only 2.0%. Meanwhile, hryvnia prices for new housing returned to pre-quarantine levels following a small and brief correction. In annual terms, however, prices for real estate increased. Hryvnia prices for housing on the primary market were up by 9.1% yoy in late May.

Analysts project that prices will continue to rise, spurred by a weaker hryvnia and low developer margins. Developers also are optimistic. A survey of developers conducted in May showed that almost half of them[5] – twice as many as in February – expected an increase in housing prices.

Growth in housing affordability stopped for first time in decade

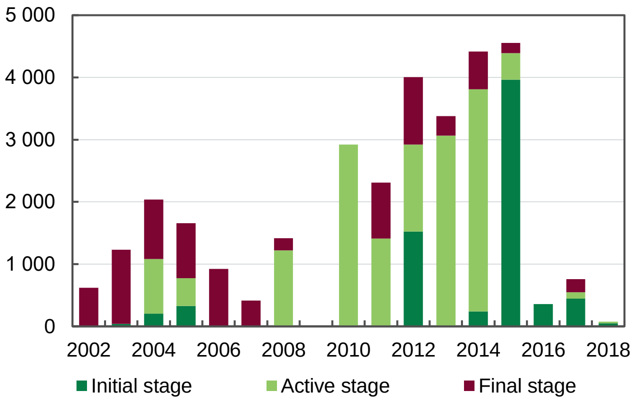
While real estate prices grew, rents fell. Coupled with a sharp slowdown in household income, this cut short a long period of growth in housing affordability. In the first four months of this year, the availability of housing based on the price-to-income and price-to-rent ratios deteriorated somewhat.

Mortgage lending could help make housing more affordable. Less than a tenth of all housing purchase deals in Ukraine are financed by bank loans. In the first four months of 2020, the mortgage portfolio shrank by 1.5%, primarily due to an unusually low level of lending in April. However, the role of mortgages in the housing market is set to grow in the coming years. First, interest rates trending lower will make mortgages more attractive. Second, mortgage-based lending will become safer as creditors enjoy greater protection. Contributing to the latter, in particular, was a recent government decision to change residence registration rules for mortgaged apartments. The amended rules require that residents obtain the lender's consent prior to registration. Bank financing will gradually fuel housing demand, push prices higher, and make it easier for people to become homeowners.

In order to facilitate active market development, it is necessary to resolve another of its core problems, the poor regulation of the primary real estate market. Despite developers holding a large portion of household savings at any given time, effective rules of the game for them are virtually nonexistent. The market remains opaque and

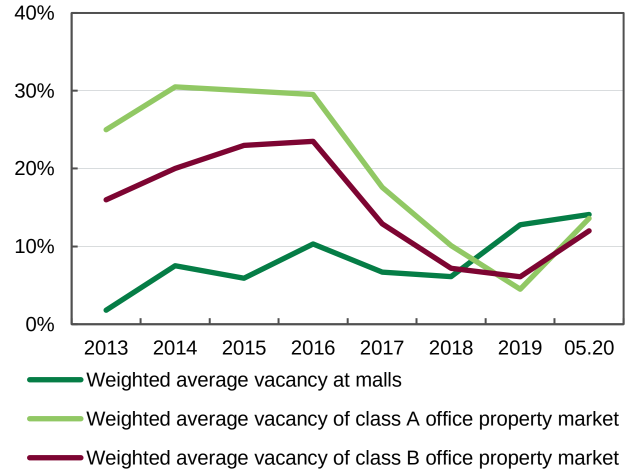
[4] The SACIU is a construction authority charged with implementing state policies in licensing the conduct of preliminary development and construction and issuance of certificates of occupancy for completed facilities.
[5] According to data from the NBU's monthly Business Outlook Survey.

Figure 2.2.7. **Number of apartments in long-delayed construction projects, by year of construction start and stage at which construction halted**



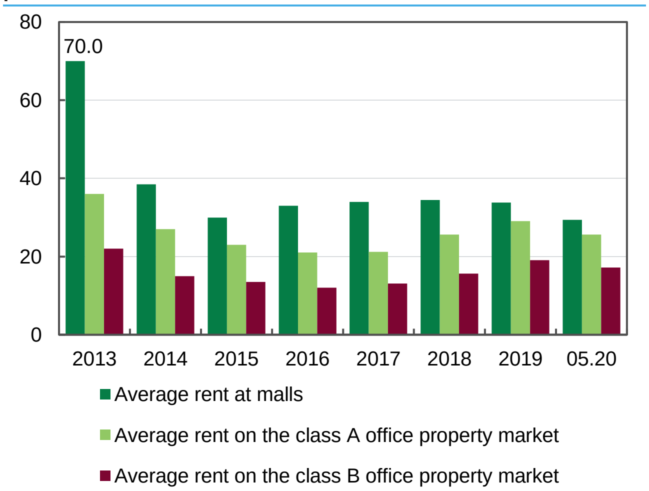
Source: DC Evolution, NBU estimates.

Figure 2.2.8. **Commercial real estate vacancy rates in Kyiv***



* All dates are as of the period end.
Source: UTG.

Figure 2.2.9. **Commercial real estate rents in Kyiv*, USD per sq. m per month**



* All dates are as of the period end.
Source: UTG.

disorderly. This problem has grown increasingly more severe over years as the number of deceived investors and frozen construction sites has risen. The market continues to be risky for both investors and lenders.

Commercial real estate has taken hardest hit

The two months of strict lockdown cost Ukrainian shopping malls approximately UAH 7 billion, according to data from the Ukrainian Council of Shopping Centers. However, the situation improved dramatically after quarantine restrictions were lifted. Retailers are not leaving shopping malls *en masse*, but a certain increase in vacancies is inevitable due to retail space optimization. Many malls made concessions to their tenants, providing rental holidays during the lockdown, with tenants only covering operating costs or being offered significant discounts. Conditions remained favorable as malls reopened. Rents often depend, among other things, on turnover, which is still far from pre-crisis levels. In early June, rents were already 13.0% lower than last year, according to UTG data.

Developers remained active in January through June this year, increasing the market's total supply by 5.5%. Currently, the total area of retail properties in the active construction phase is equivalent to almost half of the market's existing retail space. However, the delivery of newly built retail properties will be postponed, as will the launch of new construction projects.

In the office market, demand also plunged. No new agreements are being concluded, while the outstanding ones are being renewed for smaller space. As of the beginning of June, office vacancy rates were 2.4 times higher compared to last year's level as some tenants partially shifted to remote work and cut their office space. In contrast to the years leading up to the crisis, when demand was much more buoyant than supply, market conditions are now dictated by tenants. Landlords are stimulating demand by offering discounts, taking up to 20% off pre-crisis rates for new deals. The delivery of new facilities has also fallen, down 85% yoy in Q1 2020. Most of the office space that was initially scheduled for opening in 2020 – 2021 (about a quarter of the existing stock) will be launched at a later time.

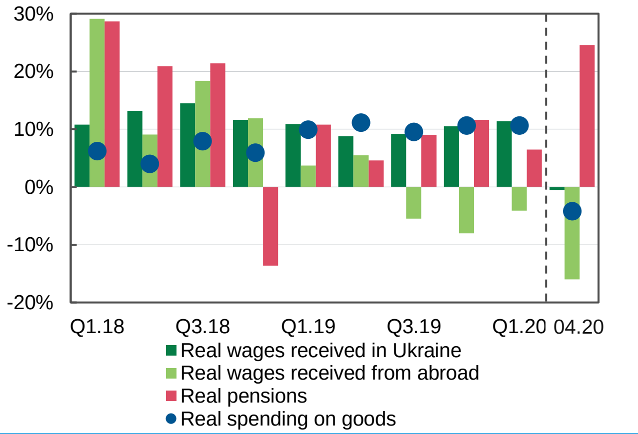
Commercial real estate investments paused

No secondary investments into commercial real estate were registered in Ukraine in Q1 2020. The market appears to be biding its time. Market players expect investment activity to pick up soon due to real estate prices edging lower. The commercial real estate market was hit hardest by the pandemic. Owing to this market being procyclical and sluggish, recovery will take time.

2.3. Households and Related Risks

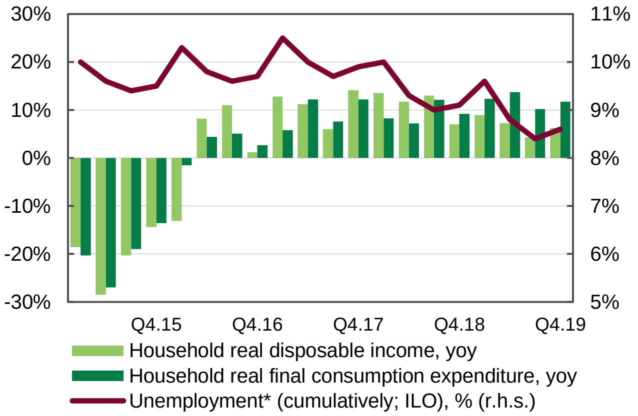
In 2020, household real income will end its three-year growth streak due to the crisis. The key underlying reasons are the deceleration in business activity, lower wages, and growth in unemployment. Consumer sentiment deteriorated sharply in April alongside a decline in incomes. More cautious consumer behavior has already slowed lending to households, but their debt burden is likely to increase due to income reduction. Difficulties with debt servicing are to be expected as a result. Concurrently, households' propensity to save will increase in the near future on the back of macroeconomic instability.

Figure 2.3.1. Changes in real wages, pensions and spending on goods, yoy



Source: SSSU, NBU estimates.

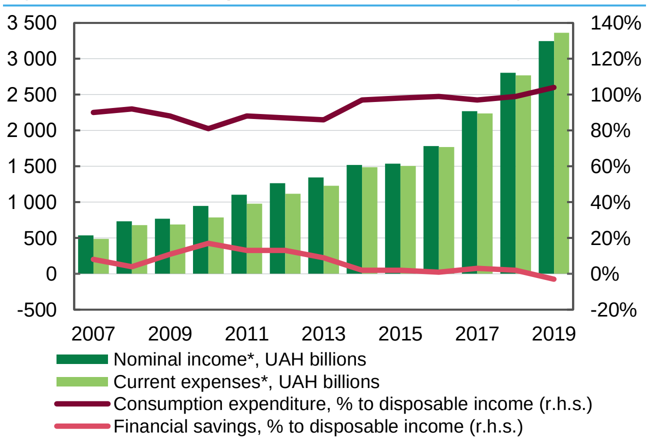
Figure 2.3.2. Changes in real disposable income, consumer spending and unemployment rate



* Percentage of economically active working age population.

Source: SSSU, NBU estimates.

Figure 2.3.3. Current expenditures and financial savings



* Excluding goods and services received free of charge, mostly paid for with budgetary funds.

Source: SSSU, NBU estimates.

Real disposable household income stopped growing in spring

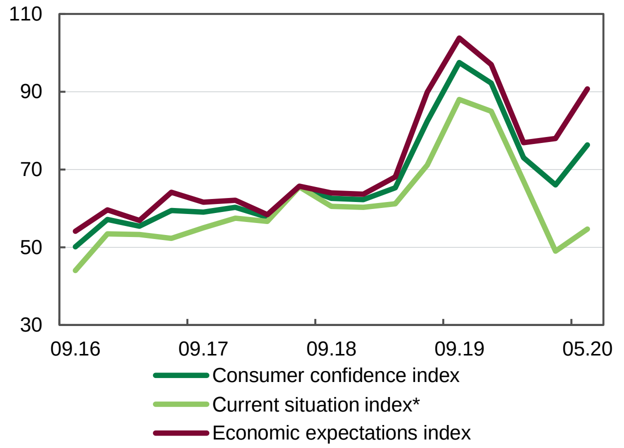
Growth in real disposable income was already slowing in 2019 as its main component, wages, decelerated. The imposition of quarantine restrictions had an immediate impact on wages. According to an Info Sapiens survey, less than half of the respondents employed before the quarantine received their March pay in full. In April, for the first time since March 2016, real wages dropped, down 0.5% yoy, reflecting weaker business activity and lower demand for labor. Apart from that, about a quarter of those surveyed lost their jobs during the month. A third of Ukrainians completely lost their income or jobs and more than a third saw their family income decrease. According to the State Employment Service, at the end of May the number of registered unemployed increased almost 1.5 times compared to March. The NBU estimates that there will be no wage growth in real terms this year.

Social benefits rose sharply in the spring. In particular, pensioners received top-ups due to the coronavirus and annual indexation of pensions. A reduction in budget revenues and Pension Fund resources will limit opportunities for providing social benefits to households. In addition, the government initiated large-scale projects to support small and medium-sized businesses to help them retain jobs. The government also announced that it would expand its programs to compensate individual entrepreneurs for loan-related interest expenses. However, this had no significant positive impact on household income.

Falling labor migrants' earnings had an adverse impact on household income. In March – April, these earnings shrank by 9% yoy in USD terms, albeit remaining slightly up in the first four months of the year. The drop was caused by less active labor migration following restrictions on border crossings imposed from mid-March. Also, migrants were losing jobs and wages, partially or completely, in their host countries. Labor migration is expected to recover gradually once the quarantine is lifted and borders reopen. Among other things, labor migration will be encouraged by rising unemployment in Ukraine as well as growing demand for labor in the EU countries.

That said, the upward trend in household income observed over the past three years will break in 2020. Fears about a second wave of the coronavirus pandemic will hold back jobs recovery. Wages are unlikely to return to growth once quarantine restrictions are lifted. Even before the crisis, rapidly growing labor costs were a major factor depressing corporate profitability. The income of individual entrepreneurs, which currently accounts for almost a quarter of disposable household income, will also decline – this

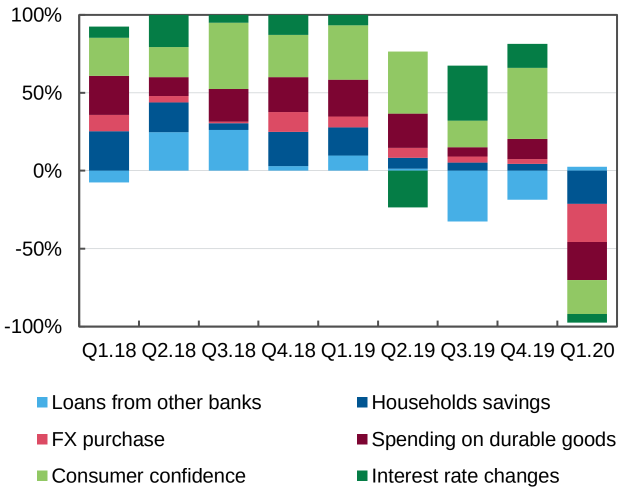
Figure 2.3.4. Ukrainian consumer confidence and wealth index



* Based on indices of current personal financial standing and propensity to consume.

Source: Info Sapiens, monthly surveys of households (age 16+).

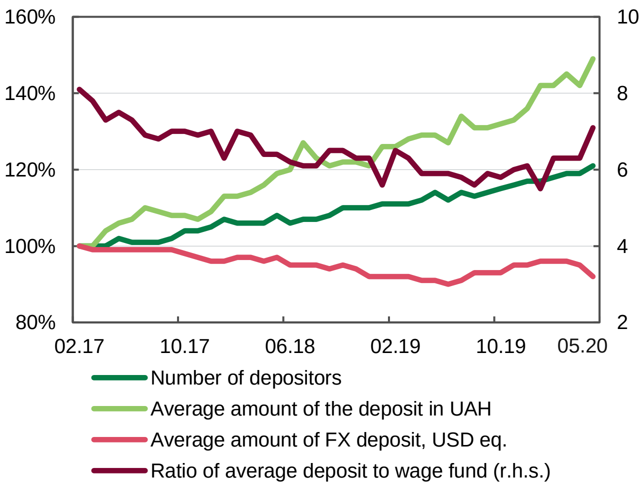
Figure 2.3.5. Drivers of change in demand for consumer loans*



* Based on normalized balances of responses in Bank Lending Survey.

Source: NBU estimates.

Figure 2.3.6. Household deposit dynamics, 1 February 2017 = 100%



* Deposits held by one person in different banks were calculated separately.

Source: SSSU, DGF, NBU estimates.

segment has been among the hardest hit by the quarantine.

Household consumer sentiment deteriorated sharply

Prolonged income growth and improved inflation and economic expectations gave a boost to consumption in the pre-crisis period. In particular, at the end of 2019, households' consumer spending exceeded their disposable income for the first time since 2016. This trend continued into Q1 2020. However, consumption slumped in April. On the one hand, households cut their expenditures due to income reduction and limited savings. On the other, supply in the trade and service sectors fell. According to Info Sapiens data, respondents mostly reported a deterioration in their financial standing in April. This indicator dropped to the level of 2016, the time when the Ukrainian economy had just started to recover from its prior crisis. In May, households' assessment of their financial standing improved due to the easing of quarantine restrictions but remained below the level at the beginning of this year.

The declining solvency and deteriorating consumer sentiment have already affected demand for loans. The bank survey showed that demand for loans is being restrained by a sharp decline in the consumption of services and many categories of goods, especially durable goods. However, the decline in consumer lending seen this past spring is unlikely to last long. Its revival will be driven by gradual economic recovery and substantial supply of loans from banks and other financial institutions. That said, lending will be somewhat below its pre-crisis level.

Propensity of middle- and high-income households to save will rise

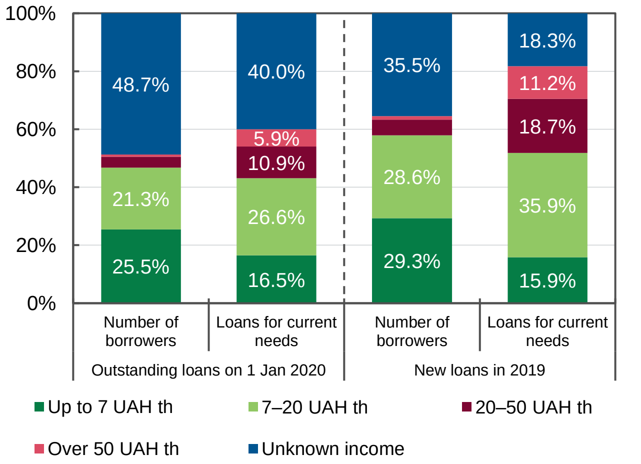
The shock of a sharp income loss will encourage households to build safety cushions. According to Info Sapiens data, the share of households that either have time deposits or plan to deposit their savings remains small. Nevertheless, bank deposits have been growing at a steady pace, their growth rate recently exceeding that of nominal wages. Looking ahead, households' ability to save will be curbed by income reduction. Surveys show that the percentage of people able to save without limiting their consumption fell in Q1 2020 by a third from its historical high, to 15%. Thus, only middle- and high-income households will be able to increase savings.

The share of time deposits shrank due to uncertainty caused by the quarantine restrictions and unfolding crisis. As a result, balances in current accounts, including payroll and social benefit accounts, will grow at a faster rate in the near future. The share of time deposits will start to rise only in 2021 – 2022, along with improving macroeconomic expectations. Steady inflows of household funds to bank accounts, together with slower lending, will firmly establish households as net creditors to banks.

Part of bank customers have high debt burden

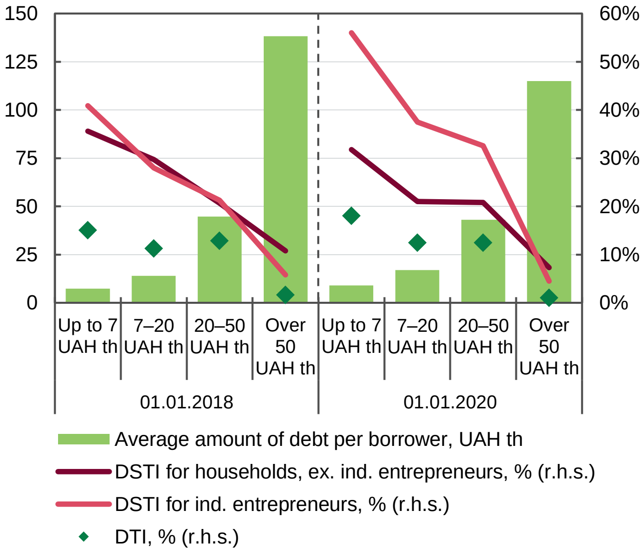
Overall, the growth in household income seen in recent years somewhat decreased the debt-service-to-income ratio (DSTI)

Figure 2.3.7. Portfolio of loans on current needs, breakdown by income group



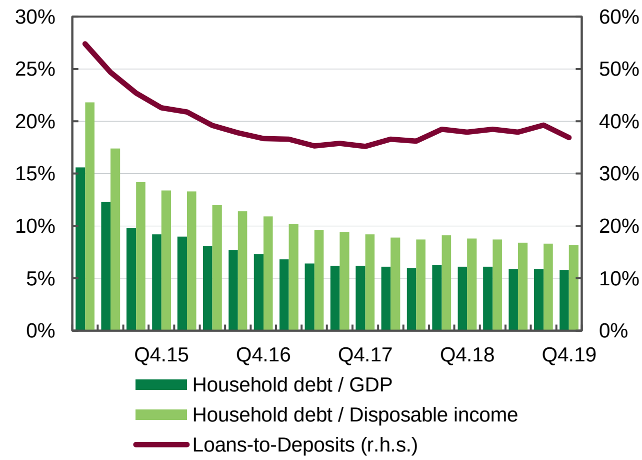
Source: bank data, NBU estimates.

Figure 2.3.8. Debt burden across groups of borrowers, broken down by income



Source: bank data, NBU estimates.

Figure 2.3.9. Household debt burden



Source: SSSU, NBU estimates.

across all borrower categories. At the start of this year, this ratio was slightly above 20% for many borrowers. However, falling incomes during the quarantine made debt servicing much more difficult. As the crisis began, banks started to offer loan holidays for borrowers. Loan holidays allow borrowers to defer their loan servicing expenses without decreasing their liabilities. One way to temporarily reduce debt servicing costs, which banks sometimes use, is to capitalize loan interest. This means that the debt burden of those borrowers whose income shrank during the crisis could rise sharply.

Debt burdens vary among borrower categories. The least well-off bank customers usually have the highest debt burden. A survey of banks[6] showed that customers with monthly income of up to UAH 7,000 spend about a third of what they make on loan servicing. Overall, households in this category on average spend over 75% of their income on current needs. Therefore, their financial standing is very unstable. The debt burden of many individual entrepreneurs also increased. For them, the quarantine restrictions and income losses will have critical repercussions. Some of these people will clearly require additional leeway from banks or support from the state, for example, partial compensation of interest expenses.

In addition, there is a category of borrowers whose debt burden cannot be estimated at all, as they received loans without providing any official proof of income. These borrowers account for a fifth of consumer loans issued over the last year. The debt share of these borrowers has declined by over 10 pp since 2017.

Overall household debt burden will rise

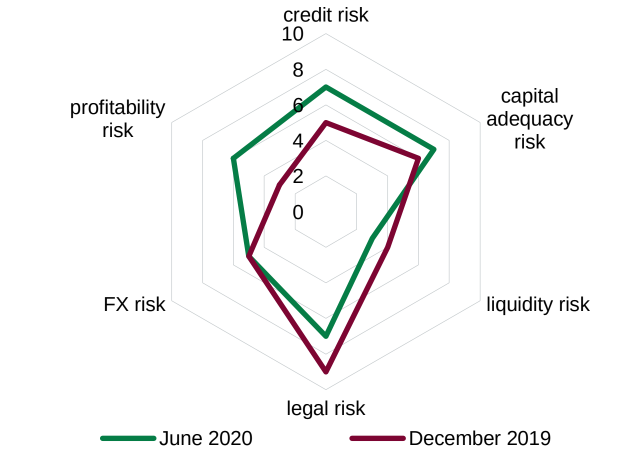
Despite the rapid lending growth in recent years, the debt burden of low- and middle-income households has increased only slightly. This owed to the average loan amount growing at a rate commensurate with the rate of income growth. Most loans in this category are small consumer loans issued for a term of up to one year. An increase in the number of customers also has contributed to growth in the total loan portfolio. According to survey findings, the debt-to-income (DTI) ratio for borrowers has ranged from 13–14%. The ratios of total debt burden to GDP and to net disposable household income have also been stable in recent years. However, the debt burden could rise this year, mainly due to the risk of unfavorable changes in disposable income and GDP.

[6] A survey of banks on lending to resident households, broken down by income group, conducted by the NBU in March – May 2020.

Part 3. Banking Sector Conditions and Risks

3.1. Banking Sector Risk Map

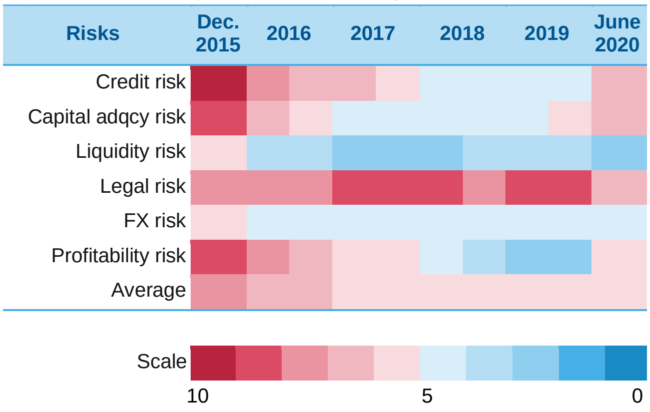
Figure 3.1.1. Banking Sector Risk Map*



* The NBU assesses risks on a scale from 0 to 10, with 0 being the lowest level of risk and 10 the highest. The assessment reflects the outlook for the next six months.

Source: NBU estimates.

Figure 3.1.2. Banking sector risk heat map



Source: NBU estimates.

Description:

- Credit risk 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.
- Liquidity risk is a measure of the ability of banks to meet their liabilities to depositors and creditors in full and on time.
- Legal risk is an estimate of the ability of banks to use legal instruments to effectively protect their rights.
- FX risk is the risk that foreign exchange market trends will affect the financial performance of banks.
- Profitability risk reflects the ability of banks to generate net profit.

Credit risk: up

The downturn in economic activity due to quarantine restrictions hit household incomes and companies' financial standing. The decline in incomes will be protracted. This will complicate loan servicing and thus have substantial negative impact on the quality of bank loan portfolios.

Capital adequacy risk: up

A number of banks will find their capital adequacy increasingly under threat, mainly due to the materialization of credit risk. This threat will be the most pronounced for two state-owned banks. The extra capital that banks have accumulated over years and can now use to absorb losses and increase lending will help contain the risk.

Liquidity risk: down

Banks entered the crisis with a liquidity cushion, with the LCR significantly above the required minimum. With banks satisfying customers' cash withdrawal requests without delay, the panic quickly subsided. Thus, the first months of the crisis showed the sustainability of the sector's funding base. Following a temporary drop, the volume of high quality liquid assets returned to its pre-crisis level. All in all, the banking sector passed its real-life liquidity stress test brilliantly. Wider access to NBU liquidity further mitigates the risk.

Legal risk: down

This was due to the adoption of legislation that made the withdrawal of banks from the market irreversible and eliminated the risk of PrivatBank's former owners reclaiming control over the bank. A number of decisions were taken to strengthen the protection of mortgagers' rights. At the same time, creditors' rights still remain poorly protected, especially as far as judicial settlement of disputes is concerned.

FX risk: unchanged

The FX market has successfully passed the crisis test, with the risk of sharp currency depreciation failing to materialize. The market was back to normal within a month of the onset of the crisis.

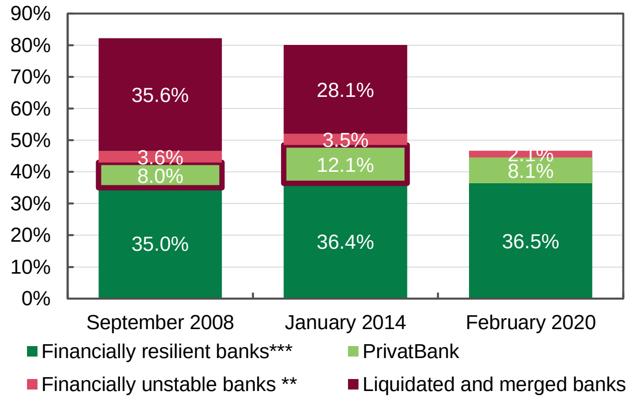
Profitability risk: up

Higher provisioning, slower lending, and falling demand for banking services, manifested by a drop in fee and commission income, will dampen the banking system's profitability. Meanwhile, several large banks will continue to generate substantial profits due to their high operational efficiency. Therefore, lower profitability will have no significant impact on their long-term financial resilience.

3.2. How Prepared Banking Sector Was to Face Crisis

In 2020, banks were much better prepared than before to handle a new crisis. They were sufficiently capitalized, and their capital adequacy ratios were trustworthy, as proper credit risk assessment procedures had been put in place. Several years of high profitability contributed to capital growth. Funding was stable and almost entirely provided by customers. The practice of lending to related parties became a thing of the past, no longer threatening the sharp deterioration in lending standards seen before. As a result, the sector had no major overhanging problems on the eve of the crisis, having built a margin of safety to face a potential economic downturn.

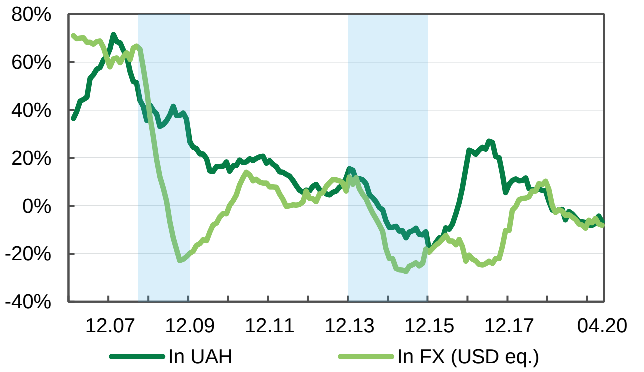
Figure 3.2.1. Net Assets distribution, % of GDP*



* To GDP in actual prices for Q4 2007 – Q3 2008 (trailing), 2013 and 2019. ** Those needing capital according to the results of the express stress test. *** Solvent banks in 2008 – 2020 that did not require capital according to the results of the express stress test, as well as state-owned banks.

Source: NBU, SSSU.

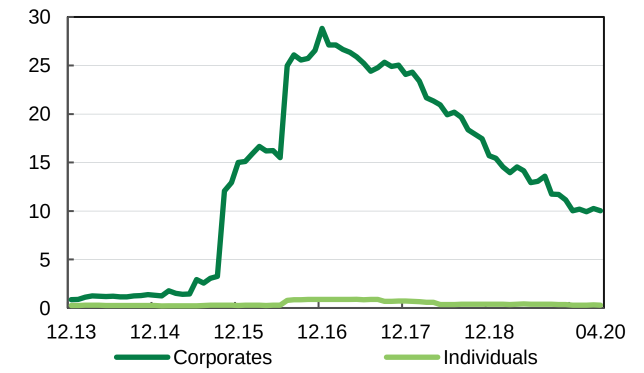
Figure 3.2.2. Gross loans to non-financial corporations, yoy



The blue rectangles indicate periods of crisis, when there was a decrease in real GDP yoy for both the quarter and the year.

Source: NBU.

Figure 3.2.3. Gross loans to Related Parties recognized by banks (excluding state-owned banks and PrivatBank)*, UAH billions



* Solvent banks as of 1 June 2020 (excluding state-owned banks and PrivatBank). Loans with principal over UAH 2 million.

Source: NBU.

Banks boast record financial resilience

Banks that are currently at risk in terms of financial soundness and level of shareholder support have combined assets that account for only 2.1% of GDP, according to NBU estimates. This stands in welcome contrast to what was observed in the lead-up to earlier crisis episodes. The crisis of 2008 began amid a credit boom, with large-scale FX mortgage lending and growing concentrations of corporate loans. Risk assessment was then a formality and risk coverage requirements loose. Sector-wide problems that had piled up since the 1990s remained unresolved. Some of the banks already financially unstable at the time continued in business until the crisis of 2014. Loans recognized as nonperforming by asset quality reviews (AQR) in 2015 – 2016 had actually gone bad long before (see Box 2. Nonperforming Loans Are the Consequence of the Crisis and Low Lending Standards in the June 2019 Financial Stability Report). Only after proper banking supervision was implemented in 2015 did insolvent banks leave the market and the remaining healthy institutions built sufficient provisions.

Credit risk assessment criteria are now significantly tighter, requiring banks to respond in a timely manner to portfolio quality deterioration, constantly maintain adequate provisions, and have enough capital to cover potential losses. Moreover, annual stress tests introduced by the NBU help ensure that the sector is better prepared to withstand macroeconomic shocks and motivated to build a reserve of capital. The median regulatory capital adequacy ratio stood at 28.3% in late February 2020, while the Tier 1 ratio was at 21.3%.

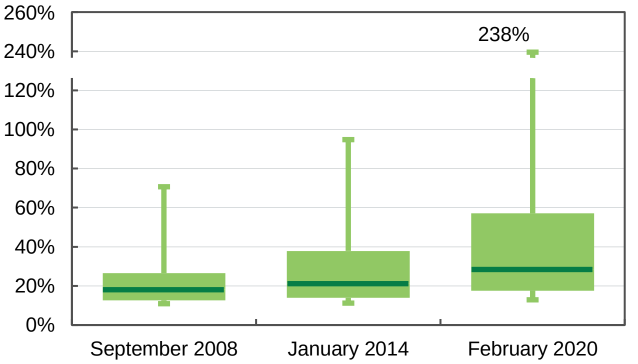
Lending to related parties became history

In the lead-up to the previous two crises, lending to related parties was commonplace. As banks identified related parties on a purely formal basis, their reporting at the time did not reflect the actual extent of related-party lending. It was not until after NBU inspections in 2015 – 2016 that the true state of affairs was revealed. The problem of excessive related-party lending has since been resolved, and almost all banks today adhere to the established limits (see section Related-Party Lending: Never Again in the June 2018 Financial Stability Report).

Banks entered crisis with high operating efficiency and profitability

Domestic banks have grown much sounder in recent years, having formed sufficient provisions for NPLs and revised their business models. Corporate and retail demand for banking services exploded. But due to a lack of high-quality corporate

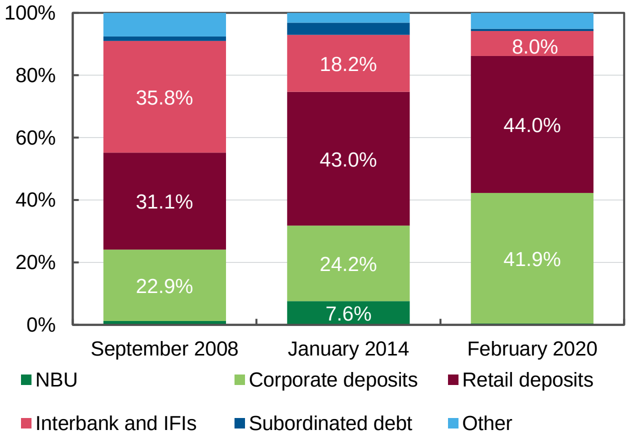
Figure 3.2.4. Distribution of the Regulatory capital adequacy ratio across the banks before crises



* 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 mean. Upper and lower dashes outside the rectangle show 5th and 95th.

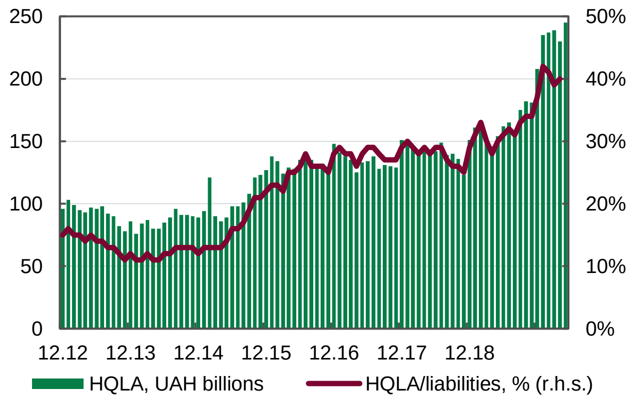
Source: NBU.

Figure 3.2.5. Breakdown of liabilities before crises



Source: NBU.

Figure 3.2.6. High Quality Liquid Assets* (HQLA) in non-state-owned banks



* In banks solvent at each reporting date. Includes T-bills, NBU certificates of deposit, cash, correspondent accounts with the NBU (except for mandatory reserves) and correspondent accounts in foreign banks with an investment grade.

Source: NBU.

borrowers with an acceptable debt burden, banks focused on developing consumer lending and invested their free funds in government securities. In 2018 – 2019, banks booked sizable profits for the first time on record, with the average return on equity surpassing 30% in 2019. This also makes the current situation different from the lead-up to the 2014 crisis, which the sector approached with virtually zero profitability. Higher operating efficiency allowed banks to generate equity and build up loan portfolios. The classic banking business became lucrative for foreign banking groups, and many of them confirmed their long-term interest in Ukraine.

Funding is sourced from domestic market

Banks' funding structure has changed drastically compared to previous crisis episodes. Banks are currently much less reliant on direct loans from foreign banks, including parent banks, or bond issuance. The sector's gross external debt has shrunk to USD 4.0 billion from USD 42.1 billion in September 2008. Most of the outstanding external debt consists of funds attracted from IFIs to finance targeted programs. Therefore, the sector today has no direct dependence on external funding or the global capital market environment. The share of corporate and retail deposits hit a historical high of 85.8% at the end of February.

The ban on FX retail lending and regulatory requirements for open FX position limits helped reduce the dollarization of liabilities to 44.5% in February 2020 from 52.9% in September 2008. As a result, banks' resilience to FX shocks strengthened.

The fast reduction in interest rates on hryvnia deposits over the past six months did not hamper the stability of the funding base. Current rates on FX deposits are near all-time lows, and many banks with foreign capital do not attract such deposits at all.

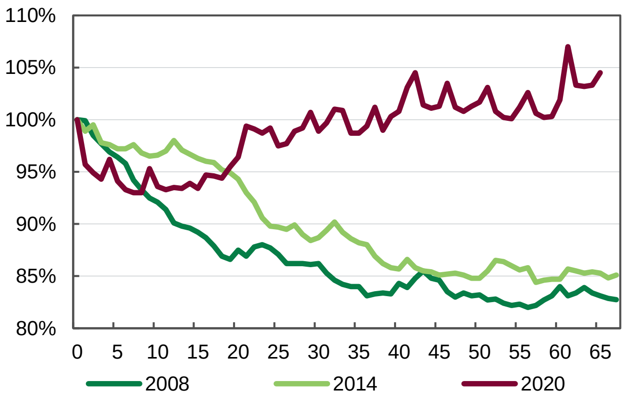
Share of high-quality liquid assets up several-fold

Banks entered this crisis with a significant margin of liquidity. Compared to 2014, the ratio of high-quality liquid assets (HQLA) to the liabilities of private banks quadrupled. To more accurately assess liquidity, the NBU introduced a new prudential standard in 2018, the liquidity coverage ratio (LCR). Current LCR values are more than double the required standard, meaning banks have a reserve of funds to cover even significant deposit outflows. Banks also grew more resilient following 2015 legislative amendments that gave them the right to refuse to repay customer deposits early on first demand.

3.3. Banks passed crisis peak without noticeable damage

When first signs of a crisis emerged in March, banks experienced a traditional wave of cash withdrawals. But this phenomenon was short-lived, as banks had ample liquidity while households and businesses exhibited stronger confidence in the financial sector. Hryvnia retail deposit outflows lasted less than two weeks. In further contrast to previous crises, banks did not have to raise deposit rates to retain customers. As the crisis peaked, banks were able to ensure continuous operation of their infrastructure despite strict quarantine restrictions. It helped relieve customers' concerns.

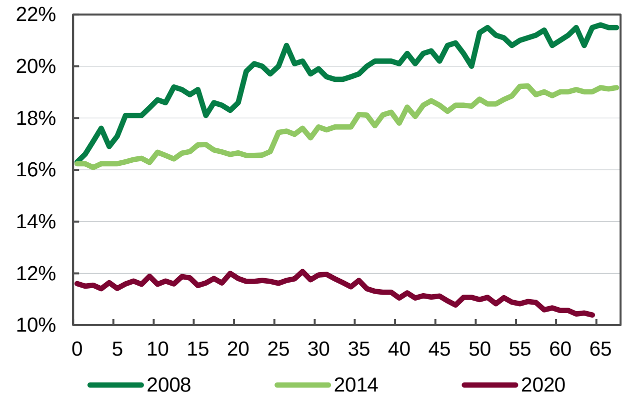
Figure 3.3.1. Retail deposits in hryvnia, the last day before the outflow* = 100%



* At solvent banks as of 1 June 2020. 0 = 3 Oct. 2008; 23 Jan. 2014; 10 Mar. 2020. X axis indicates number of working days.

Source: NBU, daily data, including certificates of deposit.

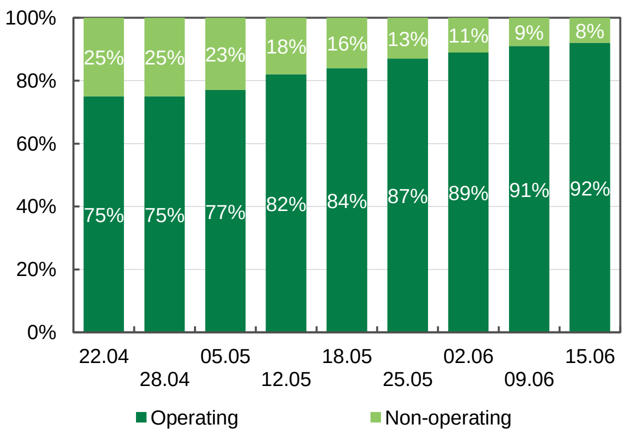
Figure 3.3.2. Interest rates on new retail 3-month hryvnia deposits



* 0 = 3 Oct. 2008; 23 Jan. 2014; 10 Mar. 2020. X axis indicates number of working days.

Source: 2008 – NBU, daily data for new deposits maturing in 32 to 92 days, 2014, 2020 – Thomson Reuters (UIRD).

Figure 3.3.3. Share of non-operating banking branches



Source: Banks' data, NBU estimates.

Banks retained customer confidence as crisis peaked

Significant outflows of retail deposits began in the first days of the quarantine. As the previous two crises showed, customers typically respond in this way when faced with uncertainty. This time, however, uncertainty was only brief, and deposits returned to growth in as little as ten business days. With plenty of liquidity, banks had no difficulty satisfying customers' deposit withdrawal requests in full on first demand. Cumulative outflows of hryvnia deposits peaked at 7%, far less than in the previous crises.

The FX deposit segment remained in check as well, with no more than 5% of these deposits leaving the banking system. A major challenge for banks was the shortage of FX cash that arose after the suspension of air travel as part of lockdown. It cut off supply of dollars and euros to Ukraine just as domestic demand for FX cash increased. To meet this temporary surge in demand, the NBU facilitated imports of cash dollars and euros and distributed them among commercial banks. Three weeks into the quarantine, the problem was solved.

Banks avoided raising deposit rates

The start of the pandemic coincided with the NBU's monetary policy easing cycle. Up until that moment, banks had been actively cutting interest rates on deposits. But following a two-month pause, banks returned to lowering rates in May. Unlike in any of the previous crises, this time banks did not have to sharply increase deposit rates to retain customers. Inflation continued to slow, while the sector's funding base remained relatively stable. Banks maintained interest rates on FX deposits at all-time lows of about 1–2% per annum.

Banking infrastructure operated smoothly

Despite the imposition of tight quarantine restrictions, three quarters of all bank branches continued to operate, as did more than 90% of ATMs. Banks introduced flexible schedules and healthy hygiene practices. They also encouraged customers to use online banking. The coordinated actions by banks and smooth operation of the financial infrastructure allayed customers' fears.

Box 1. Regulatory response to the crisis

Financial regulators and central banks across the globe were quick to respond to the crisis, launching monetary and regulatory measures to support financial institutions and complement governments' anti-crisis measures. Drawing on global best practices, the NBU, concurrently with leading regulators, deployed virtually every anti-crisis instrument available to it.

Governments around the world, being responsible for their countries' economic development, bear the bulk of the costs of countering the coronavirus crisis. They channel budget funds to targeted support programs. Central banks, however, act within their mandates to maintain price and/or financial stability. They eased monetary policy, particularly by cutting key policy rates. Developed economies with rates close to zero expanded their quantitative easing programs (purchases of securities on secondary market). In addition, central banks made every effort to prevent liquidity shortages, expanding long-term refinancing facilities, holding liquidity provision operations more frequently, and expanding eligible collateral for such operations. This provided banks and their customers with cheaper funding.

At the same time, prudential policy measures were adopted, aimed at:

- Freeing up banks' capital to absorb losses and lend to the economy. The countercyclical capital buffer and systemic risk buffer were released. In some jurisdictions, banks were allowed to use the capital conservation buffers and Pillar II capital buffers along with liquidity buffers (HQLA). However, regulators limited dividend payouts and bonuses to top management in order to ensure that the freed-up capital is used as intended.
- Easing the regulatory burden on banks. Regulators canceled this year's stress tests, deferred inspections, and extended the deadlines for banks to submit reports and other data so as not to divert their resources during the crisis. They also put off the implementation of some regulations, such as the latest amendments to Basel III.
- Promoting loan holidays and restructurings. With a view to promoting lending, many countries suspended certain macroprudential restrictions, like LTV. At the same time, national regulators require that banks continue to comply with prudential requirements and report the true quality of their loan portfolios.

The NBU's response to the threats posed by the coronacrisis was likewise rapid and resolute. The NBU announced its first decisions and guidelines for banks simultaneously with the introduction of a nationwide quarantine. The actions taken were comprehensive and guided by global best practices. The NBU, in particular:

- postponed the introduction of the capital conservation buffer and the systemic importance buffer and recommended banks to refrain from dividend distribution until October;
- deferred the requirement for FX-denominated domestic government bonds to be covered with capital;
- cancelled stress tests of banks in 2020 and postponed on-site inspections of banks and NBFIs;
- introduced long-term refinancing facilities for banks for a term of up to five years; extended the term of refinancing loans from 30 to 90 days and started to hold refinancing operations more frequently; expanded eligible collateral;
- supplied banks with foreign currency cash;
- entered into a currency (UAH/USD) swap agreement with the EBRD totaling up to USD 500 million;
- extended the deadline for banks to draft and validate strategies for managing non-performing exposures and recovery plans;
- allowed banks additional time to submit and publish their financial statements;
- recommended that banks restructure loans for borrowers hit by pandemic-related restrictions;
- eased the requirements for assessing credit risk – the loan restructurings due to quarantine restrictions will have no adverse impact on capital.

The NBU's resolute and well-timed actions quelled the market panic in March and helped preserve confidence in the banking system. The key policy rate cut to 6% will also help support the economy during the pandemic.

Table 1. Bank-targeted measures taken by central banks and financial regulators in response to COVID-19 since 10 March 2020

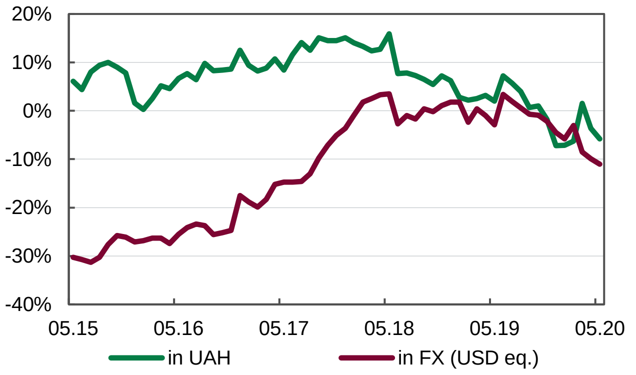
Indicators	ECB / EBA	United Kingdom	Sweden	Poland	Czech Republic	Hungary	Romania	Russia	Serbia	Ukraine
Key policy rate cuts (pp)	-	0.65	- / 0.55*	1.0	1.5	-	0.5	0.5	0.75	5.0
Long-term refinancing	+	+				+		+		+
Market purchases of assets	+	+	+	+			+			
More frequent repo operations				+	+	+				+
Expansion of eligible collateral			+			+		+	+	
FX swaps with central banks or IFIs	+		+	+	+	+		+		+
Promotion of loan holidays**	+	+	+					+		+
Release/reduction of capital buffers	+		+	+	+	+	+	+	+	+
Permission to operate with LCR below required one		+	+	+	+	+	+	+		+
Restrictions on dividend distributions			+					+		
Extension of reporting deadlines	+	+	+	+	+	+	+	+		+
Deferral of inspections	+	+					+	+		+
Postponement/cancellation of stress tests	+		+***	+		+				+
Promotion of loan restructurings	+	+								+
Relaxation of other prudential requirements	+	+		+	+		+	+		+
Key policy rate cuts (pp)		+	+	+	+	+		+		+

* No longer in force; ** Non-key policy rate cut; *** Government compensations for interest and/or fee and commission costs and/or recommendation to introduce loan holidays and regulatory relaxations for revised/restructured loans.

3.4. Corporate Loan Portfolio Quality

Overall, the quality of the performing corporate portfolio currently is the highest in decades. Although past crises led to a major loss of economic potential, structural changes have made Ukrainian business more resilient to shocks, and banks had to raise lending standards for new borrowers. However, as several sectors of the Ukrainian economy will be seriously affected by the ongoing crisis, it is important to ensure that temporary liquidity issues do not lead to debtors' insolvency. It is crucial for banks to monitor the financial standing of their borrowers and restructure their loans if necessary.

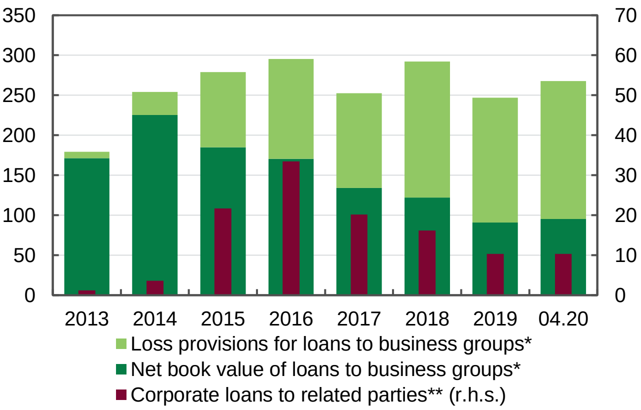
Figure 3.4.1. Net corporate loans* (excl. PrivatBank), yoy



* In solvent banks as of 1 June 2020.

Source: NBU.

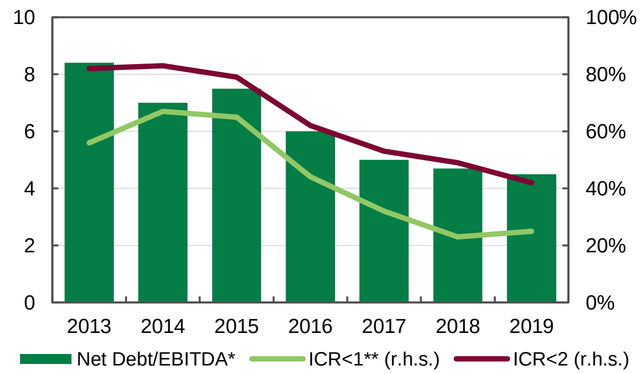
Figure 3.4.2. Loans to business groups and related parties, UAH billions



* Domestic private business groups with loans > UAH 1 billion as of the end of the period. ** In Ukrainian banks with private capital.
Solvent banks as of the end of the period (excl. PrivatBank).

Source: NBU, NBU estimates.

Figure 3.4.3. Debt load and share of loans owed by borrowers with low ICR



* Net Debt/EBITDA weighted by loan amount. ** ICR less than 1 or operating losses.
Calculated based on standalone financial statements of borrowers with performing loans in solvent banks as of the end of the period.

Source: NBU, banks' data, NBU estimates.

Corporate portfolio: leaving old problems behind

Following the banking crisis of 2014 – 2016, the net corporate loan portfolio hardly grew. Banks mostly lent to high-quality borrowers in recent years. Demand for loans from standards-compliant companies was limited. Some of the potential borrowers were not ready to ensure the completeness and quality of information disclosure. Many companies financed their operations with own funds. The most creditworthy companies often preferred to borrow from foreign markets or IFIs. The legacy portfolio of problem loans, built under the past practice of excessive and high-risk lending, was gradually shrinking, particularly due to loss recognitions and provisioning.

An important task was to overcome the banking system's two major problems that drove its losses during the previous crisis, namely related-party lending and excessive loan portfolio concentrations. While the first issue has effectively been dealt with, the share of domestic business groups in the banking system's gross portfolio in some cases is still too high. Banks, especially state-owned ones, cannot get rid of the legacy problem debts amassed by business groups (read more in Loan Concentration Risks Require Stricter Controls). However, the associated risks have become much less acute as banks recognized credit losses with respect to most of these loans and provisioned for them.

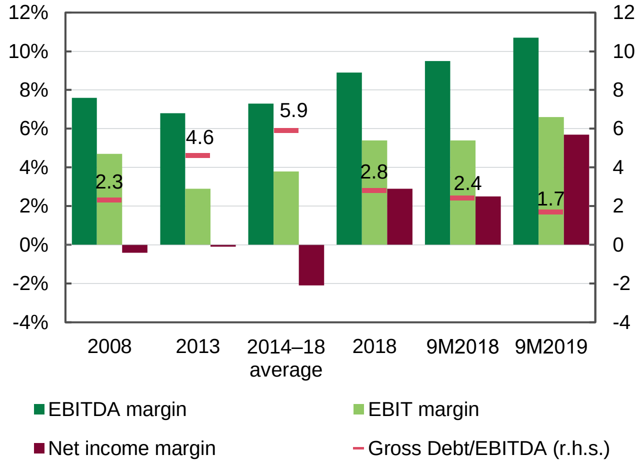
In order to reduce the portfolio's credit risks, the NBU has been actively working for the last several years to raise lending standards, transparency and reliability of corporate borrowers' assessment. In particular, credit risk assessment requirements were brought closer in line with the recommendations of the Basel Committee on Banking Supervision, large exposure concentrations and related-party transactions were limited, and annual stress testing of the largest debtors was introduced. This encouraged banks to lend to high-quality borrowers with a transparent cash flow sources and ownership structure.

Corporate borrowers entered crisis with acceptable debt load

Currently the corporate portfolio is much more resilient and less vulnerable to macroeconomic shocks. Borrowers have a safety margin, manifested by their mostly acceptable debt metrics. Their net-debt-to-EBITDA ratios have been gradually declining, implying stronger loan servicing ability.

The key risks to the real sector materialized during the last crisis. The corporate sector has since recovered, with its revenues increasing, efficiency and transparency improving in recent years. Profitability of the real sector's enterprises

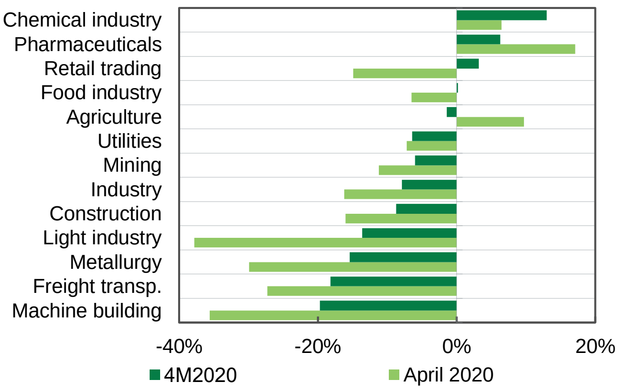
Figure 3.4.4. Real sector's* profitability and debt load



* Large and medium-sized enterprises.

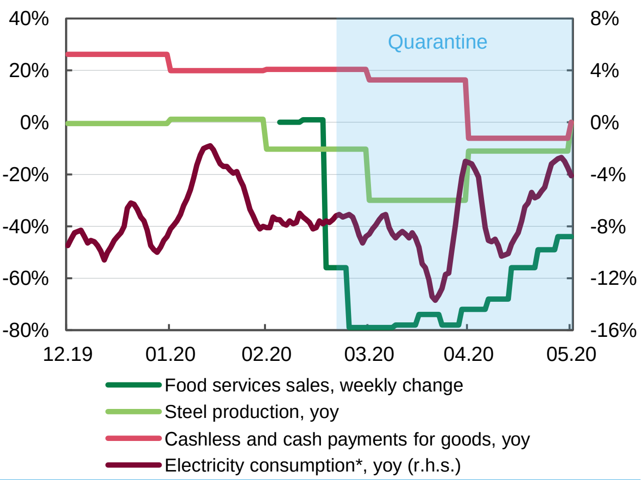
Source: SSSU, NBU estimates.

Figure 3.4.5. Production in key economic sectors, yoy



Source: SSSU.

Figure 3.4.6. Operational data of industry, retail and food services



* Seven-day moving average.

Source: NBU, opendatabot.ua, Ukrmetalurgprom, Ministry of Energy and Coal Industry of Ukraine.

was higher than before prior downturns, with EBITDA margin for the three quarters of 2019 reaching around 11% and the interest coverage ratio (ICR) hitting a record high of 5.8x. While profits rose, the debt load eased. For the 12 months ending September 2019, the average gross-debt-to-EBITDA ratio totaled 1.7x, an acceptable level.

Enterprises are affected by coronacrisis fallout

The global COVID-19 pandemic has caused the global economy and domestic output to plummet. Suffering the largest falls were the service sector, metallurgy, machine building, light industry, construction, and transportation.

The crisis exposed structural problems in two key sectors of the Ukrainian economy. The slump in global demand compounded the difficulties faced by steelmakers, as most of them had already been loss-making in 2019. In April, steel prices fell below last year's minimum. Producers remain solvent due to their vertical integration. The decline in investment demand and deterioration in business expectations drove the slide in machinery manufacturing. The prospects for the machinery industry are gloomy, as this sector still has not fully recovered from the crisis of 2014 – 2016 and the loss of the Russian market.

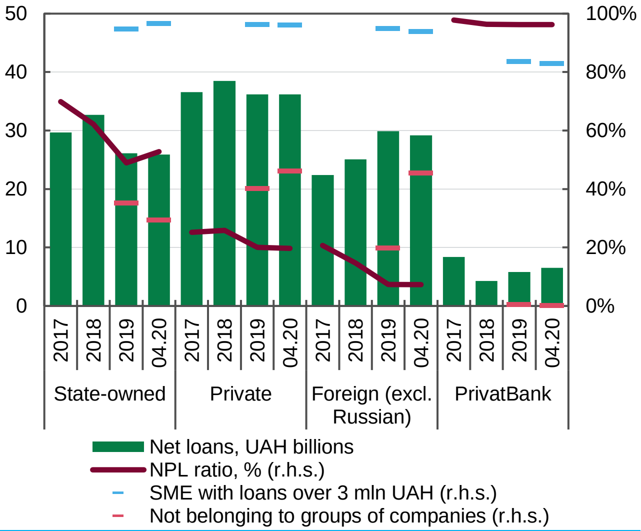
However, exports of oils and fats, and iron ores increased. High global demand for food will soften the negative impact of the pandemic on Ukrainian exporters.

Although economic recovery will not be quick, the domestic economy probably has already passed the lowest point. In May, economic expectations improved, and prices for the majority of Ukrainian corporate Eurobonds approached pre-crisis levels. Electricity consumption and metals output started to grow, pointing to a recovery in industrial production. However, uncertainty remains high due to a new wave of infections, with associated risks that tight quarantine restrictions would be reinstated.

Small businesses need support

Strict quarantine restrictions have significantly reduced the activities of the service sector and nonfood trade. Following the transition to the adaptive quarantine, these sectors partially resumed operations, but they are still facing major risks due to falling demand and changing consumer habits. Small businesses remain the most vulnerable. Some of them may go bankrupt due to not being able to earn revenue for a long time and having limited liquidity buffers. The NBU is encouraging banks to restructure the loans of debtors affected by the pandemic. Small businesses are readily participating in such programs. As of early June, the top 20 banks revised the terms for 7% of their small and medium-sized enterprise portfolios. The government, for its part, introduced an interest rate compensation program and plans to provide loan guarantees to small businesses. Cheap loans should help minimize adverse effects of the COVID-19 pandemic.

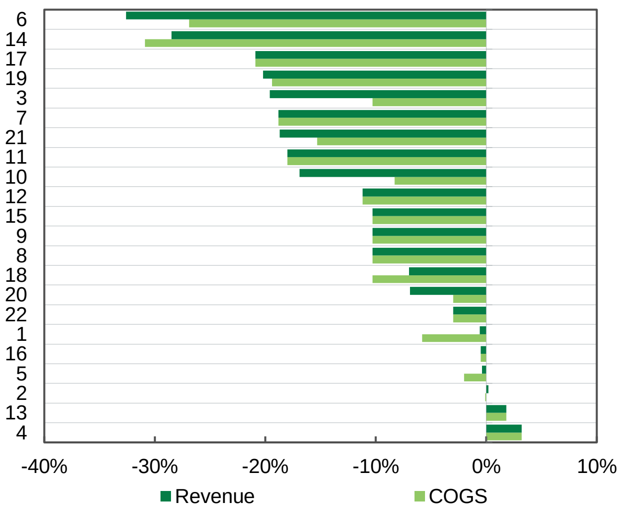
Figure 3.4.7. Net loans* to small and micro enterprises (SMEs) and their quality



* In solvent banks as of 1 May 2020.

Source: NBU.

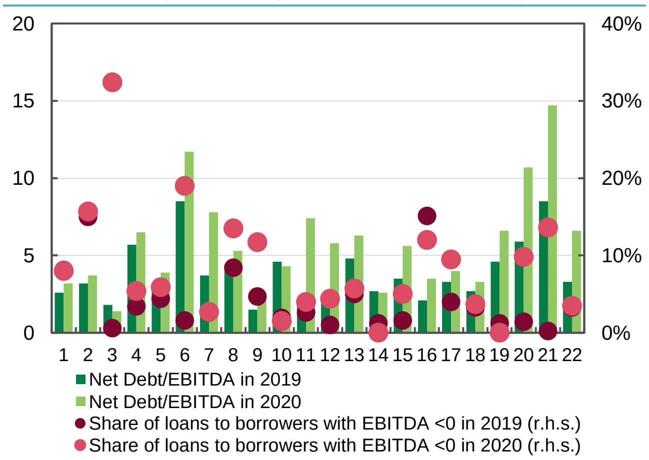
Figure 3.4.8. Projected changes in revenues and COGS for real sector's clusters in 2020



Number and name of cluster according to table 2.

Source: NBU forecast.

Figure 3.4.9. Weighted average debt-to-EBITDA ratio by clusters



NBU forecast for 2020.
Number and name of cluster according to table 2.

Source: NBU, banks' data, NBU estimates.

Evaluating crisis impact: hardest hit sectors are at risk

The NBU performed an express stress test of corporate borrowers' solvency in order to evaluate the impact of the coronavirus crisis on the real sector and assess potential losses that banks may incur as a result of corporate defaults. For purposes of this analysis, borrowers were divided into 22 real sector's clusters based on their share of the total loan portfolio and the homogeneity of factors affecting the clusters.

Assumptions for revenue dynamics and cost of goods sold were developed for each cluster based on the NBU's macroeconomic forecast. Hotels and restaurants, commercial real estate, and retail trade (except food retail) are among the sectors hit hardest by quarantine restrictions. However, they mostly account for a small share of the overall loan portfolio. The second group of industries vulnerable to the pandemic includes pro-cyclical sectors such as metallurgy, machinery, and mining. In contrast, agriculture and the food industry are not expected to cut production significantly. After past crises, banks saw a notable increase in the share of borrowers from these sectors in their portfolios. This trend made banks more resilient to crises.

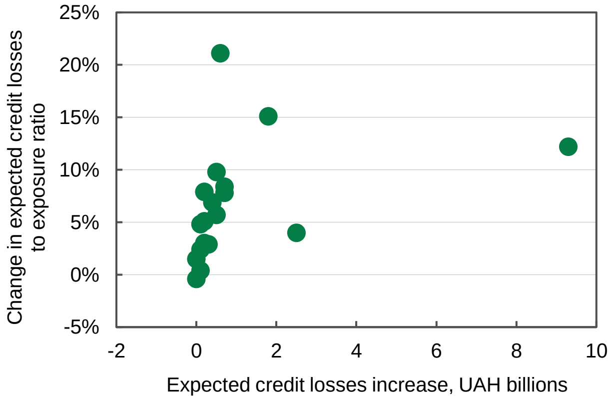
The NBU simulated the impact of industry-wide dynamics on the revenue and balance sheets of sampled companies. The analysis used 6,005 standalone financial statements and 653 consolidated reports. The sample of included companies in total amounted to a share of 85% of the banking system's performing corporate loan portfolio at the beginning of May.

The assessment expectedly yielded the highest level of defaults in the hardest hit industries, namely metallurgy, machine building, commercial real estate, and non-food trade. The model showed no defaults in the hospitality sector, as the bulk of associated bank loans were on the balance sheets of several debtors capable of surviving the shock. Concentration has a major impact on the level of defaults: the rapid projected growth in the share of nonperforming loans in some clusters is due to defaults by one or several large borrowers.

Based on the stress tests results, the NBU modelled the credit risks of large corporate portfolios of the top 18 banks[7]. Additionally the impact of nonperforming loans was assessed, particularly the effects of collateral amortization and exchange rate fluctuations. A deterioration in the quality of corporate portfolios will have no critical impact on the majority of banks. Four banks are the exception, as they remain saddled with unsolved legacy problems. The assessed losses mostly stem from old low-quality portfolios. These consist of insufficiently provisioned nonperforming loans or previously restructured debts. This segment of debtors was on the NBU's radar screen during past stress tests. The results of modeling corporate portfolio losses were included in the overall assessment of risks to banks' capital (read more in Section 3.6. Assessment of Banks' Crisis Resilience – Stress Test).

[7] Alfa-Bank, Vostok, Kredyt Dnipro, Credit Agricole Bank, Kredobank, Megabank, OTP Bank, Oschadbank, Pivdennyi, PrivatBank, Procredit, FUIB, Raiffeisen Bank Aval, Taskombank, Ukrgasbank, Ukreximbank, Ukrsibbank, Universal.

Figure 3.4.10. Impact of the crisis on expected credit losses for large exposures, breakdown for the largest banks[7]



Source: NBU estimates.

Table 2. Crisis impact on corporate loan portfolio by real sector's clusters

No.	Cluster name	Cluster's share of net corporate portfolio*	Share of NPL, %	Loans in sample**, UAH billions	Number of debtors in sample	EBITDA/interest expenses		Projected defaults***	
						2019	2020	Number of debtors	Share in total loans, %
1	Grain crop growing	11	14	23.9	1,145	7.7	6.2	17	4
2	Agriculture, excl. grain crop growing	2	24	7.5	172	5.4	4.2	9	13
3	Mining	1	53	0.8	21	9.4	13.7	4	31
4	Vegetable oil and animal fats production	3	58	13.2	48	2.9	2.2	5	4
5	Food, excl. vegetable oil and animal fats production	5	60	10.4	260	5.3	5.6	7	4
6	Ferrous metallurgy	1	62	5.1	9	1.5	0.6	4	81
7	Machine building	3	71	9.8	126	4.2	3.2	10	15
8	Other processing industries	7	63	27.8	641	7.0	4.8	25	12
9	Power generation, excl. renewables	5	2	20.5	80	6.1	6.6	15	12
10	Renewable power generation	8	23	28.6	162	11.0	7.5	4	1
11	Construction	3	66	5.6	225	13.7	5.2	15	12
12	Wholesale and retail trade in vehicles	1	27	2.7	172	8.7	6.4	5	8
13	Wholesale trade in agricultural products	6	14	17.3	180	4.6	2.5	10	4
14	Wholesale trade in fuel	3	62	8.3	137	6.7	7.0	2	3
15	Other wholesale trade	12	49	42.1	1,302	5.9	3.6	46	5
16	Food and pharma retail	2	9	9.3	116	3.6	3.0	5	12
17	Other retail	2	92	7.4	74	8.9	6.3	9	32
18	Transportation	6	39	19.0	253	7.1	6.8	25	4
19	Hotels and restaurants	0.4	32	1.0	32	6.7	4.7	0	0
20	Real estate, excl. shopping malls	6	54	20.2	197	8.5	2.8	35	14
21	Shopping malls	2	81	5.6	8	4.1	0.9	4	32
22	Other	11	29	54.2	645	8.0	4.7	44	3
	Total	**100**	**52**	**340.4**	**6,005**	**6.9**	**4.8**	**300**	**9**

* Breakdown by net corporate loans with outstanding amount of more than UAH 2 million.

** Outstanding debt of borrowers with performing loans whose financial statements were used for express stress test.

*** Over one-year horizon.

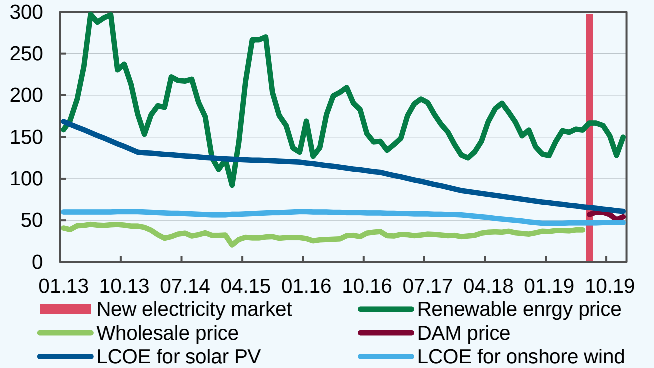
Box 2. How Energy Crisis Affected Banks

Domestic renewable energy installed capacities expanded rapidly in 2018 – 2019, driven by high fixed tariffs and plunging construction costs. About a third of all facilities was financed by several domestic banks, which actively lent to this segment and failed to prevent excessive concentration of the underlying loans. Capacity expansion in the renewable power sector led to problems with compensation for the feed-in tariff, and the government initiated a revision of operating regulations for alternative energy producers. The new conditions will affect the banks that granted loans to the sector. Although most borrowers will remain solvent, some will still need changing the underlying lending terms. Banks need to restructure relevant loans without incurring losses and review their credit policies going forward in order to limit concentration.

Between 2017 and 2019, Ukraine's total renewable power generation capacities expanded by 4.5 times. The high feed-in tariff pegged to the euro and the steady decline in the levelized cost of energy[8] from renewable projects (-39% for onshore wind and -82% for solar photovoltaic (PV) plants in 2010 – 2019[9]) encouraged investors to finance construction of new facilities.

In July 2019, a new electricity market model was launched. The tariffs were not reduced, but the mechanism of settlements with green energy producers changed. State-owned company Guaranteed Buyer became responsible for paying the feed-in tariff, using the cash flows received from Ukrenergo NPC and from partial resale of electricity produced by Energoatom NNEGC.

Figure B.2.1. Weighted average electricity price and levelized costs of electricity (LCOE) from renewable sources, EUR/MWh

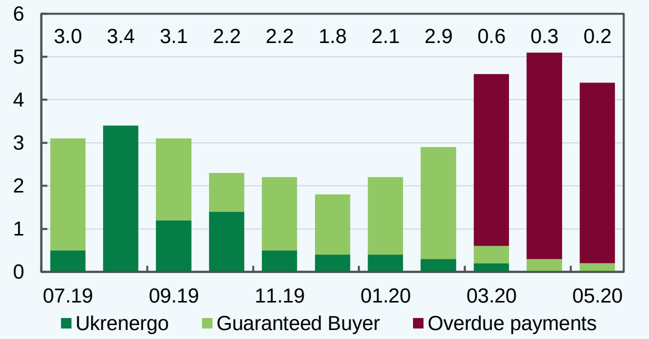


Source: Energorynok, Market Operator, Guaranteed Buyer, IRENA[9].

However, some large consumers appealed Ukrenergo's tariffs in court and had them reduced almost threefold. Later on, exporters of electricity refused to pay Ukrenergo for its transmission services, creating a funding deficit at Guaranteed Buyer. Unseasonably warm winter and the subsequent coronavirus crisis curbed electricity consumption in both of the previous two quarters. All of these factors, coupled with growth in renewable power generation, caused a critical piling up of debts to green producers, prompting energy market participants to seek a compromise.

Moving to resolve the crisis, the government signed a memorandum with green electricity producers on 12 June. In particular, the document stipulated a reduction in the feed-in tariff and tighter requirements for electricity supplies within set limits. For its part, the government pledged to repay the accumulated debts.

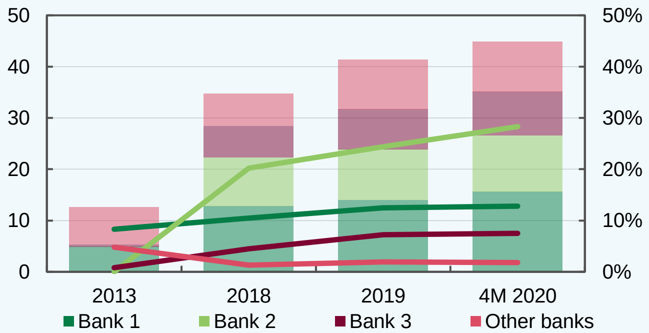
Figure B.2.2. Payments for energy from renewable sources, UAH billions



Source: Guaranteed Buyer, NBU estimates.

In recent years, favorable operating conditions in the alternative energy sector attracted banks' interest. State-owned banks have been the most active to date, accounting for 78% of total loans in this segment. Recent regulatory changes directly affect the financial institutions that created green loan concentrations in their portfolios despite multiple warnings from the NBU.

Figure B.2.3. Loans to renewable energy producers, UAH billions, and share of renewable projects in banks' corporate loan portfolios (r.h.s), %



Source: NBU.

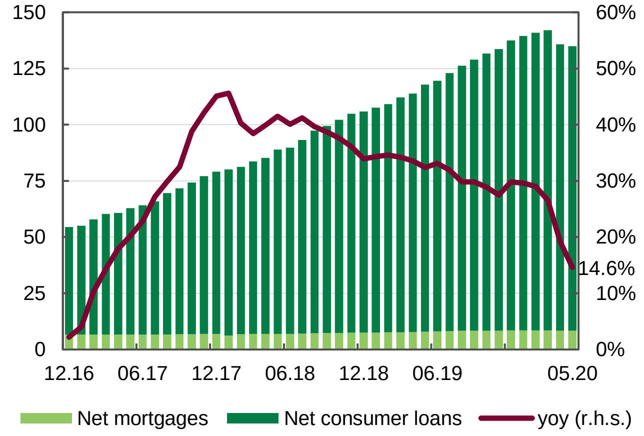
The tariff revision will affect borrowers with high debt servicing costs. It would be sufficient for most of these companies to extend their loan agreements, pursuant to current NBU regulations, in a way that the financial position of the lender does not diminish (without reducing the NPV). This will not lead to an increase in credit losses. For a small number of the most complex cases necessitating concessions by creditors, it is recommended to use the Law *On Financial Restructuring*.

[8] Levelized cost of energy (LCOE) – the net present value of all costs over the lifetime of the asset divided by an appropriately discounted total of the energy output.
[9] IRENA (2020), Renewable Power Generation Costs in 2019, International Renewable Energy Agency, Abu Dhabi.

3.5. Retail Lending Risks

In April, the net retail loan portfolio shrank for the first time in more than three years. The main reason for this was weaker demand for loans. Deteriorating macroeconomic conditions and quarantine restrictions immediately affected the quality of the portfolio. As a result, the migration rate of loans to NPLs will be significantly higher this year than the average for the past few years. In light of this, banks will have to act in advance to make larger provisions for expected loan losses. Any attempts to conceal the actual quality of the portfolio will only produce greater losses in the future. However, the downturn in this segment is unlikely to last long, as economic recovery will spur lending. Consumer loans will grow, albeit at a somewhat slower pace than before the crisis, while mortgages will play an increasingly more important role thanks to lower rates.

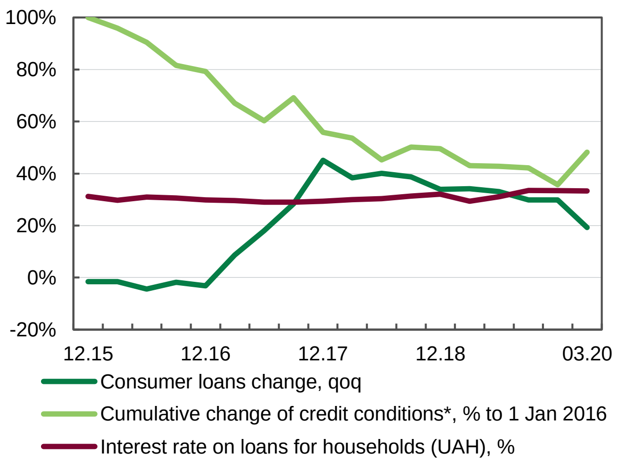
Figure 3.5.1. Net hryvnia retail loans*



* In banks solvent as of 1 June 2020.

Source: NBU.

Figure 3.5.2. Lending standards and consumer lending growth



* The line reflects the cumulative change in the balances of responses to the quarterly Bank Lending survey question about how the criteria for approving

household loan applications have changed during the current quarter.

Source: NBU.

Following three years of robust expansion, growth in retail lending stopped

The current growth rate is only 15% yoy, and in April – May outstanding loans even declined by about 5%. Demand contraction stood behind the deceleration. This is evidenced by the latest Bank Lending Survey. Another argument in favor is that online searches for loan offerings have fallen (see Box 3. Household Demand for Consumer Loans Tumbled Due to Crisis). Compounding the negative dynamic was the suspension of loan issuance at household appliance stores, as those were closed while tight quarantine restrictions were in effect. Demand for loans from nonbank financial institutions fell even more than that for bank loans. This means that there is currently no migration of lending to the nonbank sector.

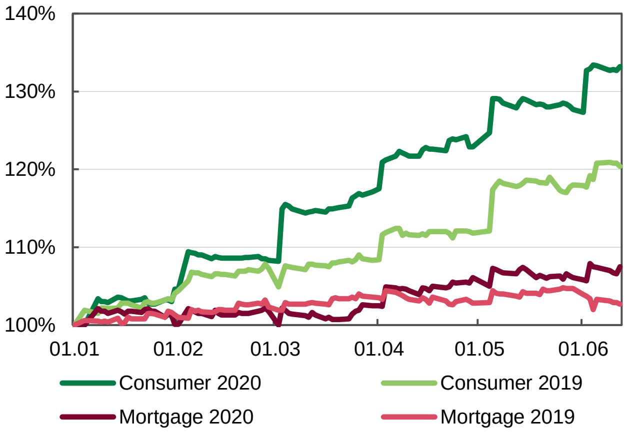
Survey results show that banks somewhat tightened their lending standards as the crisis unfolded. Among other things, banks slightly reduced maximum loan amounts for new borrowers. Yet the tightness of current lending conditions is comparable to early 2019. For the most part, banks did not revise credit card limits for their active customers, and some even increased them. Interest rates on loans have remained unchanged since the start of the year. Thus, it was weaker demand that caused lending to drop.

Falling household income instantly hit loan quality

This trend is comparable to those seen during the previous crises and highlights the risks which the NBU pointed out in its previous financial stability reports. Since the quarantine was imposed, the share of household loans past due more than seven days has risen by about 5%. Historically, a third of such loans (and up to 60% during crises) eventually ended in default. The growth rate of overdue interest payments has been considerably higher than last year. The NBU estimates that about 12% of loans will migrate to NPLs. This is significantly higher than the level banks previously assumed for purposes of calculating loan loss provisions.

Some banks responded promptly by allowing borrowers to restructure their loans during the quarantine. Lending terms were eased for 11% of loans. However, not all banks were proactive. Practically all loan restructurings were performed by five banks that jointly account for half of the loan portfolio. Generally better loan portfolio quality indicators were reported by banks that were more active in conducting preventive restructurings or ran sizable payroll card programs. Expectedly, banks that lent to riskier borrowers ended up with more past-due loans.

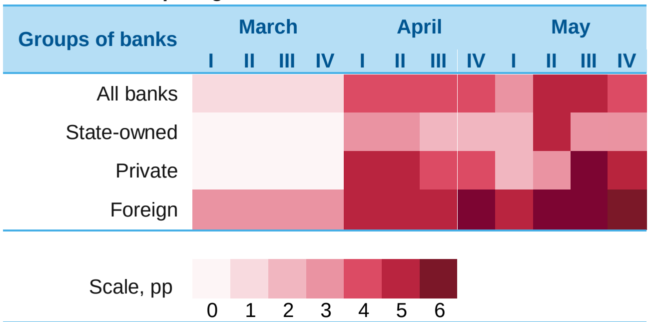
Figure 3.5.3. Change in interests* on hryvnia retail loans that are past due, beginning of the year = 100%



* Interests that are overdue for less than two years as of 1 April 2020. Data for 12 banks that are active in lending to households.

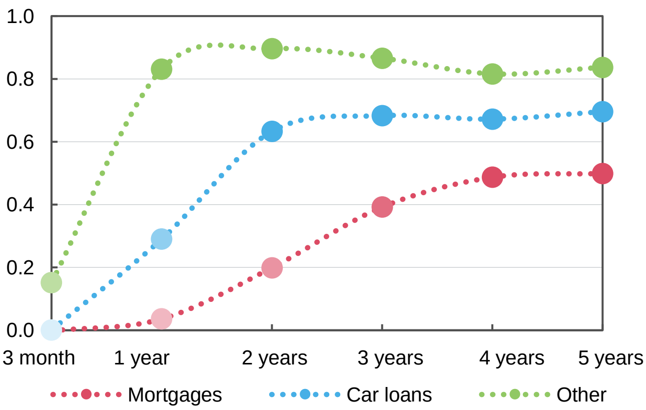
Source: NBU.

Figure 3.5.4. Change in fraction of overdue hryvnia loans to households comparing to 1 March 2020



Source: NBU.

Figure 3.5.5. Change in NPLs fraction in response to macro factors* deterioration by 1%, pp



* Macro factors, which influence change in NPLs fraction, are decrease of real wage, increase in unemployment and consumer price index.

Source: NBU.

Loan restructuring practices should not conceal true quality of portfolios

The current priority is to ensure that banks appropriately reflect their credit risk and loan provisions. Restructurings should only be conducted to provide favorable debt servicing terms while quarantine restrictions are in force. These restructurings should not be used to conceal customers' inability to return to servicing their loans in due time because of a prolonged income loss. A survey of banks showed that they did not increase provisions for retail loans even as a severe crisis was unfolding (see Box 4. Banks Have to Increase Loan Loss Provisions). A slow response will only exacerbate the need to make large one-off provisions in the future. This will produce the so called cliff effect on profitability and capital adequacy indicators. Once the quarantine is lifted and economic activity recovers, the NBU will assess the quality of bank assets to verify the accuracy of reported NPLs and associated loan loss provisions.

Despite the crisis, the NBU remains committed to its decision to introduce increased risk weights for unsecured consumer loans next year. However, contrary to earlier plans, this will not be implemented at the beginning of the year. Current NBU estimates confirm that banks often fail to make sufficient provisions for these loans. Increased risk weights would force banks to hold more capital to cover losses that could arise from such loans.

Historically, consumer loans were quicker to react to changes in macroeconomic conditions than mortgages

The quality of unsecured loans usually deteriorates sharply when wages fall and unemployment rises. The full effect becomes felt within a year. In contrast, mortgages respond to changes in macroeconomic conditions much more slowly, with the impact of a shock lingering for over three years. However, the estimated negative effect is smaller in this case. Thus, loan portfolio losses materialize in their entirety only over time.

Consumer lending will return to growth reasonably quickly. This market has undergone no fundamental changes: banks will continue to find it attractive, and consumers remain in the habit of buying on credit. Consumer lending penetration, albeit rising, makes up only 4% of GDP, still below the equilibrium level of 10%.

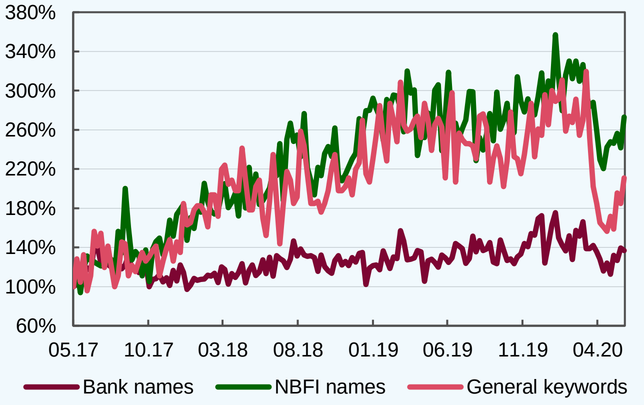
Mortgage lending will pick up steam. Given its small volume, the banking system will not sustain any significant losses from the mortgage portfolio during the current crisis, and banks will be interested in developing this lending instrument. Lower interest rates will stimulate demand. The low transparency of the housing market and the difficulties banks face in foreclosing loan collateral in the event of a borrower's default remain the main impediments to the development of mortgage lending.

Box 3. Household Demand for Consumer Loans Tumbled Due to Crisis

It is sometimes difficult to predict the effect crisis phenomena have on household demand for loans. On the one hand, as real income drops, households find themselves in need of additional income to cover their current expenses. On the other hand, they start to spend less on durable goods. Banks reported the negative effect of the latter in the Bank Lending Survey. The retail portfolio indeed shrank in April – May. The online activity of consumers of financial services also pointed to weaker demand as the number of search queries and traffic on lenders' websites declined. This trend applied to both banks and nonbank financial institutions (NBFIs).

Search engine data and data about traffic on websites of financial institutions were used to study the demand for consumer loans[10]. Remote lending has been on the rise recently, already accounting for a significant share of services provided by banks and NBFIs. Manifesting this trend is the number of searches containing either general phrases (e.g. "online loan", "loan to card") or names of NBFIs, which jumped several-fold in the past three years. Searches for banks also increased, but less impressively.

Figure B.3.1. Number of Google searches, 1 May 2017 = 100%



PrivatBank was excluded because of a large number of searches that were not related to lending.

Source: Google trends, NBU estimates.

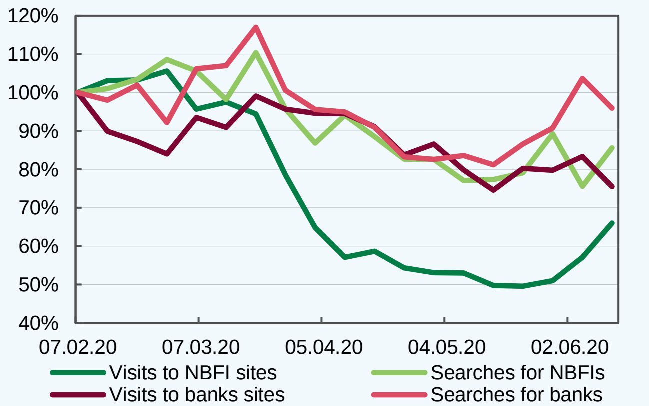
Therefore, the number of searches is an indicator of customer interest in new loans. The number of searches had been growing up until mid-March, i.e. the point when the quarantine was imposed, temporary outflows of deposits began and the hryvnia depreciated rapidly. As of the end of April, the number of general-phrase searches halved, and searches containing bank and NFBI names fell by a third. However, searches returned to growth already in May.

Website traffic saw similar dynamics. Visits to bank websites had fallen by 25% by mid-May, followed by a gradual increase. Traffic on NBFI websites almost halved. The greater online popularity of banks could be explained by their considerably wider range of services including P2P transfers, deposit transactions, currency exchange, and online shopping. At the same time, NBFIs' website traffic only reflects the demand for online loans, mostly consumer loans.

The number of visits to the websites of some banks increased, whereas the number of Google searches fell. This can occur when visits to a website come from paid ads that are related to but not directly dependent on the content of the search query. Therefore, this might indicate an increase in advertising traffic. At the same time, NBFIs saw a decline in the number of website visits from paid Google ads, so these lenders are currently less active in terms of advertising. Since the start of the quarantine, banks have encouraged customers to use mobile apps. However, downloads of the most popular apps have been decreasing since late March. It should be noted that a similar trend was observed in other countries as well.

Overall, almost all of the analyzed financial institutions show similar dynamics in terms of both website visits and app downloads. In other words, there are no signs of users switching between institutions.

Figure B.3.2. Number of website visits and searches for bank and NBFI names, 1 February 2020 = 100%



Visits to the websites of Oschadbank and PrivatBank were excluded as those are heavily influenced by the cycles of salary and pension payments and payments of utility bills.

Source: Google trends, SimilarWeb, NBU estimates.

To conclude, the demand for consumer loans had indeed been on the way down until mid-May but then started to recover. While some banks have stepped up their marketing activities, NBFIs have been much slower. However, given the nature of consumer lending, both banks and NBFIs are likely to more actively encourage customers to use their services in the future in order to maintain their customer base and profitability.

[10] The assessment was made for 12 banks with the largest consumer loan portfolios and 12 financial companies with the highest website traffic. Banks were weighted by portfolio size; financial companies were weighted by website traffic.

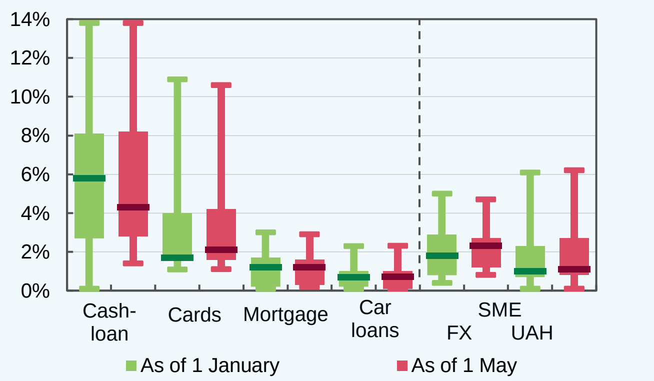
Box 4. Banks Have to Increase Loan Loss Provisions

IFRS 9 requires that financial institutions respond to deteriorating macroeconomic forecasts in a timely manner by increasing their provisions. Nevertheless, the first months of the crisis have clearly shown that banks ignored changes in macroeconomic conditions and were in no hurry to increase expected credit losses. In most cases, this manifests the need for a sweeping revision of the methods that banks use to measure credit losses.

Under IFRS 9, allowances for expected credit losses depend on projected macroeconomic conditions. In mid-March, the domestic economy entered a recession. Concurrently, most leading analytical institutions sharply downgraded their macroeconomic expectations – the current consensus is that GDP and corporate and household incomes will fall and unemployment rise in the wake of the pandemic and associated restrictions. Naturally, this should have resulted in an increase in expected credit losses and thus loan loss provisions. Banks should have reflected this in their financial statements for Q1 2020.

In reality, banks made virtually no adjustments to their credit loss projections compared to the start of the year. Some banks even reported slightly better assessments. This contradicts the general logic of the impact of macro-conditions on credit risk, which was confirmed by observations already in April and May. As a result, banks need to substantially revise their approaches to calculating expected loss parameters.

Figure B.4.1. Distribution of expected loss estimates for hryvnia retail and SME loans at stage 1[11] according to IFRS 9



* Faces of the rectangle represent the first and third quartiles. The line inside the rectangle is the median. The upper and lower "whiskers" outside the rectangle display the maximum and minimum values.

Source: survey of 15 banks conducted in June 2020, NBU estimates.

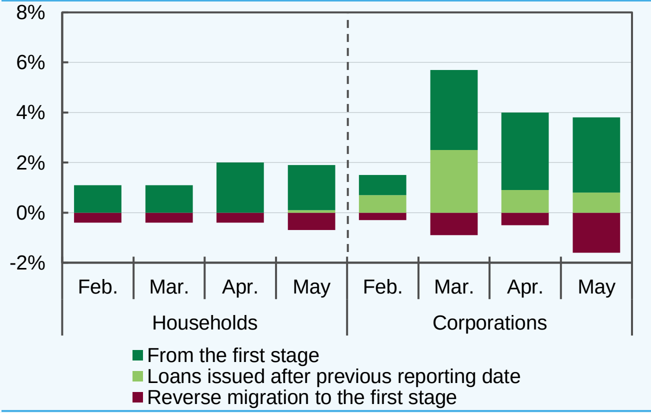
When measuring expected losses, financial institutions need to apply a baseline scenario that envisages a deterioration in economic conditions. IFRS 9 also allows financial institutions to use several alternative macroeconomic scenarios, such as favorable or extremely adverse scenarios, setting different probabilities for them. Currently, leading forecasters agree that the probability of macroeconomic developments deviating from the baseline scenario toward a negative one is much higher than the probability of a milder recession. For this reason, higher weights should be assigned to more adverse scenarios.

It is still hard to accurately predict how long the ongoing crisis will last and how damaging it will be. The acute phase of the crisis will be over when quarantine restrictions are relaxed. That said, negative effects for many sectors of the economy will linger for much longer. As a result, the financial standing of many companies and households will worsen over a one-year horizon. This should naturally result in an increase in expected credit losses on loans at the stage 1 for all types of mass products (consumer loans, mortgages, and loans to SMEs).

For large corporate debtors, it is important to take into account their lines of business, the impact of the current crisis on borrowers, and risks to recovery. And with that in mind, prudent scenarios of credit risk losses should be built.

The NBU expects that a significant increase in credit risk during the crisis will lead to a rise in the amount of loans falling within stage two according to IFRS 9. For such loans, banks are required to calculate lifetime rather than 12-month expected credit losses. That said, the criteria for loans migrating from stage one to stage two should be set judiciously. A change in macroeconomic conditions is not an unconditional trigger for that. Nor are short-term restructurings or a suspension in loan servicing due to quarantine restrictions. But repeat restructurings after the quarantine has been lifted or relaxed in most cases signify a significant increase in credit risk at the very least.

Figure B.4.2. Loan migration to stage 2 under IFRS 9



* The ratio of exposure at default to total loans at the first stage as of the previous reporting date.

Source: NBU.

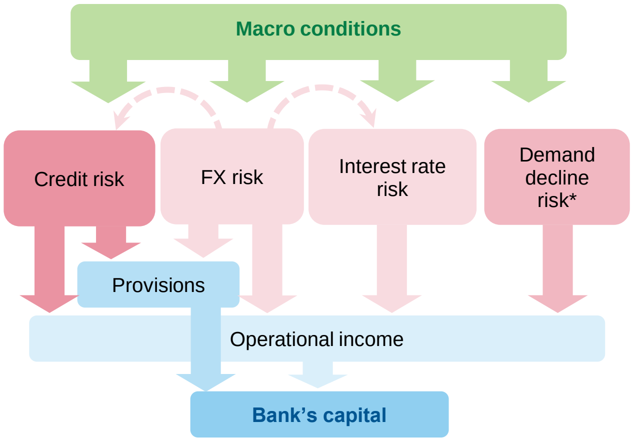
Overall, a quick analysis reveals that banks' models for measuring expected credit losses are not always adequate. For the most part, these models are insensitive to pronounced changes in macroeconomic inputs. This implies the threat that credit risk will not be recognized and relevant allowances made in due time.

[11] Loans with no significant increase in credit risk since initial recognition.

3.6. Assessment of Banks' Crisis Resilience – Stress Test

Although most of the quarantine restrictions have already been lifted, they set off a chain of adverse macroeconomic developments that will affect many banks' capital levels in the coming year. The findings of an express stress test conducted by the NBU support this conclusion. Credit risk will have the strongest impact: its increase for the portfolio of loans to small and medium-sized businesses will be substantially higher than what previous stress tests assumed. Yet the impact of interest rate risk and FX risk will be moderate. The low interest rate risk is underpinned by banks' stable funding base, while FX risk is mitigated by the prudent monetary and FX policies and well-balanced structure of assets and liabilities. Another negative factor is the falling demand for banking services, which will depress banks' fee and commission income. Nevertheless, many banks will go through this period without breaching capital adequacy requirements, being supported by their higher initial capitalization and stronger operating performance.

Figure 3.6.1. Impact of macroeconomic conditions on bank capital



* A decline in demand for banking services modelled through a drop in fee and commission income.

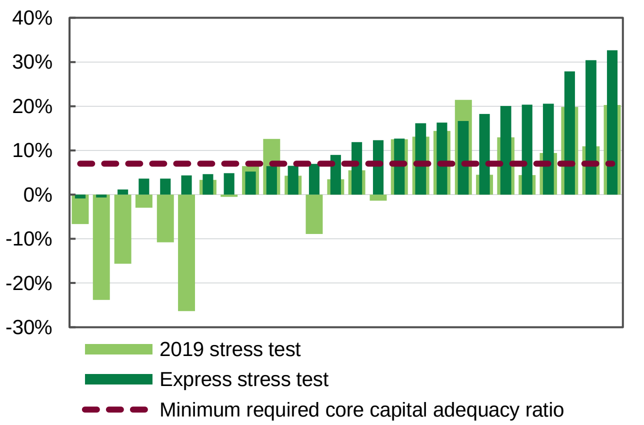
Sourse: NBU.

Table 3. Adverse stress test scenarios, change in % yoy

Indicator	2019 stress tests assumptions	Express stress test assumptions
Real GDP	-4.1	-8.7
Unemployment, %	9.8	9.8
Exchange rate (UAH/USD)	-23.2	-5.2

Sourse: NBU.

Figure 3.6.2. Core capital adequacy ratio for individual banks over one-year horizon: based on 2019 stress test and express stress test



Sourse: NBU.

Risks to banking system will rise

The NBU conducts annual stress tests of the largest financial institutions, this practice started in 2018, in order to measure underlying risks. This year, the NBU cancelled its regular stress test in order not to divert its own and banks' resources needed to promptly respond to urgent challenges posed by the pandemic. However, it is important for the NBU to understand how prepared banks are for the current crisis, whether they will retain their financial sustainability and continue to lend in the challenging macroeconomic environment.

To approximate the potential impact of the ongoing crisis on banks, the NBU conducted an express stress test of the same institutions that were diagnosed in 2019[12]. Together, these banks account for 91% of total sector assets. Calculations were based on their financial statements as of 1 May 2020.

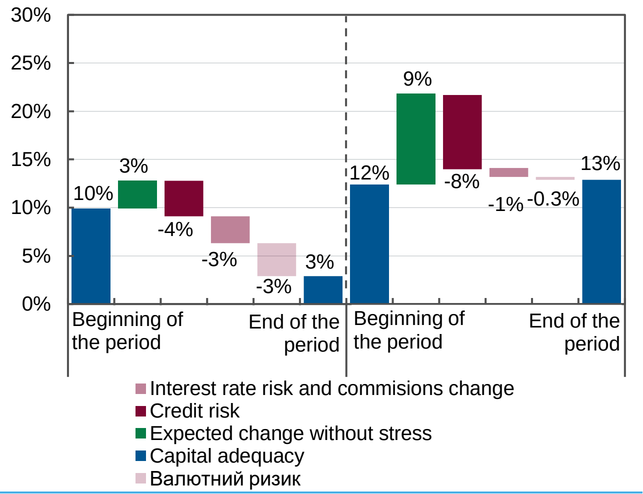
The underlying macroeconomic parameters of the express stress test were slightly worse than those currently forecast by the NBU. As uncertainty about the depth and duration of the current crisis is still high, the NBU used conservative assumptions. The results of the express stress test should be interpreted only in the context of the assumptions underlying the simulation. Further, these findings should not be taken as a forecast of banks' financial indicators, as they reflect estimates of the impact of the crisis on capital only through limited channels. Moreover, the stress test was based on the static balance sheet assumption, namely that the loan portfolio changes solely as a result of quality deterioration or exchange rate fluctuations. The express stress test covered a one-year horizon. The NBU expects almost all negative consequences of the current crisis and associated quarantine restrictions to materialize within a year. In addition to the main scenario, the NBU also estimated how bank indicators would have changed if the positive macroeconomic trends seen in 2019 had continued into the current year. These estimates were used as a comparison base.

Express stress test shows most banks are prepared for crisis

The assessments for most banks are better than the respective results of the 2019 stress test. Apart from different macroeconomic parameters used, this improvement also

[12] A-Bank, Alfa-Bank, Investment and Savings Bank, Vostok Bank, Globus Bank, Idea Bank, Industrialbank, Credit Dnipro Bank, Crédit Agricole Bank, Kredobank, Megabank, International Investment Bank, MTB Bank, OTP Bank, Oschadbank, Pivdennyi Bank, PrivatBank, Procredit Bank, First Ukrainian International Bank, Raiffeisen Bank Aval, Tascombank, Ukrgasbank, Ukreksimbank, UkrSibbank, Universal Bank, Forward Bank.

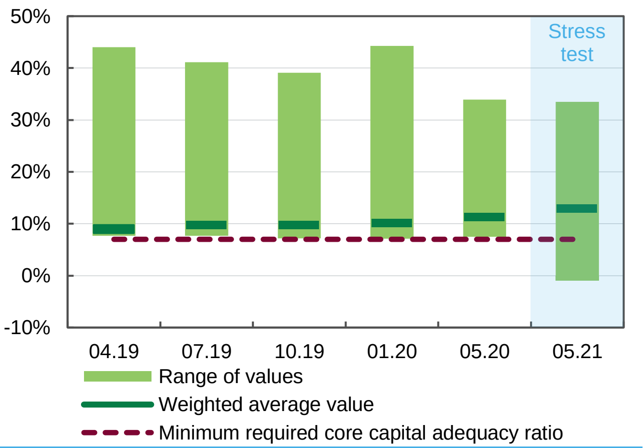
Figure 3.6.3. Factors of change in core capital adequacy ratio over one-year horizon: 2019 stress test vs. express stress test



Based on results of the 2020 express stress test, which used data as of 1 May 2020 for banks that had been stress-tested in 2019 (excluding Russian-owned banks), over a one-year horizon.

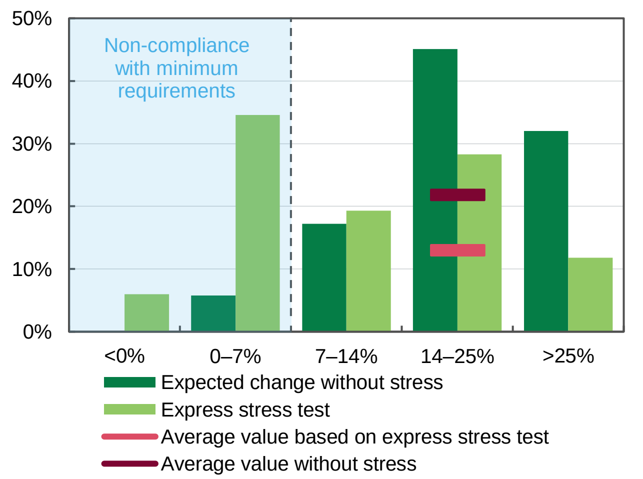
Sourse: NBU.

Figure 3.6.4. Distribution of core capital adequacy ratio



Sourse: NBU.

Figure 3.6.5. Distribution* of core capital adequacy ratio: no-crisis scenario and based on express stress test assumptions



* Modelled using 1,000 stress test simulations, assuming a normal distribution and volatility of scenario parameters at 10% of indicator values.

Sourse: NBU.

reflects banks' higher initial level of capital adequacy and better operational efficiency.

Overall, 9 out of the 26 tested banks could require additional capital. They account for 30% of total sector assets, including two state-owned banks representing 25% of assets. Their potential capital needs over one year add up to UAH 10.3 billion. This is a much lower amount compared to the 2019 stress test. Last year's assessments produced potential capital needs of UAH 14.1 billion under a baseline scenario that assumed the economic growth cycle would continue, and UAH 37.4 billion under an adverse scenario envisaging an economic downturn and sharp currency depreciation. The difference between the 2020 and 2019 assessments is due to measures a number of banks have taken to increase their resilience.

As was the case before, banks with large concentrations of corporate loans comprised the highest-risk category. Banks lending solely to households constituted another risky group.

One peculiarity of the current crisis is that risks to financial institutions actively lending to small and medium-sized enterprises (SMEs) will increase sharply. The preceding regular annual stress tests did not assume any significant losses arising from the SME segment, as it had been resistant to shocks during previous crises.

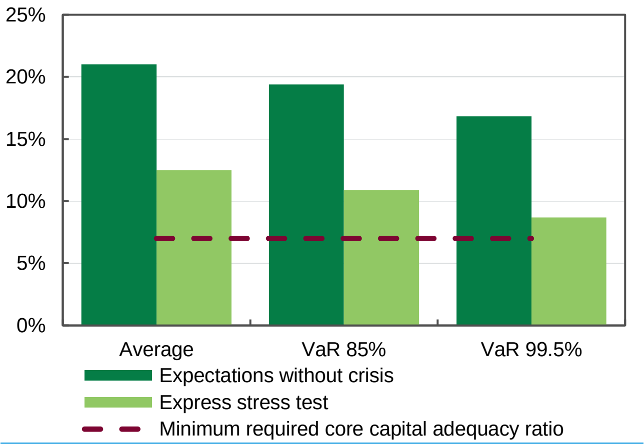
Express stress test assumes materialization of same risks as complete annual stress test

That said, there are several important differences:

- Credit risk has the strongest impact on capital. It is modeled through the migration of a portion of performing loans to non-performing, respective provisioning, and the loss of a portion of interest income. This year, the migration rate is considerably higher for corporate loans.
- The effect from the materialization of interest rate risk in the express stress test is insignificant compared to estimates from the 2019 stress test. The express stress test did not assume any shock changes in either loan or deposit rates. Last year's regular stress test produced significant interest margin and spread compression under the adverse scenario due to deposits growing more expensive.
- The risk that demand for banking services will shrink was modelled through a 10% drop in fee and commission income. In contrast, the regular stress test assumed that fee and commission income would rise moderately due to high inflation.
- FX risk was modelled on the assumption that hryvnia depreciation would be moderate. Given that FX market conditions have remained favorable since the crisis hit, the impact of this risk is also minor. Nevertheless, it will somewhat increase the debt burden while also worsening the servicing of FX loans.

Loan quality deterioration will have most severe impact on capital adequacy

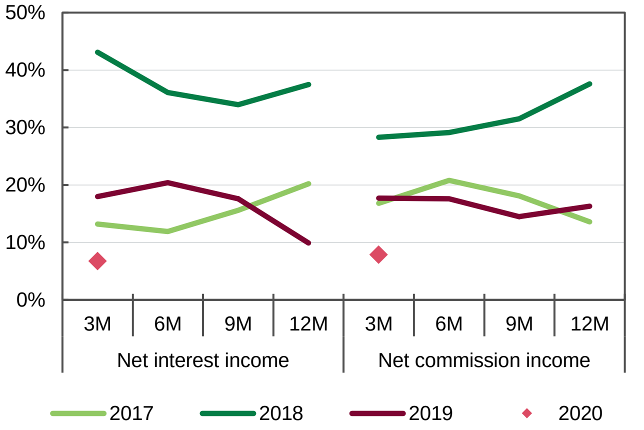
Figure 3.6.6. Weighted average* core capital adequacy ratio over one year: no-crisis scenario and based on express stress test assumptions



* Weighted by the size of risk-weighted assets. Modelled using 1,000 stress test simulations, assuming a normal distribution and volatility of scenario parameters at 10% of indicator values. VaR indicates the value below which the weighted average capital adequacy ratio drops only in 15% and 0.5% of cases, respectively.

Sourse: NBU.

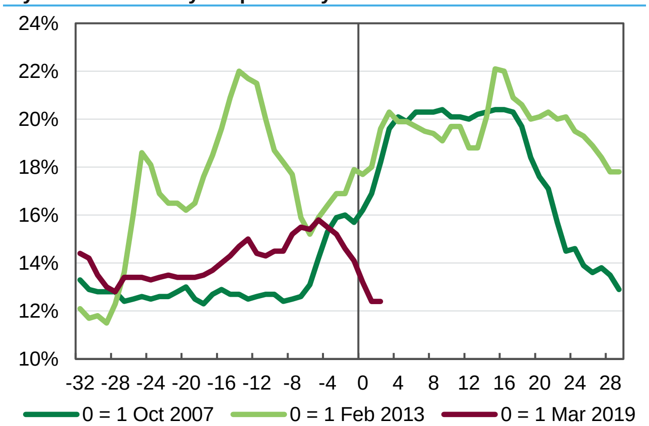
Figure 3.6.7. Change in net interest and net fee and commission income, yoy



* Taking into account adjustment entries, except for 2019 and Q1 2020.

Sourse: NBU.

Figure 3.6.8. Interest rates on new household term deposits in hryvnia with maturity of up to one year



X axis shows number of months.

Sourse: NBU.

The share of loans becoming nonperforming was estimated at 10–15% across segments. Estimates show that the highest default rates will be in the segment of FX corporate loans. The weaker servicing of these loans already seen during the spring months supports this assumption. About 10% of the portfolio that was performing in early March became more than seven days overdue in the course of three months, including 6% of loans being more than a month overdue. The performance of hryvnia corporate loans has been expectedly better but also deteriorating.

Total losses from materialization of the corporate portfolio's credit risk will be greater than those estimated by the 2019 stress test. The main reason for this is the considerable impact of the quarantine restrictions on SMEs. In the past, the SME loan portfolio was more stable than other portfolios due to its high diversification by sector and region. However, the quarantine restrictions and sharp demand contraction affected industries where the bulk of companies are small or medium in size, such as trade, hotels and restaurants, etc. Many corporate borrowers completely lost their income during the quarantine and will take a long time to recover.

About 12% of hryvnia household loans could migrate to the non-performing category, which is commensurate with the assumptions used in last year's stress test. The retail loan portfolio usually responds sharply to crises, resulting in significant losses for banks with a larger share of unsecured household loans.

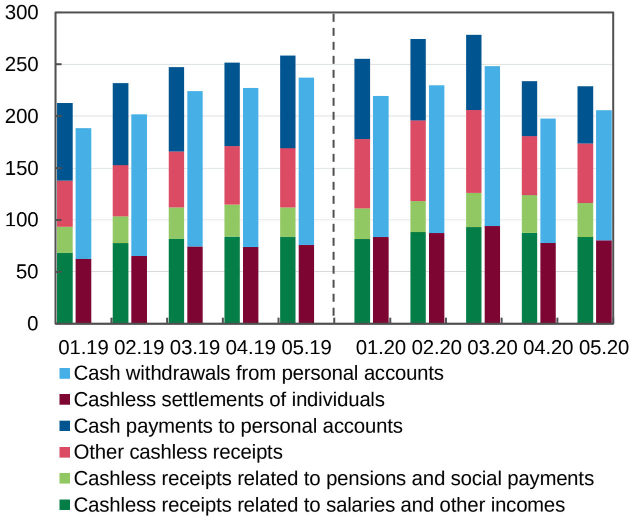
Net interest income will drop solely due to loan quality deterioration, interest rate spread will compress moderately

The weaker quality of consumer loan portfolios will be the main factor behind the decline in bank incomes. This is because this segment currently generates a third of banks' total interest income. In contrast to all previous crises, banks are seeing no deposit outflows. As a result, they are not forced to sharply raise their deposit rates in order to retain customers the way they did during all previous crises. Moreover, low inflation and banks' stable funding base are helping push deposit rates down. This trend will continue, enabling banks to maintain reasonable interest rate spreads for some time even despite lower loan rates. Therefore, the impact of interest rate risk shown by the express stress test is significantly smaller than in the 2019 stress test. This is one of the differences that singles out the current crisis from all previous downturns while also manifesting the financial sector's higher resilience.

Fee and commission income will shrink noticeably

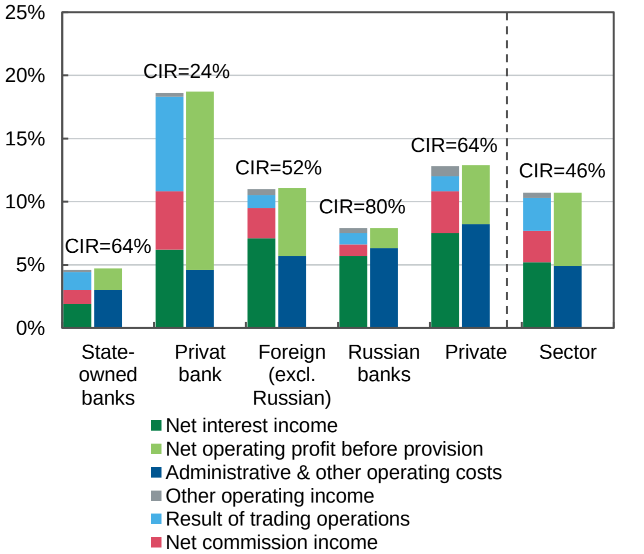
The express stress test assumed a 10% drop in fee and commission income compared to 2019. There are several reasons for this. Banks are encouraging their customers to make cashless payments and use other online services by temporarily reducing fees on such transactions. The volume of purchase and sale transactions, including across retail chains, decreased, meaning banks' fee income from

Figure 3.6.9. Average amounts credited to, and debited from, household accounts, UAH billions



Sourse: NBU.

Figure 3.6.10. Ratio of net operating income earned in first four months of 2020* to assets, by bank groups



* Annualized.

Sourse: NBU.

cashless payments also fell. Since mid-March, there has been a sharp decline in operations with household bank accounts, such as crediting household accounts with wages. Many banks introduced preferential terms for servicing payment terminals and reduced other fees and commissions for SMEs. Falling demand for consumer loans will have a significant negative impact on the fee and commission income linked to such loans.

Summing up, credit risk will be the major factor influencing banks' profitability and capital over the next year. Banks' provisions need to increase significantly compared to previous years. Net interest and fee and commission income at most banks, albeit declining, will be sufficient to cover their operating expenses. Considering moderate fluctuations in the hryvnia exchange rate, the impact of FX risk will be minor. Moreover, most financial institutions have a balanced currency structure of assets and liabilities, which makes them much less sensitive to adverse FX market events. Overall, the current crisis has produced an entirely new type of adverse scenario: materialization of macroeconomic shocks without major currency depreciation. Existing capital cushions will enable most banks to meet the relevant minimum requirements despite the crisis. Other banks' capital needs will not be critical.

Banks must take action to minimize fallout from crisis

Banks need to actively manage their loan portfolios and operating activities in order to minimize the adverse impact of the crisis. Among other things, they should:

- Control and respond in a timely manner to portfolio quality deterioration by offering borrowers loan restructurings. The NBU has allowed banks to use flexible restructuring tools, such as loan repayment holidays, without recognizing borrowers as being in default. All steps taken by banks should help restore the financial health of borrowers without resulting in a significant loss in the net present value of loans.
- Make appropriate and timely provisions for impaired loans and loans for which a significant increase in credit risk has been identified. Although there has been a significant increase in expected credit losses since the start of the year, banks failed to recognize these losses in their financial statements for Q1.
- Decrease deposit rates accordingly with changes in the macroeconomic environment and the key policy rate. Slower inflation and funding base stability are enabling banks to substantially cut their funding costs.
- Enhance operating performance, particularly through using online instruments. The quarantine has shown that there is significant potential for reducing branch network costs by moving operations online.

Box 5. Interest Rates on Corporate Loans are Falling Gradually

The inflation targeting regime has made it possible to curb inflation, anchor inflation expectations of households and businesses, and reduce interest risks. Despite the crisis, the NBU remained committed to its monetary policy easing cycle, having cut its key policy rate by 7.5 pp since the start of the year. Through changing the key policy rate, the NBU attempts to influence interest rates for borrowers. To study the relationship between the key policy rate and commercial rates, the NBU conducted a study using autoregressive distributed lag models. Its findings show that corporate loan rates are sensitive to changes in the key policy rate. The most sensitive are interest rates on loans to subsidiaries of international companies, short-term loans, and loans issued by foreign-owned banks.

Interest rates on hryvnia corporate loans are driven by four main factors: the cost of funding, risk levels (including credit risk), the margin to cover administrative expenses, and the rate of return. A survey of banks[13] shows that risk costs incorporate into interest rates average 2 pp. Surcharges to cover operating expenses are the same. To ensure profitability, banks add up to 3 pp. Nevertheless, the main component is the cost of funding, which is determined by macroeconomic conditions.

Slower inflation creates an environment enabling the NBU to cut its key policy rate. Deposit rates have responded to the key policy rate cut, albeit more slowly. The correlation between these indicators is moderate, while the relationship between interest rates on hryvnia corporate loans and the key policy rate is strong. Specifically, it was decided to test the hypothesis that the loan rates are sensitive to the key policy rate by using autoregressive distributed lag models.

Overall, the relationship between interest rates on corporate loans and the key policy rate is rather strong and statistically significant. The transmission rate shows that a 1% cut in the key policy rate results in a 0.83% decrease in loan rates. However, this effect varies among borrower groups.

Table 4. Long-term impact of key policy rate on loans to non-financial corporations

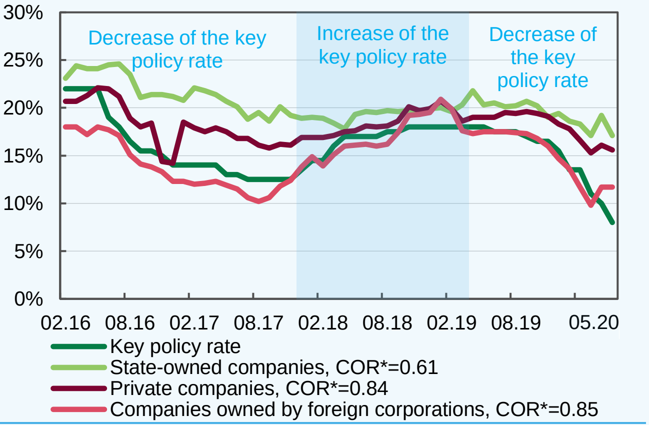
Loan group	Transmission rate
Total corporate loans	0.83***
By type of ownership (excluding Russian-owned banks):	
Foreign-owned companies	0.83***
Private companies	0.88**
State-owned companies	0.19
By maturity:	
Up to one month	0.90***
From one to six months	0.85***
From six to 12 months	0.67**
Over one year	0.21
By loan size:	
From UAH 2 to 10 million	0.83***
Over UAH 60 million	1.01***

The coefficients' significance levels are ***99.9%, **99%, and *95%, as estimated based on t-statistic values.

Source: NBU.

In particular, loans to subsidiaries of international companies are the most sensitive to changes in the key policy rate. Usually, these companies are financially stable and attract short-term loans to replenish their working capital. The underlying risks for banks are therefore insignificant. As a result, banks can lend to these companies at interest rates that are close to the key policy rate. It is worth mentioning that loan rates for subsidiaries of foreign companies are symmetrically sensitive to both decreases and increases in the key policy rate. While the cost of loans to domestic companies responds more strongly to decreases in the key policy rate.

Figure B.5.1. Interest rates on hryvnia loans to non-financial corporations (all banks), % per annum



* COR is the rate of correlation with the NBU key policy rate.

Source: NBU.

Interest rates charged by foreign-owned banks are the most sensitive to changes in the key policy rate, while those charged by state-owned banks are more inert. The cost of long-term loans is significantly less sensitive to key policy rate changes, in particular due to uncertainty over macroeconomic conditions and the overall level of interest rates in the future. Key policy rate changes affect interest rates on both small and large loans.

Although quarantine restrictions temporarily stopped the decline in interest rates, there are currently no underlying factors to break the trend towards a drop in loan rates. After all, the cost of funding will continue to decrease. This will be fueled by moderate inflation and the absence of threats of large deposit outflows. Moreover, competition for reliable borrowers will also push banks to cut loan rates. For more risky borrowers, interest rates will decline slower.

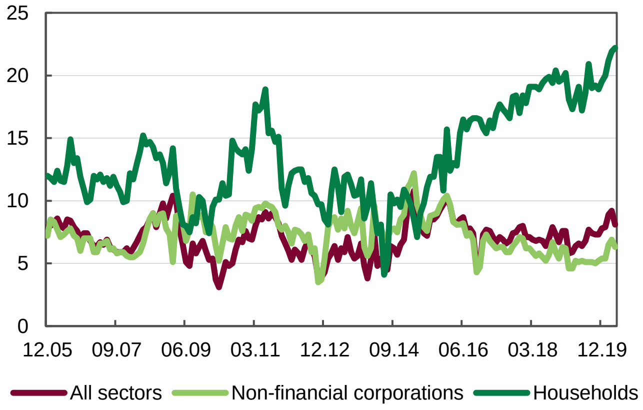
Access to long-term refinancing loans and the launch of interest rate swaps will enable banks to issue loans at floating rates more actively. In turn, this will strengthen the relationship between the key policy rate and loan rates charged by commercial banks.

[13] A survey of top 21 banks regarding loan rate components conducted in September 2019.

3.7. Resumption of Lending and Post-Crisis Challenges for Banks

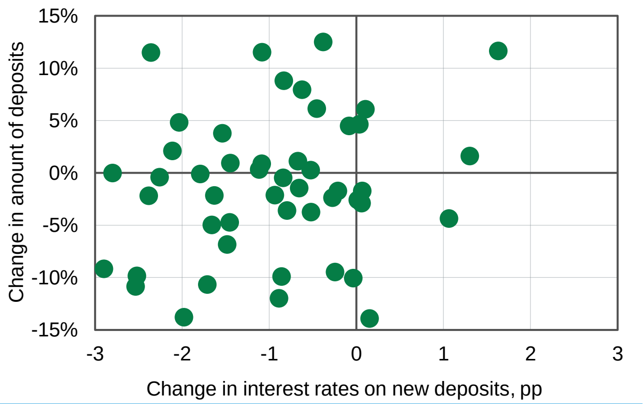
After overcoming the effects of the crisis, banks will remain fit to maintain lending to the economy. This will be supported by banks' sufficient capital and liquidity buffers and by the development of long-term refinancing instruments and interest rate swaps. Lower credit costs will stimulate demand for loans. At the same time, working in a low interest rate environment will pose new challenges for financial institutions, as interest rate spreads will narrow. Other trends that will affect bank business models are the digitalization of basic services and automation of internal processes.

Figure 3.7.1. Spread between new hryvnia loans and deposits of residents, pp



Source: NBU.

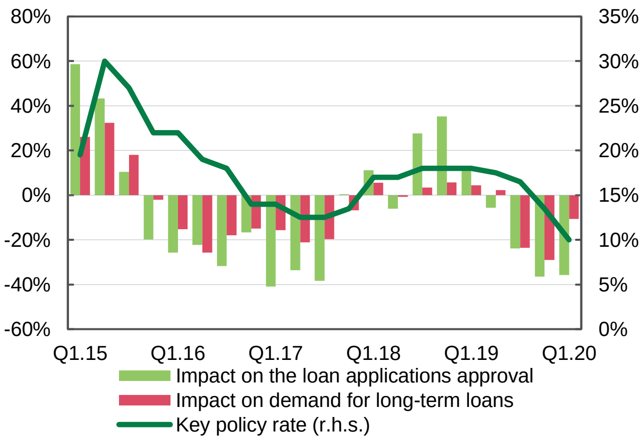
Figure 3.7.2. Change in total amount of deposits and cost of new hryvnia term deposits of retail customers between 10 March and 10 June 2020



Solvent banks that attract hryvnia retail deposits.

Source: NBU, daily data.

Figure 3.7.3. Impact of interest rates* on lending conditions for corporate borrowers



* Negative values mean lower pressure of interest rates on approvals of loan applications and demand for long-term loans.

Source: NBU.

Banks are ready to continue lending to economy

Banks' sufficient capital and liquidity buffers will support the continuation of lending. Consumer lending, which has been the most dynamic segment in recent years, will return to growth and remain attractive for banks. In European countries, the penetration rate of consumer loans is about 10% of GDP. It will take long before Ukraine reaches this level from its current 4%. However, growth will slow as the segment becomes more saturated. Therefore, banks will shift to less profitable but more stable lending segments, whose potential is practically untapped. Mortgage lending is one such segment for retail banks.

Initially, because of the crisis, the share of domestic government debt securities in bank assets will grow, mainly at state-owned banks (read more in Crisis May Adversely Affect Business Models of State-Owned Banks). During the crisis, financial institutions will also increase their portfolios of loans to small and medium enterprises. Government programs to support small businesses through loan guarantees or interest rate compensations will raise banks' interest toward this segment, despite a significant increase in associated credit risk.

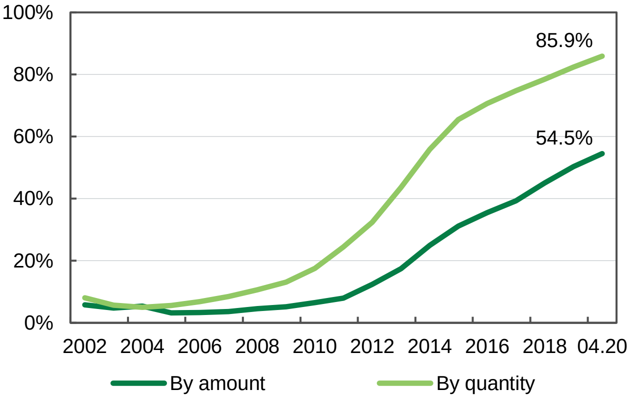
Era of high rates and spreads becoming history

The dynamics of deposit interest rates already reflect the new reality: at the majority of banks, rates will soon drop to the single digits. All prerequisites for this to happen are in place: low inflation, stable inflation expectations, confidence in the banking sector, and key policy rate cuts. The decrease in interest rates will reduce the role of price factors in competition. Depositors will prefer more reliable banks despite lower yields. This pattern has already been observed for several years in the segment of foreign currency deposits. Most households keep their foreign currency funds at stable banks, although the yields these banks offer keep trending lower.

In the absence of new macroeconomic shocks, interest rates on corporate and retail loans will also drop. Competition among banks for high-quality borrowers will intensify. Financial institutions note that the positive impact of lower rates on demand for corporate loans has grown markedly since H2 2019.

At the same time, lower interest rates pose new challenges for banks. They will find it increasingly difficult to exploit high interest rate spreads and earn large net interest income. Bank should take this medium-term risk into account in their strategies. In particular, banks should respond by cutting their operating expenses.

Figure 3.7.4. Share of cashless transactions using electronic means of payment issued by Ukrainian banks

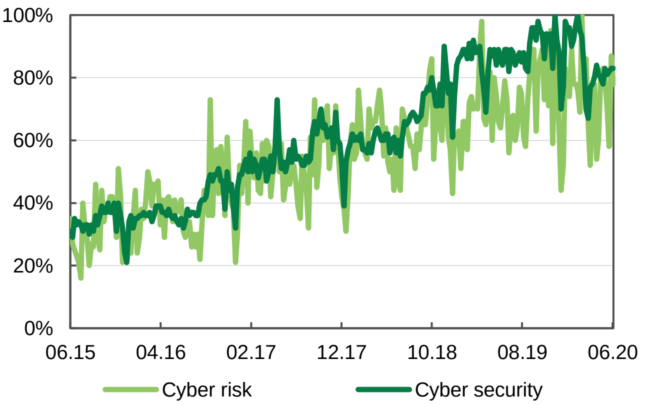


* Transactions include cashless transactions and cash withdrawals.
Source: NBU.

Figure 3.7.5. Rankings of major risk factors in financial sector*

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

Figure 3.7.6. Number of Google search queries, % of maximum number of queries for period



Source: Google trends.

Share of long-term loans will grow

One of the enduring obstacles to lending recovery is the lack of long-term funding. Banks raise funds mainly for a short term: the residual maturity of three quarters of total hryvnia liabilities is up to one month. Increasing the maturity of liabilities is a long-term issue, as the Ukrainian market has virtually no relevant resources at the moment. The NBU's launch of long-term refinancing instruments will address this problem in part. The NBU will provide such loans through regular tenders at a floating rate linked to the key policy rate. In addition, banks will have at their disposal an instrument to hedge against the risks of interest rate changes – the interest rate swap. It will allow financial institutions to offer customers products at a fixed interest rate while raising long-term funding at a floating rate. In the future, the convenience and benefits of using interest rate swaps will also facilitate interbank transactions.

Digitalization is a new normal for all banks

Quarantine restrictions boosted growth in cashless transactions, which had already been on the rise in recent years. In the future, the digital transformation will cover more and more aspects of customer service. The promptness in developing convenient remote services will become an increasingly important competitive advantage. As a result, the need for bank branches will gradually decrease. The introduction of digital technologies will ultimately reduce operating expenses. Therefore, banks should invest time and money to bring their processes and services online already in the near future.

Banks refocused attention on cybersecurity

The increase in the number of customers using online services raises the risk of cyber fraud. Top managers of financial institutions polled by the NBU identified cyber threats as one of the largest sources of systemic risk. Banks need to strengthen their information protection and fraud detection systems. The focus is on minimizing consumer risks and protecting personal data. Banks should pay special attention to improving the digital culture of vulnerable customer groups, especially senior people.

Equally important for banks is to protect themselves from relevant risks. Requirements have tightened significantly for the system of financial monitoring and operational risk management. Rapid changes in macroeconomic conditions require immediate adaptation of credit risk assessment models. Banks should automate all their procedures in order to save on allocating substantial resources for the internal control system and not waste time when performing their core operations. Financial institutions will be able to effectively perform these tasks by using big data and machine learning.

Box 6. Crisis May Adversely Affect Business Models of State-Owned Banks

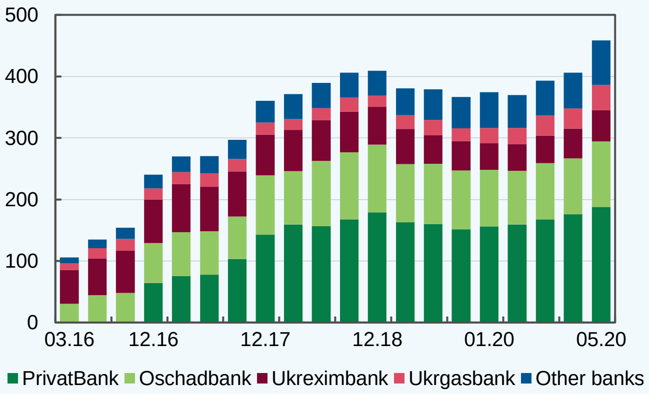
During the crisis, state-owned banks increased acquisitions of domestic government debt securities and stepped up lending to municipalities and for infrastructure projects. Access to NBU refinancing loans enabled them to scale up these transactions. Such practice can be considered acceptable this year due to the sharp budget deficit expansion and difficulty raising funds from other lenders. However, it may have undesirable long-term implications for the business models and investment attractiveness of state-owned banks. Therefore, this practice should be abandoned in the post-crisis period.

This year, the state budget deficit increased to a record level. It was due to the need to support the economy, help vulnerable segments of the population, and finance measures to combat the spread of COVID-19. Also in the pipeline for this year are large-scale infrastructure projects, including construction of roads by state-owned company Ukravtodor, which require significant funding.

Thanks to renewed cooperation with the IMF, Ukraine stands to receive significant volumes of external financing. This funding alone will not cover the budget deficit. The government will need to borrow domestically by placing its debt securities. In contrast to the previous year, foreign portfolio investors are currently showing virtually no appetite for government bonds. This leaves it to the banking sector to play an important role in financing the budget deficit.

State-owned banks have traditionally been the largest holders of domestic government debt securities. As at the end of May, they held UAH 386 billion of bonds on their balance sheets, or 84% of the total volume held by Ukrainian banks. Out of that amount, UAH 231 billion is the fair value of bonds that state banks received as recapitalization in previous years. During March – May, state-owned banks increased investments in domestic government debt securities by UAH 60 billion. Private banks have been much less active in the domestic government debt market to date; nevertheless, their spare liquidity capacity may drive demand going forward.

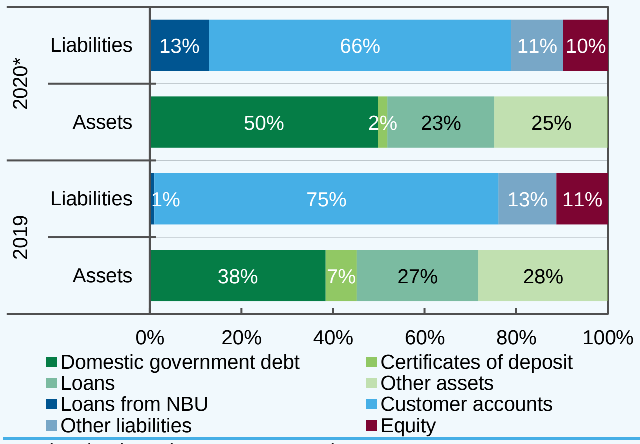
Figure B.6.1. Volumes of domestic government bonds in banking system, UAH billions



Source: NBU.

Active purchases of government bonds by state-owned banks will significantly change their asset structure. According to NBU estimates, by the end of 2020, the share of government bonds may increase up to 50% of their total assets. Although these instruments carry no credit or currency risks, their growing share will have certain negative implications. In essence, state-owned banks may become quasi-funds financing government programs. This will diminish their primary function of lending and force them to adjust their business models, reducing the share of regular banking business in operating income. Simultaneously, the share of funding from the NBU in their liabilities will increase. The cost of this funding depends on the key policy rate, meaning additional interest rate risk.

Figure B.6.2. Estimated impact of domestic government bonds purchased with NBU refinancing on state-owned banks' balance sheets



* Estimation based on NBU assumptions.

Source: NBU estimates.

Another undesirable implication is the further increase of the state's share in the banking sector. After the sector was cleaned up and PrivatBank nationalized, the share of state-owned banks exceeded half of total assets in the banking system. The state has clearly committed to reduce its presence. However, the growing asset share of domestic government bonds at state-owned banks will make this goal harder to achieve.

Substantial financing of the budget deficit and infrastructure projects by state-owned banks this year is unavoidable as an element of short-term crisis relief policy. It is extremely important that acquisitions of domestic government debt securities are made on market terms and are rational. However, in the coming years, this approach should be abandoned in order to ensure that state-owned banks remain financially resilient and attractive to investors.

3.8. Changes in the Regulatory Environment

In line with Ukraine's commitments to the IMF under the new cooperation program, Parliament passed priority financial sector legislation in H1 2020. One of the new laws makes bank resolutions irreversible. The other, on the land market, allows, for the first time ever in Ukraine, to pledge land as collateral for bank loans. The NBU published new requirements for financial monitoring and introduced crisis relief measures in response to the pandemic.

Parliament passed important financial sector legislation that:

- **improved some banking regulation mechanisms**, in part by making it impossible for insolvent banks to come back to the market. Were an NBU decision to resolve a bank found wrong, the bank's owners would be entitled to file for damages. Damages would be determined based on an independent auditor's report. The new law streamlines the regulator's decision-making procedures, enabling it to detect a deterioration of banks' financial standing early on and thus save insolvent institutions' assets by withdrawing them from the market with minimum losses;
- **streamlined the investment raising process and introduction of new financial instruments**, upgrading the capital markets infrastructure and facilitating the emergence of new instruments for managing business assets. The law stipulates provisions on the conclusion and execution of derivative contracts; operation of commodity exchanges; protection of bondholder rights, including through the institution of bondholder meetings in line with best international practices;
- **opened up the land market** by establishing a legal framework for market-based transactions with farmland. Specifically, the law lifts the ban on farmland sales effective 1 July 2021, empowering banks to take over title to land parcels that served as collateral against loans that went unpaid. Banks are required to auction such land plots within two years of acquiring them;
- **changed the administration and payment of taxes** in order to introduce international standards of tax control for all participants in international trade and implement the BEPS Action Plan. The adoption of this action plan is a prerequisite for further currency liberalization and compliance with the NBU roadmap.

To mitigate the economic fallout from the quarantine restrictions imposed to contain the pandemic, Parliament passed the Law ***On Measures to Support Taxpayers During Quarantine***. The law introduced tax and nontax benefits and simplified administrative procedures for the period of lockdown. Priority tax relief efforts included the lifting of penalties for tax violations, exemptions from fines, a moratorium on desk and on-site inspections, and a special grace period (loan holidays) allowing households and business to defer their loan payments. In particular, the law forbids financial institutions to impose penalties for late payments on consumer loans and raise interest rates on such loans, except where loan agreements expressly stipulate a scheduled change to a floating interest rate.

The Law *On Simplifying Reorganization and Capitalization of Banks* was extended by four years. This law allows banks, until 2024, to use streamlined procedures to reorganize through mergers in three months or to recapitalize or voluntarily cease banking activities without terminating their legal entity in six months. In addition, the minimum share capital requirement for a bank was reduced to UAH 200 million from UAH 500 million, and the NBU was authorized to set differentiated minimum share capital requirements for individual banks and legal entities intending to carry out banking activities (but no less than UAH 200 million). However, none of these entities or banks may hold less than UAH 200 million in authorized capital. Before the new law took effect, banks were to have accumulated at least UAH 300 million in share capital by 1 January 2021 and UAH 500 million by 11 July 2024. As of late May, there were 44 banks with less than UAH 500 million and 29 banks with less than UAH 300 million in registered share capital.

On its part, the NBU took measures to assist banks as they navigate through the crisis. See Box 1. Regulatory Response to the Crisis for a more detailed overview of how the NBU and financial regulators in other countries responded to the coronacrisis.

The NBU tightened NPL write-off requirements

In April 2020, the NBU approved Resolution No. 49, spelling out the minimum criteria for writing off fully provisioned loans. Specifically, if a bank does not reasonably expect to recover such a loan, it must write it off if at least one of the following occurs:

- the loan or part of it becomes more than 36 months past due;
- the bank has not received significant repayments on the loan (at least 10% of the loan's book value) over the past 36 months;
- the bank has not received significant income from the sale or recovery of the underlying collateral or has not been able to access the collateral in the past 36 months;
- the bank has failed to sell the loan for three consecutive times;
- the bank has found out that the borrower's debt was written off by another bank.

Writing off a loan does not mean forgiving it. The bank must proceed with efforts to recover the debt. A Cabinet of Ministers of Ukraine resolution, approved in April and applying to state-owned banks, set out the same write-off criteria.

The NBU amended its Regulation *On Management of*

Nonperforming Exposures at Ukrainian Banks, adding a requirement that banks draw up internal regulations governing debt write-offs. These regulations must specify the criteria for verifying that recovery of a financial asset cannot reasonably be expected. Banks must review their impaired assets by 1 October of each year and ascertain that the write-off criteria have been met. Once approved, these regulations will accelerate write-offs of fully provisioned loans by banks.

The NBU introduced long-term refinancing for banks
To support long-term lending, the NBU introduced long-term floating-rate refinancing instruments in addition to its standard short-term facilities. Banks can repay these loans early at any time. The first auction took place in May, with eleven banks taking out almost UAH 2.4 billion in loans maturing in one to five years.

The NBU also changed the schedule of its auctions and maturities of its standard liquidity management instruments. From now on, it has doubled the frequency of placements of certificates of deposit and issuance of short-term refinancing loans. Two-week certificates of deposit became a weekly instrument, while the maturity of short-term refinancing loans, previously limited to 14 days, was extended to up to one month. The rate on these instruments will remain at the level of the NBU key policy rate.

The NBU laid the groundwork for launching interest rate swaps with banks
In the nearest future, the NBU will introduce a new financial instrument, interest rate swaps with banks, thus spurring the launch of an interest rate swap market. A swap agreement provides income at a floating interest rate in exchange for fixed interest rate payments accruing on a specified notional amount. The parties to an interest rate swap contract will regularly exchange these payments. Floating rates will be calculated on the basis of the Ukrainian index of interbank rates on overnight lending and deposit facilities (UONIA). In this way, banks can hedge their interest rate risk by converting floating payments on loans or deposits into fixed ones. This will promote the development of long-term lending – including mortgages – to both businesses and households. The NBU will hold interest rate swap transactions through quantity- or price-based auctions. Eligible to participate in the auctions will be banks that previously concluded respective general agreements with the NBU and accumulated required default funds. A default fund may include domestic government debt securities and/or national or foreign currency held in interest-free accounts with the NBU.

The NBU unveiled a new procedure for financial monitoring by banks
Following the parliamentary passage of new financial monitoring requirements in late April, the NBU approved and published a relevant regulation for banks in May. The regulation orders that banks start to apply the new requirements to their new customers once the law takes effect. For the existing customers, these requirements are to be applied during scheduled data verifications. One of the important novelties of the legislation is the possibility of remote customer identification. Opening an account will no longer require a trip to a bank. It will suffice to verify a customer’s identification data using the NBU’s BankID system, the customer’s qualified electronic signature (QES), or other applicable authentication methods. Similar rules will be introduced for NBFIs after the NBU starts to regulate them.

The central bank also updated the requirements for tracing ultimate beneficial owners. Apart from using information from the Unified Register of Legal Entities, Sole Proprietors, and Public Associations when identifying and verifying legal entities, banks are now required to check other sources. This tightens the responsibility of primary financial monitoring entities (obliged entities) for meeting financial monitoring requirements, including the proper verification of information.

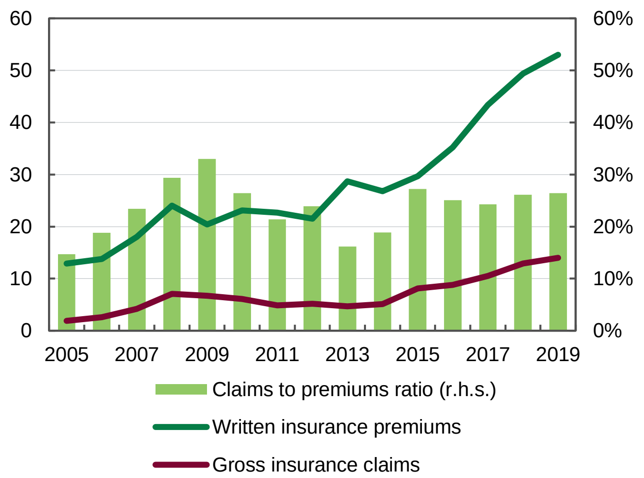
The NBU simplified some of banking license approval procedures
In May 2020, the NBU simplified its approaches to monitoring the financial standing of legal entities and the property status of individuals with qualifying holdings in banks. In particular, the NBU reduced the amount of information that the owners of qualifying holdings must provide annually and updated the methodology for assessing their financial standing, which will help improve the substantive analysis.

Part 4. Non-Banking Sector Conditions and Risks

4.1. Solvency risks of non-life insurers

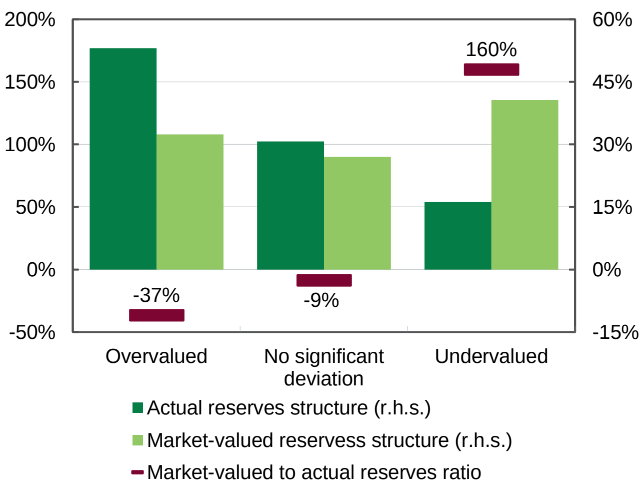
Ukraine's non-life risk insurance market has been growing in recent years, but the penetration of insurance services is still moderate. While many companies operating in the market are financially resilient and provide quality services, they often face competition from dubious players whose activity erodes customer trust in this market. The key problem for many companies is that they understate their liabilities under insurance agreements and lack high-quality assets to meet these obligations. Therefore, the NBU will tighten the requirements for insurers in order to safeguard their financial resilience. In the future, requirements for insurance companies will increasingly be based on the EU's Solvency framework. The companies will also need to enhance their corporate governance and implement effective internal control systems. All this will contribute to strengthening customer confidence and help the market develop more dynamically.

Figure 4.1.1. Gross insurance premiums and claims, UAH billions



Source: National Commission for state regulation of financial services markets, NBU.

Figure 4.1.2. Distribution of unearned premium reserves compared to estimates based on market data



The estimation was performed by calculating the average ratio of reserves to premiums by type of insurance for 185 insurance companies based on 2018 data. A deviation of the size of reserves from the estimated value of more than 25% is considered significant.

Source: National Commission for State Regulation of Financial Services Markets data, NBU estimates.

Insurance market is still sluggish

The market for non-life insurance in Ukraine has been growing steadily since the 2000s even as the number of insurance companies fell sharply in recent years. However, Ukraine has a very low level of penetration of insurance services, its ratio of insurance premiums to GDP totaling a mere 1.4%, or a quarter of the global and European averages. Unlike in most other countries, life insurance in Ukraine is virtually nonexistent.

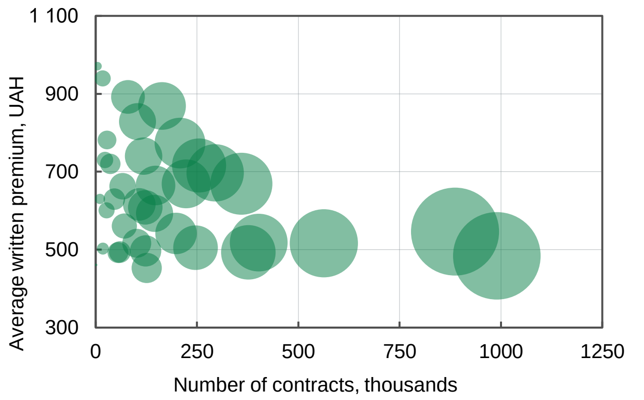
For more than a decade, the ratio of insurance claims to premiums hovered around 25%, enabling companies to earn handsome profits. Legislative peculiarities created huge incentives to use insurers as tax evasion vehicles. Some companies combined tax evasion practices with traditional insurance services, particularly personal insurance, but their lack of motivation to hone their services and build financial resilience put their customers at risk. The market's key problems are the understatement of technical reserves and lack of appropriate assets to cover them, implying difficulties in meeting obligations to customers.

Liabilities are commonly understated

The amount of liabilities under insurance contracts is reflected in estimated technical provisions. These provisions should be calculated using reliable data and relevant assumptions. For staple risk insurance products, the required level of provisions can be estimated using market statistics. If the underlying risks are small and homogeneous, then the amount of provisions per contract should be comparable for different companies. Proceeding from this inference, the NBU conducted a comparative analysis of insurance provisions, which showed that a third of companies in the sample may have underestimated them significantly.

Risks are also underestimated at the stage of setting insurance rates, which are often conditioned by price dumping considerations rather than quality underwriting that properly accounts for potential insurance claims. The bulk of the insurance premium remains with the intermediary, while all insurance payouts are made by the insurer. Many companies in this segment do not receive enough premiums to fully offset possible settlements and administrative costs, leading some of them to reduce or defer payouts.

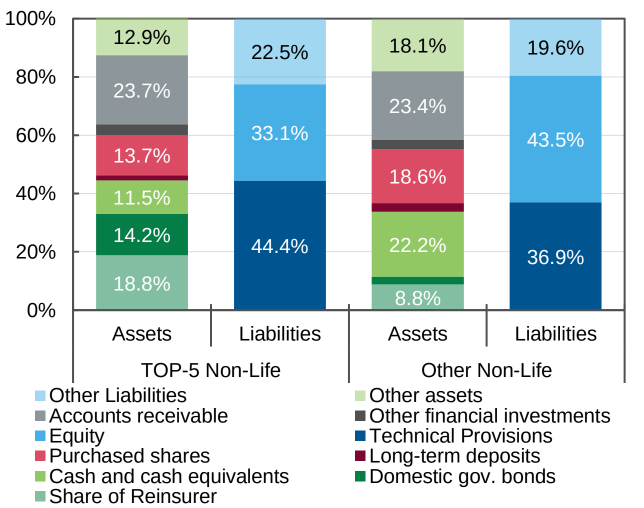
Figure 4.1.3. Ratio of premiums to number of concluded contracts for third party liability insurance of vehicle owners in 2018



Bubble size indicates volume of gross premiums.

Source: National Commission for State Regulation of Financial Services Markets.

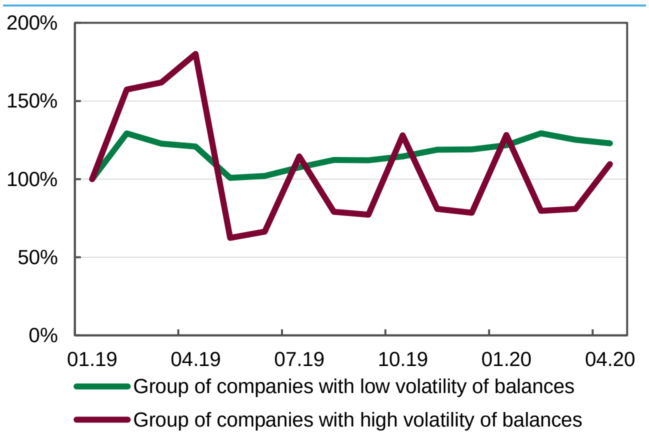
Figure 4.1.4. Structure of assets and liabilities of non-life insurers in 2018



The sample consists of 72 insurance companies with combined asset share of 80%.

Source: National Commission for State Regulation of Financial Services Markets, auditors' reports, NBU estimates.

Figure 4.1.5. Changes in bank account balances for groups of insurers depending on volatility of balances*, 1 January 2019 = 100%



* Volatility is considered low if the average monthly change in account balances is less than 25%. The average monthly change is calculated as the simple average of the change in account balances on each date relative to the average balance for the entire period. The sample includes insurance companies with more than UAH 2 million in bank accounts as at one of reporting dates.

Source: NBU.

Many insurers have inferior quality assets

Insurance companies need liquid, quality assets to make timely payouts. Such assets include, among others, domestic government debt securities and bank deposits. These two items are the key components of asset portfolios of sound Ukrainian insurers.

At the same time, many insurers invest in illiquid assets with no identifiable market value, including corporate equity, shares, and investment certificates. The reported income from these assets averages less than 5% a year, which is significantly lower than the current return on lower-risk bank deposits or domestic government debt securities. Needless to say, such assets seldom lend themselves to conversion into liquid funds. Some of the securities in question have been frozen or withdrawn from circulation. Receivables, often with no market value to speak of, make up another large portion of assets at numerous companies. A sizable share of insurance assets have been filed with claims to reinsurers, which also raises concerns. Meanwhile, approximately a third of insurance premiums have gone to insurers with questionable solvency, meaning a low probability of compensation.

Even bank deposits are often something that insurance companies do not continually have at their disposal. Some institutions put their funds into bank accounts solely on quarterly reporting dates, only to convert this cash into other assets the next day. More than half of the 150 financial institutions the NBU analyzed engaged in such operations. However, such companies account for less than 20% of insurers' total bank deposits.

All aforementioned problems create a situation where capital levels declared by many insurers are inflated and financial resilience indicators inaccurate.

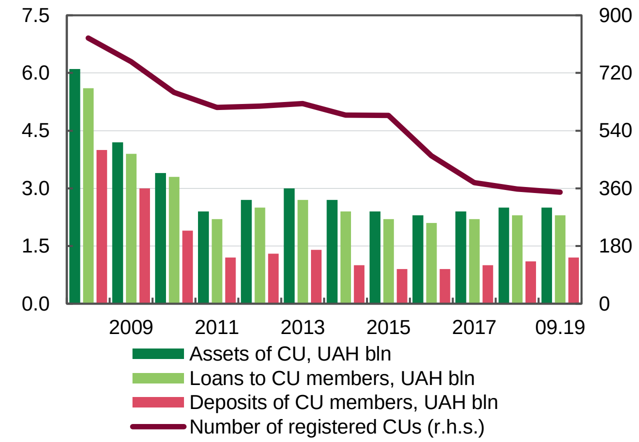
Market regulation needs overhauling

Development of the insurance market is constrained by imperfect regulation, which in many respects is out of line with the Insurance Core Principles of the International Association of Insurance Supervisors (IAIS) and European Solvency legislation. The NBU is initiating changes to the insurance market regulatory framework, including to the underlying legislation. New rules of the game should create a favorable environment for the development of solvent and bona fide insurance companies and protect them from unfair competition. Consumers should receive additional guarantees that their rights will be protected and that they will receive full and timely compensation. The NBU will prioritize strengthening the financial stability of insurers, implementing best practices of corporate governance and internal control systems, and providing early response to financial problems and violations of consumer rights in financial services.

4.2. Risks to Credit Unions

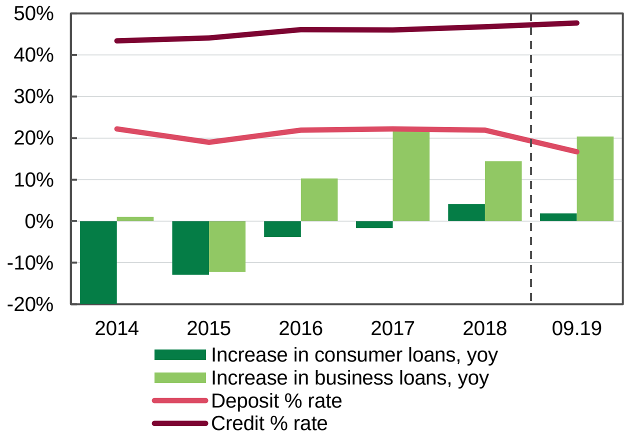
Credit unions, a type of nonbank financial institutions, expanded rapidly in Ukraine in the late 1990s and early 2000s. The segment stopped growing after the crisis of 2008 – 2009 and needs an impetus to jump-start its development. To this end, the NBU intends to change the regulation of credit unions to make them more financially resilient. Stricter requirements for their management and internal control systems will be introduced, along with tighter liquidity and solvency standards. The NBU also believes that the list of services that credit unions can provide should be expanded. The growing availability of banking services and rapid expansion of financial companies are currently the main challenges to the development of credit unions.

Figure 4.2.1. Trends in credit union market



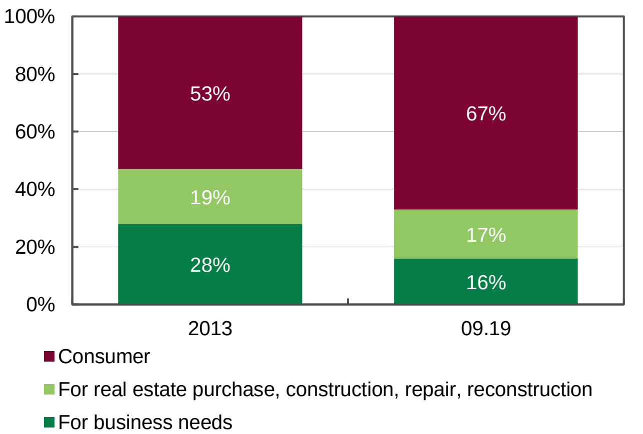
Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

Figure 4.2.2. Changes in lending to credit union members, interest rates on loans and deposits



Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

Figure 4.2.3. Loan portfolio structure of credit unions



Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

Few institutions pursue classic credit union business model

The standard business model for credit unions is to make loans to some of their members out of contributions and deposits provided by other members. Because classic credit unions operate on the principle of mutual assistance, they are supposed to provide credit on terms more favorable than those offered by banks. Often, credit unions also seek to implement a social function, such as supporting their community, cooperatives, or small local producers. This makes some credit unions eligible to receive international financial assistance, which, among other things, contributed to their active development before 2008. It is external financial support that has fueled lending by credit unions to small businesses, primarily in agriculture, since 2016.

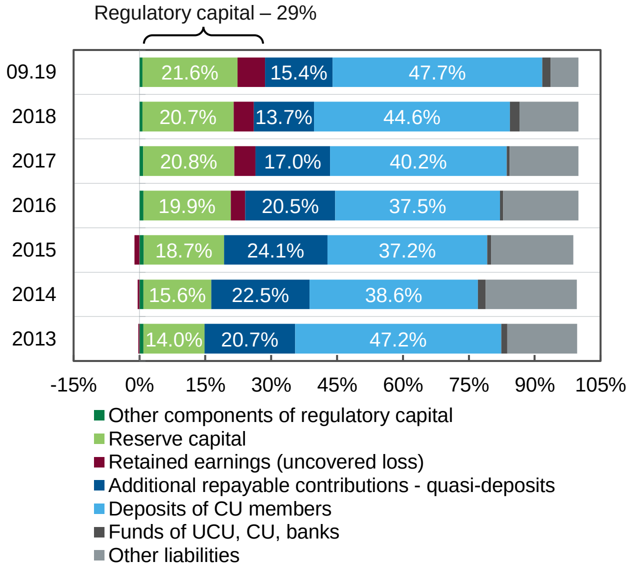
However, fewer and fewer credit unions operated on the classic business model over time. The market contracted sharply following the 2008 – 2009 crisis and has since stagnated. The number of credit unions and volumes of their deposits and loans fell by half to two-thirds over the period. A third of registered credit unions are not operational, and almost 70% of their members are dormant.

Many credit unions have loan portfolios dominated by consumer loans

Currently, the only competitive advantage of credit unions in the consumer lending segment is that they are located in remote areas where other financial institutions do not operate. Credit unions often cannot withstand direct competition with banks and financial companies. For instance, loan rates charged by credit unions are as high as those on bank loans, and sometimes even higher. Furthermore, unlike banks, credit unions do not provide related financial services. Financial companies have an advantage over credit unions due to their fast and convenient remote lending. Hence, the loan portfolio of credit unions grows at a very moderate pace.

In many cases, the core of credit unions' business is to make expensive loans to low-income individuals to finance their current needs, often without proper assessment of their solvency and real collateral. These loans are of mediocre quality, with 15–17% of them being more than 90 days past due. Sometimes the loan portfolio of a credit union becomes concentrated due to the allocation of funds for the business needs of credit union managers and their associates. These practices are out of line with the classic principles on which credit unions used to operate. At the same time, credit unions frequently take a loose approach to assessing the real level

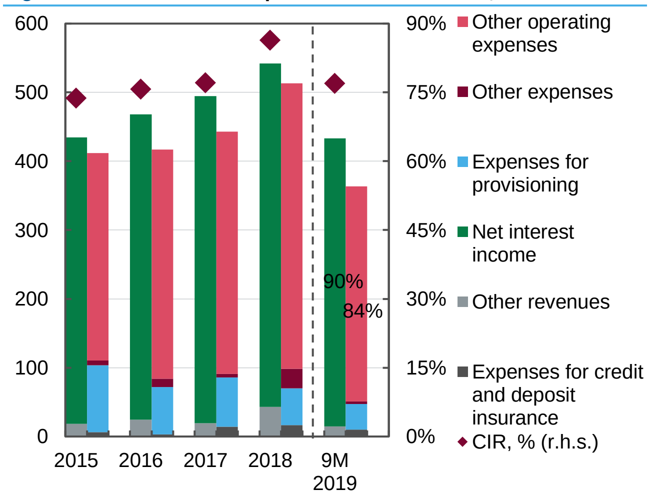
Figure 4.2.4. Structure of funding sources



UCU – united credit union.

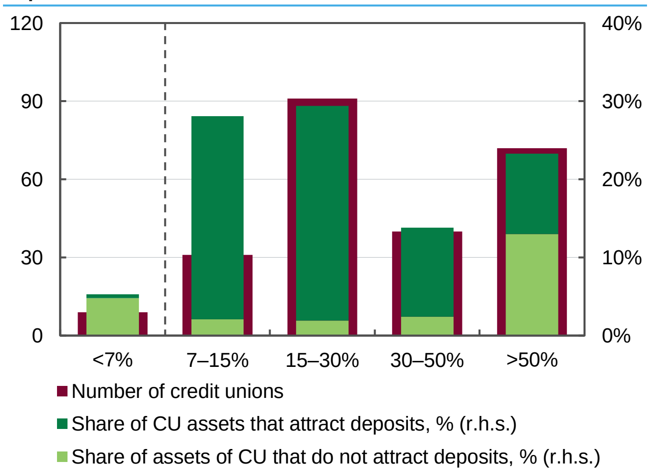
Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

Figure 4.2.5. Income and expenses of credit unions, UAH millions



Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

Figure 4.2.6. Regulatory capital adequacy distribution, as of 30 September 2019



Source: National Commission for State Regulation of Financial Services Markets, NBU estimates.

of credit risk, which results in understated provisions and inflated capital adequacy ratios.

Credit unions have insufficient funding sources and solvency support tools

Most credit unions, accounting for three-quarters of the sector's total assets, receive funding mainly through deposits. Although credit unions offer attractive deposit interest rates, their deposit base has grown only sluggishly, by an average of 7% over the past three years – much more slowly than household incomes or bank deposits. This lag can be explained by high risks for depositors and the lack of a deposit guarantee system. At the same time, some credit unions do not attract deposits at all, preferring to draw additional share contributions from their members as the main source of funding. These contributions are eventually returned to members, meaning they serve as quasi-deposits rather than capital instruments. Raising such contributions is easy, as it does not involve signing an agreement. Yet for the same reason, they fail to provide a steady flow of funding. What is more, members sometimes make additional share contributions for a short period with the sole purpose of getting their hands on a portion of their credit union's distributable earnings. The bottom line is that this instrument does not constitute a reliable funding base.

The only sustainable source of capital for credit unions is their profits. Up until 2017, credit unions enjoyed non-profit status and primarily distributed their earnings among members. As tax legislation changed, preconditions appeared for credit unions to retain their earnings and use them to replenish their reserve funds. Thus, credit unions have been able to grow their equity in recent years by drawing on retained earnings. Apart from this source, credit unions have no other means to maintain solvency for the time being.

Low operating efficiency and profitability weigh on capital growth

Due to high lending costs, the spread between the loan and deposit rates of credit unions has widened to 31%. However, their cost-to-income ratio (CIR) exceeds 75% due to the small scale of operations and significant administrative costs. Upon replenishing reserves, credit unions have almost no profit left to add to their capital. Recognizing the true quality of loans may only worsen the picture.

Credit unions need incentives to develop

To generate momentum for jump-starting their development, credit unions need to win back the trust of their members, increase their financial resilience, and expand the range and improve the quality of their services. To that end, the NBU plans to change the regulations governing credit unions, in particular by initiating legislative changes. Among other things, tighter requirements for corporate governance and internal controls will be established, the list of funding tools will be expanded, a mechanism for maintaining the solvency by members will be created, and ambiguities stemming from non-profit status will be eliminated.

Recommendations

Achieving financial stability requires both smooth cooperation among all financial market participants including the NBU, banks, nonbank financial institutions, other market regulators and active support from state authorities. The NBU makes recommendations to government authorities and financial institutions, and communicates its near-term goals and plans.

Recommendations to State Authorities

Ensure meeting all conditions for cooperation with international donors
The IMF has approved a new 18-month Stand-by Arrangement for Ukraine totaling around USD 5 billion. The program envisages the implementation of reforms to maintain financial stability, return to sustainable economic growth following the pandemic, and foster structural changes in the economy. All commitments made by Ukraine under this program, and also under programs with the World Bank and the EU, must be fully implemented in order to achieve the underlying objectives.

Pass legislation aimed to promote financial sector development:
on expanding the list of credit agreements covered by the Law of Ukraine *On Consumer Lending* **(No. 1109)**. In order to protect borrowers, this law will be expanded to cover microcredit agreements for a term of up to one month and with a total loan amount of no more than one minimum wage. At the same time, according to the bill, the maximum amount that can be recovered from a debtor shall be capped at double the amount of the principal debt regardless of agreement between the parties.

on Partial Guarantee Fund for Agricultural Loans. The fund's main activity will be to provide partial guarantees for loans to small and medium-sized agricultural producers. Such guarantees will reduce risks for banks and allow for providing sizable funding to small agricultural producers even if the underlying collateral covers only part of the loan. The fund will partially compensate losses incurred by financial institutions in case of a debtor's default.

amendments to the **Law of Ukraine *On Banks and Banking*** intended to improve the system of corporate governance and internal control at banks and further harmonize capital requirements with EU legislation. It is also necessary to overhaul bank resolution rules in accordance with BRRD requirements. This would strengthen the ability of the NBU and the Deposit Guarantee Fund (DGF) to respond in a timely manner to banks' financial problems and be proactive. The aforementioned draft laws, developed in cooperation with international financial institutions, will be submitted to parliament.

Update laws that regulate nonbank financial market
The rules regulating nonbank institutions require fundamental revision in certain segments. To this end, several new laws need to be adopted to replace the current outdated ones. A framework law on financial services, which would lay down the general principles for regulating the sector, should come first. The second step would include the passage of new laws on insurance, credit unions, and financial companies.

Strengthen regulation of primary real estate market
Financing schemes employed in the primary market remain complex and confusing, the market itself is extremely opaque, and there are still virtually no reputational requirements for developers. Investors' rights are constantly violated through postponing commissioning deadlines or freezing construction, and the situation may get worse as demand drops during the quarantine. In its December Financial Stability Report, the NBU recommended to enhance transparency of the primary real estate market and strengthen protection of investors' rights. For the time being, these factors restrain recovery in mortgage lending.

Speed up implementation of strategy to reform state-owned banks
Oschadbank and Ukreximbank have been implementing their new strategies slowly. This can partly be explained by the drawn-out process of reshuffling the banks' supervisory boards and management. The banks need to accelerate the implementation of new business models in

order to improve their operational efficiency and generate acceptable net profitability. It is also advisable to speed up measures for the state to gradually exit the banking sector.

Recommendations to Banks

Most of the recommendations to banks made in the previous issues of the Financial Stability Report remain relevant. In view of the challenges posed by the coronavirus crisis, banks are recommended to:

- monitor the macroeconomic environment and the state of individual economic sectors. The NBU recommends that banks rely on conservative assumptions and forecasts as they model their performance indicators for the next 12 months;
- increase their estimates of expected credit losses and provision under IFRS 9 in a timely manner in order to avoid future cliff effects when a one-off recognition of significant losses would affect capital adequacy;
- monitor debtors' solvency and, if needed, promptly respond by offering feasible restructuring options;
- step up work on nonperforming loans, particularly write off loans that are 100% provisioned;
- continue to reduce deposit interest rates in view of low inflation and NBU key policy rate cuts;
- further encourage customers to shift to cashless payments and contactless transactions, ensuring the smooth operation of all necessary services;
- adapt business models to a protracted crisis, particularly by optimizing operating costs.

Start calculating net stable funding ratio (NSFR) and operational risk capital requirement in test mode

Provisional calculations of the NSFR will start in August and last until the end of the year. Compliance with the NSFR will become mandatory from the start of 2021. The planned test calculations will allow the NBU to determine the initial NSFR requirement and the transition period during which banks will have to bring their NSFR to 100%. Banks are to submit to the NBU their test calculations of capital requirements to cover operational risks by 31 August. The operational risk capital requirement is to be introduced in January 2022. Therefore, having obtained first test results, financial institutions will have time to prepare for implementing the new liquidity and capital requirements.

Ensure that banks comply with new financial monitoring law

The new financial monitoring (anti-money laundering, AML) law vested banks with additional functions while mandating them to improve internal procedures. This will be facilitated by the introduction of a risk-based approach across all processes of the reporting institutions. Banks will need to focus more on checking the narrower list of high-risk customer transactions. Along with that, financial institutions will be able to automate their analysis of other customers. These changes must not impose any restrictions on risk-free customer transactions.

Refrain from paying dividends amid the crisis

Banks must support the economy during the crisis and help businesses recover in the post-crisis period, which will require capital. Banks will also need additional capital due to the expected deterioration in the financial standing of borrowers and corresponding increase in credit risk losses. Therefore, banks should refrain from paying dividends, at least for as long as significant macroeconomic uncertainty persists. Moreover, after the crisis is past its peak, the NBU will gradually restore the requirements for capital buffers, expand the list of risks to be covered with capital, and come back to increasing risk weights for consumer loans.

Recommendations to Nonbank Financial Institutions

The NBU will implement a proportionate and risk-based approach to the supervision and regulation of nonbank financial institutions. The NBU laid down its vision in the relevant White Papers for insurance companies, credit unions, financial companies, factoring, pawnshops, and financial leasing. The NBU plans to fundamentally revise the regulation principles for several of these segments. However, in the early stages, nonbank financial institutions should focus on the following areas:

- ensuring a transparent ownership structure;

- improving the quality of financial and statistical reporting;
- complying with AML requirements;
- improving the quality of corporate governance and establishing the internal control system.

NBU Plans and Goals

Complete takeover of powers to regulate market for nonbank financial services

The NBU has made organizational preparations for regulating and supervising the nonbank financial sector starting in July. Initially, the rules set by the previous authority will remain fully in effect. However, the NBU plans to adapt them gradually going forward. The NBU's primary goal is to develop a package of regulations on licensing and registration procedures, operational requirements, solvency criteria, and requirements with respect to ownership structure and top management of financial institutions. New draft laws will be developed for certain market segments based on global best practices. The new regulatory principles will be implemented gradually over at least three years. The implementation will be preceded by a broad public discussion involving representatives of relevant stakeholders.

Continue approximation of banking regulations to EU acquis

The NBU will continue to implement key requirements of the EU *acquis* on banking regulation. In particular, by the end of the year, it will prepare and propose to banks a concept of market risk capital coverage. The concept will be based on the Simplified Standardized Approach, which is applied to institutions with small trading portfolios of simple financial instruments. The new market and operational risk capital requirements will be implemented simultaneously in 2022. The NBU also confirms its intention to introduce a new structure of regulatory capital and Pillar 2 of banking regulation, in particular it will set requirements for the assessment of internal capital and liquidity of banks (ICAAP, ILAAP). In view of the crisis, the schedule for implementing some of the new rules may be adjusted.

Conduct asset quality reviews (AQR) of banks in the aftermath of the acute crisis phase

Assessing the quality of assets will help determine whether banks accurately reflect the state of their loan portfolios and make relevant provisions. It is important that the capital adequacy levels reported by banks reflect their real standing. Thus, it is essential for the regulator, as well as for the entire financial market, to know that banks have fully recognized losses from rising nonperforming loans.

Abbreviations and terms

COVID-19	Infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)
AML	Anti-money laundering
ATM	Automated teller machine / cash machine
AQR	Asset quality review
BEPS	Base erosion and profit shifting
BRRD	Bank Recovery and Resolution Directive
CIR	Cost-to-income ratio
CPI	Consumer price index
CU	Credit Union
DGF	Deposit guarantee fund
DSTI	Debt service to income ratio
EBA	European Banking Authority
EBITDA	Earnings before interest, taxes, depreciation and amortization
ECB	European Central Bank
EM	Emerging markets
EU	European Union
Fed	US Federal Reserve System
FX	Foreign currency/exchange
GDP	Gross Domestic Product
COGS	Cost of goods sold
HQLA	High-quality liquid assets
ICAAP	Internal capital adequacy assessment process
ILAAP	Internal liquidity adequacy assessment process
ILO	International Labor Organization
IFI	International Financial Institutions
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
LCR	Liquidity coverage ratio
LTV	Loan-to-value ratio
NBFI	Non-bank financial institution
NBU	National Bank of Ukraine
NCFS	National Commission for state regulation of financial services markets
NSFR	Net stable funding ratio
NPE/NPL	NPE/NPL Non-performing exposure / loan
NPV	Net present value
OPEC	Organization of the Petroleum Exporting Countries
OR	Operational risk
Parliament	Verkhovna Rada of Ukraine (Supreme Council)
PD	Probability of default
PrivatBank	Public Joint-Stock Company Commercial Bank “PrivatBank”
ROA	Return on assets
ROE	Return on equity
RWA	Risk-weighted assets
SIB	Systemically important bank
SME	Small and medium-sized enterprises
Solvency	Solvency I, II Directives and related regulation
SSSU	State Statistics Service of Ukraine
STSU	State Treasury Service of Ukraine
TTM	Trailing Twelve Months
VAT	Value added tax
US	United States of America
UAH/USD	US dollars per one hryvnia

th	thousand
mln	million
bln	billion
sq. m	square meters
EUR	euro
UAH	Ukrainian hryvnia
USD	US dollar
eq.	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
Q	quarter
H	half-year
M	month