



# Macprudential Policy

## Strategy

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## Introduction

The National Bank of Ukraine (the "NBU") is publishing its Macroprudential Policy Strategy ("the strategy"). In a detailed and accessible manner, it describes the macroprudential regulation system, and how the NBU will apply it in Ukraine.

The publication of the strategy will promote the transparency, clarity, and predictability of macroprudential policy for financial market participants. The publication will also boost the policy's effectiveness and help achieve the policy's key objective: financial stability in Ukraine. Macroprudential regulation has spread quickly across the world over the last decades, propelled in particular by the global financial crisis. Ukraine's deep crises in 2008–2009 and 2014–2016 hastened the need for the country to attain financial stability. Therefore, in mid-2015 amendments to the Law On the National Bank of Ukraine legislated financial stability as the NBU's second most important function after maintaining price stability. The NBU has thus de facto received a mandate to set macroprudential policy in Ukraine. The strategy lays the foundations for that mandate.

The first section of the strategy provides a brief overview of the essence, objectives, principles, and tools of macroprudential policy. The second section is devoted to the macroprudential regulation environment in Ukraine. The third section describes

the practicalities of implementing macroprudential policy in Ukraine. This section focuses on the key risks that, if materialized, could disrupt the normal functioning of the financial sector, and identifies means to mitigate these risks. The strategy also provides a tentative list of macroprudential instruments the NBU uses – or intends to use at a later date – to promote financial stability.

The strategy was initially discussed at a meeting of the Financial Stability Committee, and approved by the Board of the National Bank of Ukraine in November 2018.

On 1 July 2020, the NBU assumed its mandate to regulate and supervise insurance, finance, leasing, and factoring companies, along with credit unions and other non-bank financial institutions. These changes, as well as the first few years of the NBU's implementation of macroprudential policy, which were accompanied by the COVID-19 pandemic and Russia's full-scale aggression against Ukraine, necessitated an update of the strategy that the NBU Board approved in December 2020.

This strategy, which includes new challenges, and especially the war challenge, was discussed at a meeting of the Financial Stability Committee on 8 November, and approved by the NBU Board in December 2024.

# Fundamentals of Macroprudential Regulation

## What is Macroprudential Policy, and Why Is It Needed?

Macroprudential policy aims to prevent the build-up and materialization of systemic risks in the financial sector, so as to ensure the smooth functioning of the financial system. The policy's ultimate goal is to promote financial stability, defined as the state in which the financial system is able to perform properly its main functions – such as financial intermediation and enabling payments – while also being able to withstand crises. Achieving that goal will in turn facilitate sustainable economic growth.

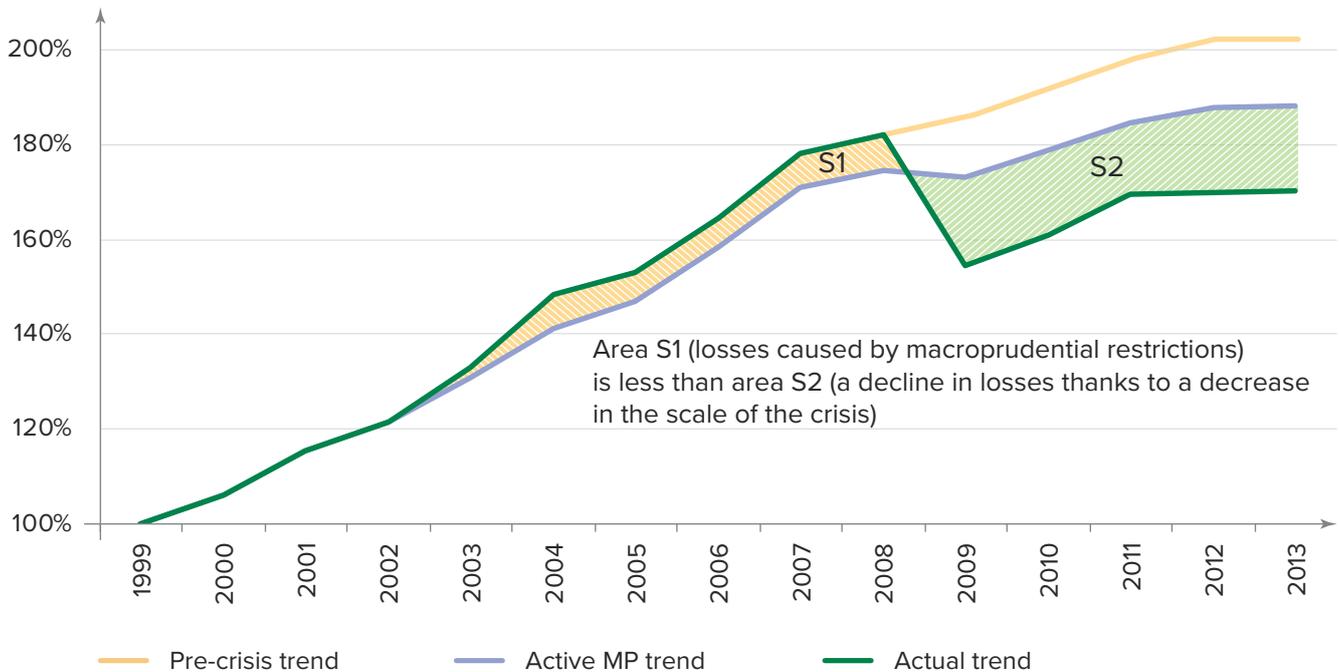
The notion of macroprudential policy emerged as policymakers reviewed the experiences of past economic crises. Since financial systems are more than the mere sum of their parts, effective supervision over individual financial institutions alone, as global experience has shown, is insufficient to ensure the proper functioning of the financial system during crises. Even if every individual financial market participant is resilient, this does not necessarily guarantee the resilience and continuous operation of the entire financial sector. For example, a well-

capitalized bank may honor all its obligations to depositors even during a crisis, but still temporarily choose not to issue new loans, thus contributing to a deeper recession. Therefore, the financial system as a whole requires regulation, and not just individual institutions.

Macroprudential policy cannot completely eliminate systemic risks. It can, however, prevent the excessive build-up of these risks and decrease the probability of those risks materializing. Thus, the policy promotes the resilience of the economy and reduces the volatility of GDP, as shown by empirical studies<sup>1</sup>. However, this policy also carries adverse side effects, including temporary restrictions on the access of households and businesses to credit. This may slow economic growth, but this is viewed as an acceptable cost in return for resilience in the face of financial crises.

Macroprudential policy is complex, partly because preemptive tools may be required even when risks to the financial system may seem insignificant. At those times, decision-makers may lack resolve (the so-called "inaction bias") because during a credit expansion, it is difficult to communicate the need for restrictions to market participants, politicians, and households.

Impact of macroprudential policy on the economic cycle (GDP of 1999 = 100%)



<sup>1</sup> [https://www.bis.org/publ/qtrpdf/r\\_qt1709g.pdf](https://www.bis.org/publ/qtrpdf/r_qt1709g.pdf)

## The Rise of Macroprudential Policy

Macroprudential policy emerged as a theoretical concept in the late 1970s, but only became a practical phenomenon in the aftermath of three crises: the Japanese financial crisis in the 1990s, the Asian financial crisis in the late 1990s, and the global crisis of 2007–2008. In the 1980s, macroprudential policy began appearing in documents from the Bank for International Settlements (BIS) as a new separate policy aimed at maintaining the stability of the entire financial system.

The central banks of Hong Kong (in the 1990s), and South Korea and Singapore (in the 2000s), were the first to deploy macroprudential tools in response to excessive inflows of capital. After the crisis of 2008–2009, the macroprudential concept spread much wider. Central banks started to establish separate financial stability units focused on macroprudential analysis and regulation, and began publishing financial stability reports.

Internationally, the Financial Stability Board (FSB) was established in 2009, while the European Systemic Risk Board (ESRB) was set up in 2010. Basel III was agreed at the Basel Committee on Bank Supervision (BCBS) in 2010, and the new Capital Requirement Directive and Regulation (CRR/CRD IV) were adopted in 2013, both of which introduced macroprudential instruments. The ESRB has published recommendations on macroprudential policy aimed at strengthening the mandates of central banks to promote financial stability and at establishing high-level interagency councils/committees on financial stability.

A new trend is the spread of macroprudential policy to the non-bank financial sector<sup>2</sup>. Currently, regulators focus primarily on insurance companies, key elements of financial market infrastructure, and setting up a level

regulatory playing field for all credit institutions. The analysis of the role of non-bank financial institutions is deepening, and new episodes of volatility and liquidity shocks in certain segments of the global financial market in 2020 and 2022 have led to additional attention to the resilience of its participants. However, a coherent macroprudential policy for the non-banking financial sector in the European Union (the EU) is still being developed<sup>3</sup>.

Today, ESG risks, cyber risks, and risks associated with virtual assets are becoming increasingly important for financial stability. These risks are drawing increasing attention from regulators at the European and global level, and they are developing tools to analyze and control them. At the same time, the range of tools for managing these risks now goes beyond macroprudential policy and requires a separate comprehensive view.

## Objectives of Macroprudential Policy

Promoting financial stability as a precondition for sustainable economic growth is a fundamental goal for many central banks around the globe. To this end, regulators aim to prevent the build-up of systemic risks so as to decrease the probability of crises and to strengthen the resilience of the financial sector.

According to recommendations from the ESRB, the strategic (ultimate) goals of macroprudential policy are achieved through intermediate objectives.

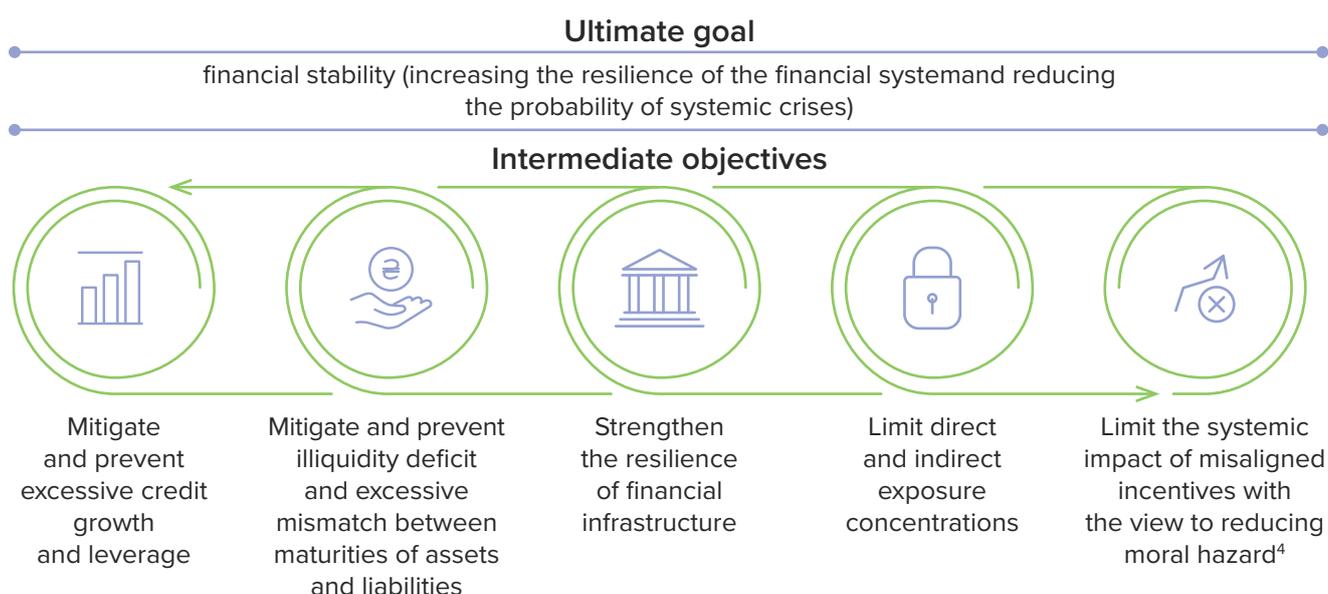
To achieve these intermediate objectives, central banks and other regulators deploy macroprudential tools. The choice of tool depends on the indicators and signs of risk detected at a particular moment.

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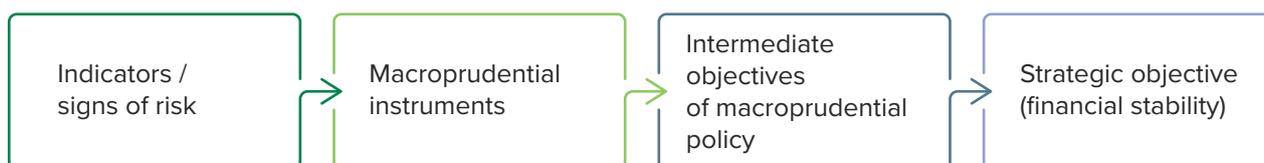
<sup>2</sup> The ESRB initiated discussions on a macroprudential strategy for the non-banking financial sector back in 2016, but the final document has not yet been finalized. The ESRB's recommendations outside the banking sector are currently addressed only to investment funds and central counterparties ([https://www.esrb.europa.eu/pub/pdf/reports/20160718\\_strategy\\_paper\\_beyond\\_banking\\_en.pdf](https://www.esrb.europa.eu/pub/pdf/reports/20160718_strategy_paper_beyond_banking_en.pdf)).

<sup>3</sup> [https://finance.ec.europa.eu/regulation-and-supervision/consultations-0/targeted-consultation-assessing-adequacy-macroprudential-policies-non-bank-financial-intermediation\\_en](https://finance.ec.europa.eu/regulation-and-supervision/consultations-0/targeted-consultation-assessing-adequacy-macroprudential-policies-non-bank-financial-intermediation_en).

## Framework of macroprudential policy objectives<sup>4</sup>



## The stages of achieving strategic objectives



## Principles of Macroprudential Policy

In implementing macroprudential policy, regulators are guided by principles that aim to ensure the effectiveness of the measures used. Holding to these principles is essential for effective regulation.

- 1. Independence.** Macroprudential policy must be independent from a central bank's (or regulator's) other functions, including monetary policy and microprudential supervision, as well as from pressures from the financial sector or other authorities. This ensures that long-term goals are prioritized over short-term objectives. For instance, during growth periods, financial institutions may object to stricter regulatory requirements. Independence helps the central bank or other regulators withstand this pressure.
- 2. Transparency.** The objectives and the grounds for the use of macroprudential instruments must be clear to the banking sector and the general public. The central bank should inform the target audiences of regulatory changes in a timely manner to give them sufficient time to prepare to respond to these changes.
- 3. Preventive approach.** The central bank should work to identify systemic risks in advance and act to minimize them. If the scale of the threat is difficult to estimate, a central bank should opt for over-reaction (termed "over-reaction bias") instead of inaction, as crisis-related losses tend to outweigh costs related to macroprudential restrictions.
- 4. Guided discretion.** The use of macroprudential instruments shall be guided by rules set ex ante. Any non-adherence will only be allowed if it is properly justified.
- 5. Coordination.** The efficacy of macroprudential policy depends on its interaction with other policies within the mandate of the central bank or other authorities. The central bank must ensure there is proper policy coordination.
- 6. Proportionality.** The use of macroprudential tools imposes certain requirements on financial institutions. These requirements must be commensurate with the contribution of a given financial institution to the overall systemic risk.

<sup>4</sup> Moral hazard is a situation when one party accepts a risk, realizing that if it materializes, it will not bear the costs which the other party will bear or have to compensate for them.

7. **Avoiding regulatory arbitrage.** Macroprudential policy is only effective if financial market participants cannot bypass restrictions by migrating to less regulated segments. Macroprudential tools should be aimed primarily at those participants and operations that cannot easily migrate into other financial segments without sustaining significant losses.
8. **Consideration of national specifics.** Macroprudential policy should account for the specifics of the national financial system to ensure the selected instruments are used effectively and help achieve policy objectives. Examples of such specifics in Ukraine are the large market share held by state-owned banks, and the very low market share of non-bank financial institutions.

## Macroprudential tools

Macroprudential tools are typically classified into capital, liquidity, and other (sectoral) instruments. However, no classification is entirely exhaustive, as regulators are introducing additional tools in response to the state and national specifics of the financial sector. The choice of a particular tool depends on a regulator's intermediate objectives. In addition, a single instrument can help achieve several objectives. Besides, some macroprudential instruments can be classified on the basis of their functional application. Therefore, tools used with credit institutions may be different from those deployed for other financial market segments or elements of infrastructure. The most frequently globally used instruments are listed below.

### Capital Instruments

#### Countercyclical capital buffer, CCyB

This instrument sets higher capital requirements (buffers) during periods of credit expansion, with the option of easing or releasing the buffer in a downturn, when systemic risks materialize. The buffer aims to reduce lending pro-cyclicality. It enhances the resilience of the banking system, protects it from potential losses, and indirectly limits the expansionary stage of the credit cycle. The credit-to-GDP gap is the main criterion for setting or releasing the buffer. In addition, the regulator considers other indicators, such as the ratio of housing prices to household incomes, the debt service-to-income ratio for households and non-financial corporations, and others.

#### Capital buffer for systemically important financial institutions

The buffer sets additional capital requirements for systemically important banks, the failure of which would have a serious adverse effect on the financial system and the economy. The capital buffer enhances

the ability of qualifying financial institutions to absorb losses, thus decreasing the probability of crises, and lessening the scale of their impact. The buffer can also limit some of the competitive advantages of systemically important institutions and level the playing field for small- and medium-sized institutions.

#### Systemic risk buffer, SyRB

This buffer involves reserving additional capital to cover long-term structural (non-cyclical) systemic risks. It can be applied to a group of banks or all financial institutions in the system. The ESRB recommends not using this instrument to cover risks that are measurable, homogeneous, and standardized, like credit, market, or operating risks. Instead, the buffer should be applied to cover, for instance, risks related to high concentration in a sector, high interconnectedness, the size of the financial sector (relative to GDP), or financial innovations that boost system complexity.

#### Capital conservation buffer, CCoB

The capital conservation buffer aims to provide a stock of capital above the minimum requirements in "normal" times to cover possible losses and prevent noncompliance with minimum capital adequacy requirements in the future. The capital conservation buffer is mostly defined as a microprudential instrument that helps to achieve macroprudential goals.

#### Leverage ratio

This metric is calculated as the ratio of Tier 1 capital to total assets and off-balance-sheet liabilities. Maintaining the ratio at the required level serves to limit an increase in lending by credit institutions that use borrowed funds. This is an extra safety measure against an excessive expansion of financial institution balance sheets in which risk weights do not reflect the actual riskiness of operations. The instrument's advantages are its simplicity and transparency, as financial institutions do not have to classify assets according to their riskiness to calculate the ratio. The Basel Committee on Banking Supervision set the minimum leverage ratio for banks at 3%.

### Liquidity instruments:

#### Liquidity coverage ratio, LCR

This is the ratio of a bank's high-quality liquid assets to expected net cash outflows over a 30-day crisis period. By maintaining the ratio above the threshold, financial institutions maintain the liquidity levels needed to weather a crisis. The LCR is often defined as a microprudential instrument that can be used to achieve macroprudential objectives through setting additional requirements (either fixed or time-varying)<sup>5</sup>. For example, regulators can lower LCR requirements during a systemic liquidity crisis to allow banks to meet obligations to depositors in full.

<sup>5</sup> [https://www.esrb.europa.eu/pub/pdf/reports/esrb.report180115\\_handbook~c9160ed5b1.en.pdf?437ea9aa6f907daf9aa7e9f8b39f38a4](https://www.esrb.europa.eu/pub/pdf/reports/esrb.report180115_handbook~c9160ed5b1.en.pdf?437ea9aa6f907daf9aa7e9f8b39f38a4).

### Net stable funding ratio, NSFR

This ratio defines the minimum proportion of stable (long-term) funding, depending on the liquidity and residual maturity of a bank's assets. The instrument encourages banks to switch to long-term funding sources, and not make long-term lending reliant exclusively on short-term funding. The ratio mitigates asset-liability mismatches to help limit credit cycle volatility. The NSFR is often described as a microprudential instrument that can be used to achieve macroprudential objectives by setting additional requirements (either fixed or time-varying).

The regulator may also set liquidity requirements for non-bank financial institutions that raise funds from households or businesses – primarily credit unions and insurance companies.

### Other instruments

#### Caps on the loan-to-value ratio, LTV

This instrument caps loan amounts for households, depending on the collateral applied. The LTV prevents asset bubbles in the real estate market and the excessive growth of mortgage lending. Regulators can cap the marginal LTV for all new mortgages or just for mortgages on the real estate that has the highest price growth.

#### Caps on the debt-service-to-income ratio (DSTI) or the debt-to-income ratio (DTI)

The DSTI and DTI instruments cap maximum loan amounts on households, depending on their income levels. They limit excessive growth in mortgage or consumer lending and the household debt burden.

Today, instruments limiting credit to borrowers (LTV, DSTI, and DTI) are globally applied to both banks and NBFIs.

### Recovery and Forced Restructuring (Resolution) Plans

Regulators require financial institutions to draw up recovery plans in advance so that a crisis does not catch them by surprise. If this plan fails, the financial institution<sup>6</sup> has to have ready a resolution plan that is optimal for all parties involved. These requirements normally apply to banks, but they can also cover some other financial institutions.

### Higher Disclosure Requirements

The regulator may require greater or more frequent disclosures of certain information from financial institutions. This instrument boosts the public's understanding of the operations of financial institutions, thus enhancing the resilience of the financial system. Additional disclosures increase the quality of risk assessments by financial market participants, especially of risks related to the solvency and liquidity of counterparties.

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<sup>6</sup> Normally applies to large and medium financial institutions.

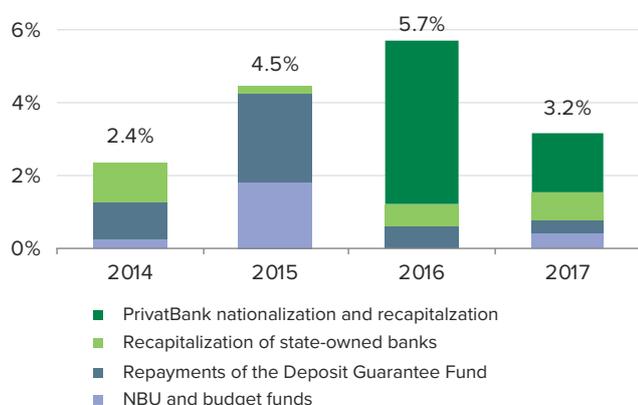
# Implementation of Macroprudential Policy in Ukraine

## Ukraine's Need for Macroprudential Regulation

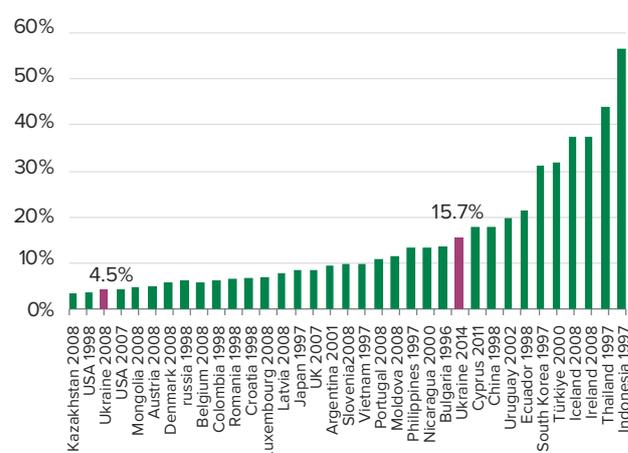
Maintaining financial stability is an urgent issue for Ukraine. The country is among the top-3 globally in terms of the frequency of banking crises<sup>7</sup>: over the last 20 years, Ukraine has experienced three deep financial crises. The latest crisis that also included

a financial crisis was in 2014–2016. The direct fiscal costs of resolving that crisis amounted to 15.7% of GDP in the respective years<sup>8</sup>, which is moderate relative to other countries. However, the indirect costs to the economy in general were much higher, at 38% of GDP<sup>9</sup>. The consequences of that systemic crisis were limiting bank lending and economic growth for a long time.

Public costs related to the resolution of the banking crisis in Ukraine in 2014–2017 (fiscal costs), % GDP



Fiscal costs of banking crisis resolution by countries<sup>7</sup>, % GDP



The costs are a part of total public expenditures on financial sector restructuring. They include bank recapitalization costs, but exclude the cost of purchased assets if they were later sold or the cost of liquidity support if it was later repaid. Data for Ukraine include funds for refinancing insolvent banks\*. The sample begins with the international crisis of 1997–1998.

Source: The National Bank of Ukraine, DGF (DGF); Luc Laeven and Fabian Valencia, 2020.

The depth and frequency of the systemic crises in Ukraine have been a function of a range of fundamental problems. These include the lack of effective banking regulation at the micro-level, and the absence of a financial stability framework – including measures to mitigate the emergence and build-up of systemic risks. Put simply, the banking sector was not prepared for crises in the past. The NBU thus had to intervene in the midst of each crisis with strong measures that were unpopular with bank clients, such as limits on deposit withdrawals.

Ukraine's last two financial crises had common elements, but also had different features.

### 2008-2009 crisis

The 2008–2009 crisis was provoked by cyclical factors, including a rapid credit expansion. With access to cheap external funding, the banks lent to households and businesses in foreign currency. Most borrowers did not hedge against currency risk, and a substantial depreciation of the hryvnia had an adverse impact on their solvency.

The mortgage segment became a source of systemic risk. Affordable credit pushed up housing demand massively, which propelled rapid growth in housing prices. In turn, that encouraged households to borrow and buy housing to capitalize on the price growth.

<sup>7</sup> Laeven, Valencia. Systemic Banking Crises Database: a Timely Update in COVID-19 Times, 2020. (<https://repec.cepr.org/repec/cpr/ceprdp/Dp14569.pdf>).

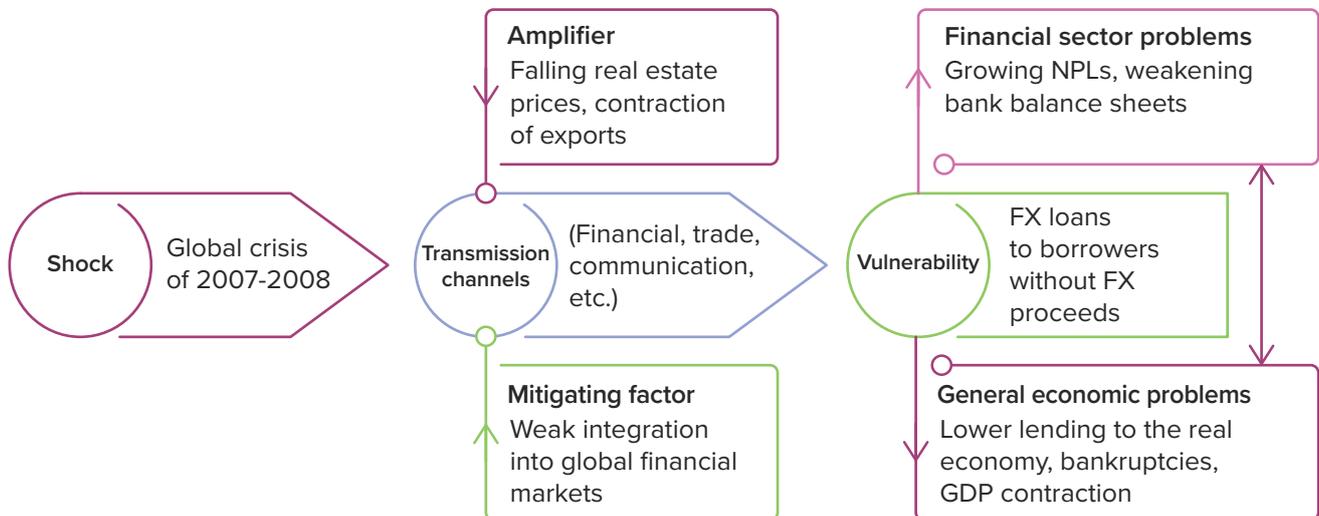
<sup>8</sup> NBU estimates.

<sup>9</sup> [https://bank.gov.ua/admin\\_uploads/article/FSR\\_2017R1.pdf?v=4#page=52](https://bank.gov.ua/admin_uploads/article/FSR_2017R1.pdf?v=4#page=52).

The systemic risks fully materialized after the beginning of the crisis. The sharp hryvnia depreciation rapidly increased households' debt burdens, as they had little to no foreign currency income. Prices for real estate

plummeted in US dollar terms, including for assets pledged as mortgage collateral. As a result, the NPL ratio for mortgages soared.

### Materialization of systemic risks (as seen from the 2008 crisis example)



### 2014-2016 crisis

This crisis was more of a structural one, for several reasons:

- Banks had accumulated considerable loans to related parties prior to the crisis. For example, 97% of the corporate loans at PrivatBank, the largest Ukrainian bank, were issued to companies related to its shareholders;
- State-owned banks lent excessively to companies belonging to politically exposed persons (almost two-thirds of their credit portfolios);
- Many banks were captive, not providing financial intermediation but instead serving the interests of business groups, or specializing in withdrawing capital abroad, or money laundering;
- The banking sector suffered from low liquidity and substantial maturity mismatches;
- Weak banks were highly interconnected in specific segments, including in interbank lending, which caused a domino effect once a single weak institution failed.

Most of these problems had already emerged prior to the 2008–2009 crisis. Nevertheless, they were not properly assessed, and the regulator did not react to them appropriately, neither before nor after the crisis. The two crises show the high costs related to the lack of effective financial regulation at the level of individual financial institutions, as well as at the systemic level.

### Recent Economic Crises

The economic crisis caused by COVID-19 pandemic in 2020 and the Russia's full-scale invasion in 2022 showed that reforms aimed at resolving legacy problems and the introduction of the first macroprudential requirements on bank capital and liquidity were steps in right direction. These steps, coupled with effective microprudential supervision, ensured there was a sufficient safety cushion for the sector, allowing it to weather the COVID-19 pandemic crisis. For the first time during a crisis, the Ukrainian financial sector facilitated the maintenance of financial stability and continuously performed its functions, rather than contributing to a deeper economic downturn.

As a result, the banks came into the crisis caused by Russia's full-scale invasion of Ukraine with a solid capital and liquidity cushion. They were operationally stable and efficient, and had contingency plans at the ready. In general, the banking system is successfully meeting extreme wartime challenges: the banks are operating without interruption, maintaining their liquidity and capital, continuing to lend, and have returned to making profits again. Confidence in the banks and the reliable operation of the deposit guarantee system contributed to a steady inflow of customer funds. Payments in Ukraine are made continuously and timely, despite the full-scale war. Moreover, the volume of transactions and the variety of payment services are growing.

## Institutional Framework

**The NBU is the key actor in the implementation of macroprudential policy.**

Under Article 6 of the Law On The National Bank of Ukraine, the NBU supports financial stability within the scope of its authority, including the stability of the banking system, as long as it does not impede the regulator's ability to achieve and maintain price stability. The law gives the NBU a mandate to design and implement macroprudential policy. This meets EU standards according to the recommendations of the European Commission and the ESRB<sup>10</sup>.

In promoting financial stability, the NBU is guided by the recommendations of the Basel Committee on Banking Supervision, the ESRB, and CRR/CRD provisions.

The NBU coordinates macroprudential policy within the scope of its authority through the Financial Stability Committee (FSCoM). This is a strategic policy-making committee chaired by the Governor of the NBU. The FSCoM meets at least once a quarter, and more frequently, if needed.

The key tasks of the FSCoM are to identify systemic risks and ways to mitigate them, make recommendations on the use of macroprudential tools, and coordinate the NBU's efforts to promote financial stability. The FSCoM makes recommendations to the NBU Board, which takes decisions on macroprudential interventions. If a systemic risk that the FSCoM has identified is beyond the NBU's mandate, the FSCoM may recommend that the interagency Financial Stability Council step in.

## Interagency Cooperation

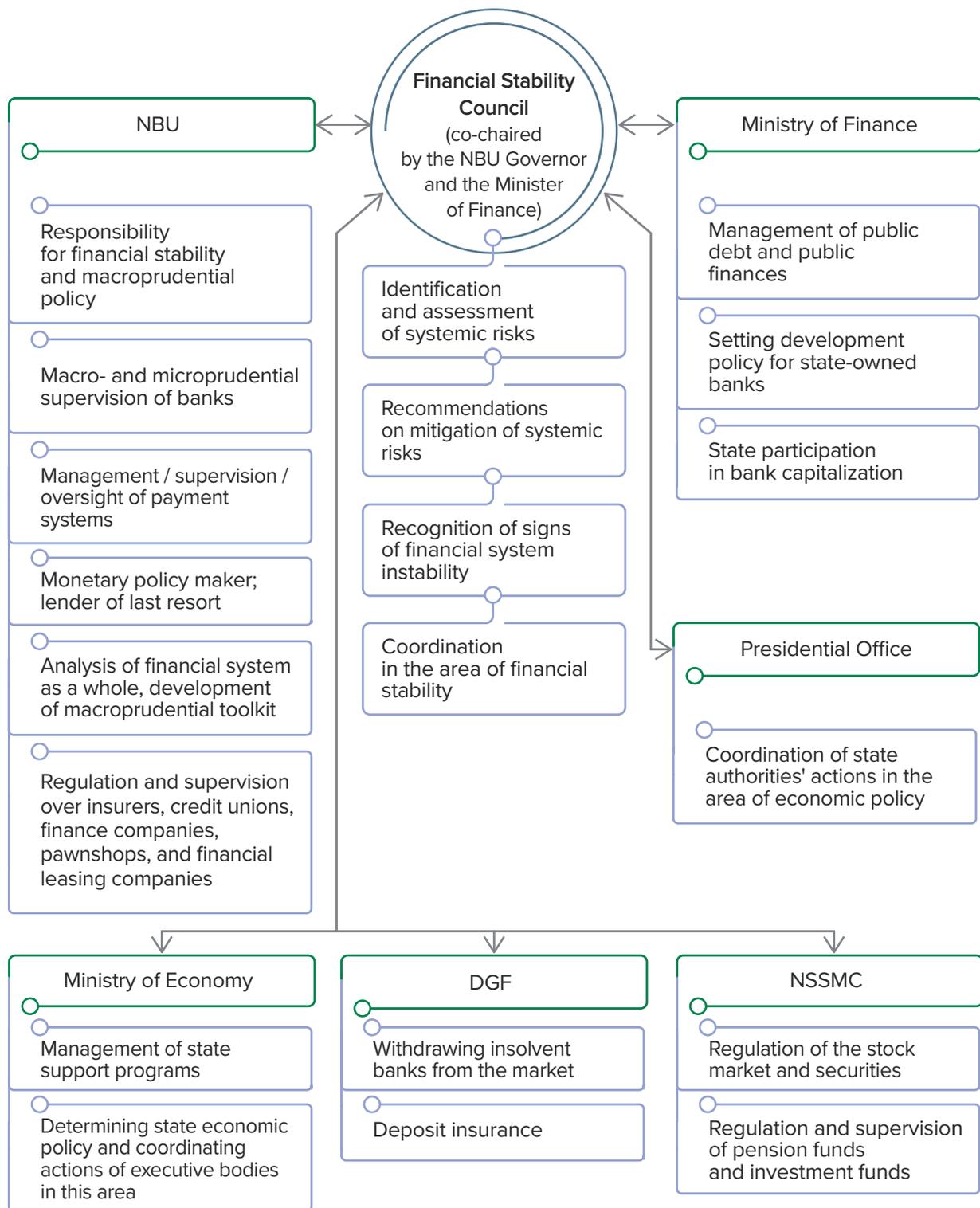
Financial stability in the country depends on banks and non-bank financial institutions. This creates the need to ensure there is effective coordination between the NBU and other financial regulators in the implementation of macroprudential policy measures. To this end, the Financial Stability Council (FSC) was established by a presidential decree in 2015. The FSC's key task is to identify and mitigate any risks to the financial system. In line with the best international standards, the FSC has brought together key regulators and government agencies that promote financial stability. In the face of wartime challenges, representatives of two more institutions joined the FSC to better coordinate measures to promote financial stability with the state's overall economic policy.

The FSC is a platform for professional discussion between top-level officials of its member institutions of threats to financial stability. If required, the FSC makes recommendations on the mitigation of risks, and institutions addressed must implement these recommendations or explain their reasons for not doing so. Moreover, in line with Article 71 of the Law of Ukraine On the National Bank of Ukraine, the FSC confirms there are signs the banking system is in an unstable financial condition, as well as the presence of circumstances that threaten the stability of the banking and/or financial system of the state. This empowers the NBU to impose temporary restrictions to regulate and supervise banks. The FSC meets at least quarterly, publishes press releases after such meetings, and compiles annual reports on its activities.

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<sup>10</sup> Regulation (EU) No 1092/2010: "...the national central banks should have a leading role in macro-prudential oversight because of their expertise and their existing responsibilities in the area of financial stability"; ESRB Recommendations of 22 December 2011 (ESRB/2011/3) on the macro-prudential mandate of national authorities, Recommendation B.3: "ensure that the central bank plays a leading role in the macroprudential policy...".

**Financial Stability Council and the roles of its member institutions in safeguarding financial stability**

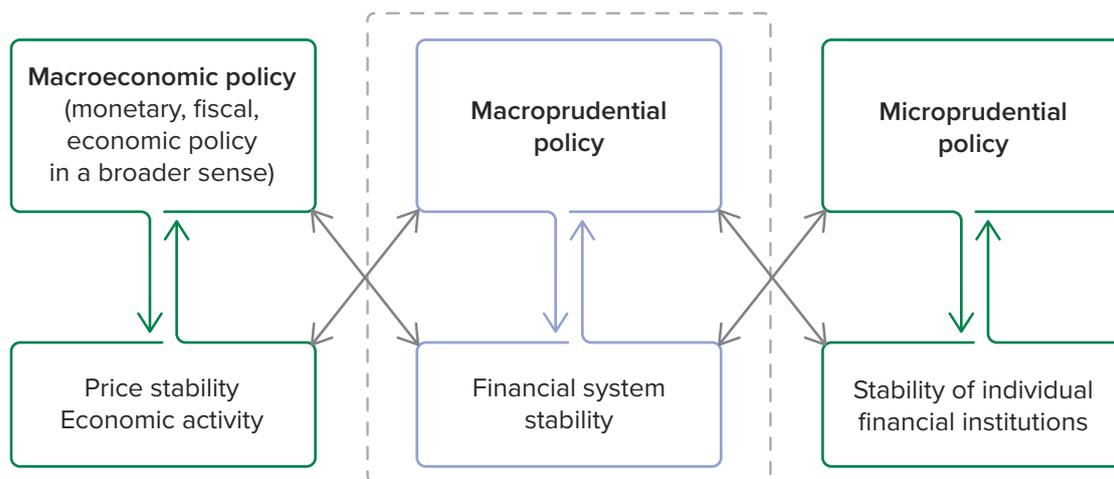


**Interactions with Other Economic Policies**

On top of ensuring interagency coordination, to be effective, macroprudential regulation must properly interact with the central bank's other policies. Within the NBU's mandate, macroprudential policy interacts

with monetary policy and microprudential supervision over financial institutions. They react to different challenges and have distinct objectives, but they need to interact with and complement one another.

## Policy interactions



### Monetary Policy

Monetary policy is the part of macroeconomic policy that aims to support the hryvnia's purchasing power by maintaining low, sustainable inflation rates. This objective is one of the preconditions of financial stability. At the same time, a more stable system and more accessible financial services contribute to the effectiveness of the transmission channel of monetary policy. Monetary policy instruments are “big guns” that impact the entire economy, including the financial sector. The NBU's application of monetary policy instruments may contribute to the achievement of macroprudential policy objectives and financial stability if, by influencing the outlook for inflation and economic activity, they reduce systemic risks or complications in the operation of the financial markets. At the same time, monetary policy instruments are not used to stabilize the financial system. If risks emerge in individual segments or markets, macroprudential policy is more effective.

At times, there might be a conflict between different policy objectives. For example, an accommodative monetary policy may be appropriate for certain macroeconomic conditions, but it may trigger side effects, such as an increase in borrowers' debt burdens and a less prudent perception of risks by lenders given the low-interest-rate environment. Moreover, the solvency of borrowers may decrease during a reverse to a tight monetary policy. Therefore, the NBU must coordinate its monetary and macroprudential policy decisions.

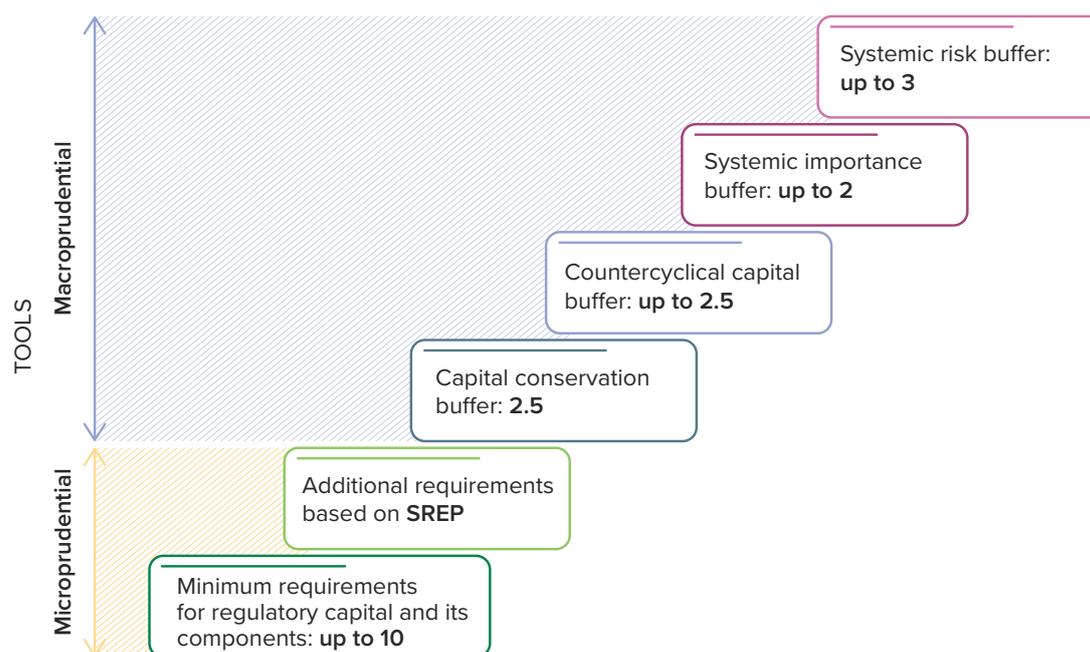
### Supervision over Financial Institutions (Microprudential Supervision)

Microprudential supervision aims to ensure the stability of financial institutions and to protect their depositors, clients and creditors. The stability of individual institutions is a necessary (though not the sole) precondition for financial sector resilience. One of the key objectives of financial supervision is the timely identification of problems at individual financial institutions, and intervening in them in a timely manner – including through resolutions. Financial institutions that repeatedly fail to comply with minimum regulatory requirements can weaken the resilience of the financial sector.

However, the two policies could encounter a conflict of interest. For instance, during an economic upturn, macroprudential policy prescribes a build-up of capital reserves (buffers) even though some institutions may seem sufficiently capitalized from a microprudential point of view. During a crisis, the foreclosure of collateral by a bank may improve that bank's financial standing, but prompt fire sales.

Setting capital requirements is a key area where microprudential supervision and macroprudential policy intersect. Minimum capital requirements are a classical microprudential instrument, while the countercyclical capital buffer, systemic importance buffer, and systemic risk buffer are typical macroprudential instruments. The capital conservation buffer and the buffer resulting from bank assessments under SREP are both micro- and macroprudential instruments.

## Total bank capital requirements (including buffers), percentage of risk-weighted assets



The NBU recognizes the potential for conflicts of interest between various policy types. The regulator's internal framework of committees works as a collegiate and involves directors from the relevant departments. This facilitates an exchange of information and ideas, prevents conflicts between policies, and allows for the reconciliation of measures and instruments. The committees on financial stability, monetary policy, supervision and regulation of banks, oversight of payment infrastructure, and supervision and regulation of non-bank financial services markets are tasked with coordinating macroprudential, microprudential, and monetary policies.

### FX Liberalization and Macroprudential Policy

Ukraine is a small, open economy that is sensitive to volatility in international financial markets. Therefore, external factors were very important during past crises. This manifested itself in FX outflows from the banking sector and capital abroad, difficulties in refinancing external debts, a reduction in the NBU's international reserves, and significant depreciation pressure on the hryvnia exchange rate. In such cases, the NBU has to respond to risks by imposing FX restrictions, using them as a macroprudential policy tool.

The Law of Ukraine On Currency and Currency Operations adopted in June 2018 provides for the free movement of capital. When there is financial stability, all

obstacles to cross-border currency transactions should be removed. At the same time, if signs of financial sector instability appear, the NBU has the right to introduce protective measures or special temporary regulations for the banking sector. Amid the war, the NBU was forced to impose capital controls and temporarily fix the exchange rate, primarily to ensure macroeconomic stability. These restrictions are gradually being eased as the macroeconomic situation allows. In particular, starting in October 2023, the NBU switched to a regime of managed exchange rate flexibility to strengthen the resilience of the FX market and the economy. In 2023–2024, the NBU took a number of measures to liberalize the FX market in line with its approved Strategy for Easing FX Restrictions, Transitioning to Greater Flexibility of the Exchange Rate, and Returning to Inflation Targeting (the FX Liberalization Strategy)<sup>11</sup>.

The NBU will continue to follow the directions set out in the FX Liberalization Strategy, according to which the introduction, relaxation, or cancelling of FX restrictions is not used to replace monetary or exchange rate policy instruments. Macroprudential instruments will also be given preference over FX restrictions in preventing systemic risks arising from capital movement. The gradual easing of FX restrictions that is in line with the economic environment will help minimize risks to price and financial stability and support the potential for a sustainable economic recovery.

<sup>11</sup> [The Strategy for Easing FX Restrictions, Transitioning to Greater Flexibility of the Exchange Rate, and Returning to Inflation Targeting.](#)

## Underlying Information

The effectiveness of macroprudential policy depends largely on the quality of input information. Currently, not all required data is available in Ukraine. The collection and publication of some data has been suspended for the period of martial law.

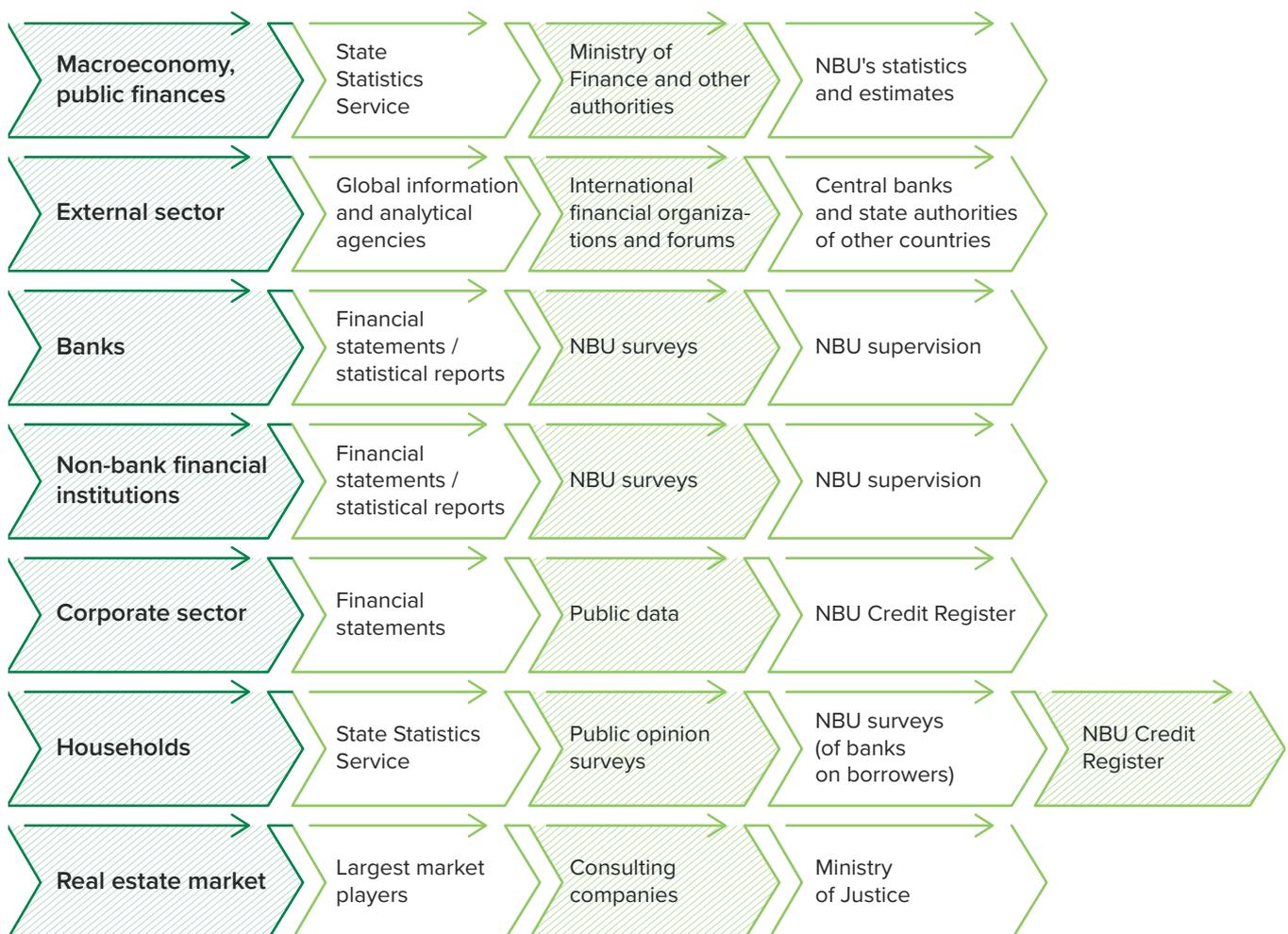
Banking sector data is the most readily available. After being given a mandate to regulate non-bank financial institutions, the NBU has been promoting their transparency and disclosing information on their key performance indicators, ownership structure, and compliance with regulatory requirements.

The NBU's Credit Register (the Credit Register) is a very important element. Banks and non-bank financial institutions submit to it information on credit transactions

for an outstanding debt of at least UAH 50,000. The NBU may change the threshold for reporting the total amount of liabilities (total debt) of a borrower for exposure reporting purposes. The NBU may use the register to recalibrate the PD and LGD ratios used by banks to assess credit risks. The Credit Register also helps monitor concentrations of credit risk in the system.

However, the data on other sectors is at present incomplete. The NBU lacks the data to evaluate the debt burden or market behavior of households by income group. That data would help the NBU set appropriate limits on credit exposures (LTV, DSTI, DTI). The NBU, together with other relevant institutions, is working to improve the system for collecting data on the real estate market. The NBU will continue to work to improve the quality and availability of the information required for macroprudential policymaking.

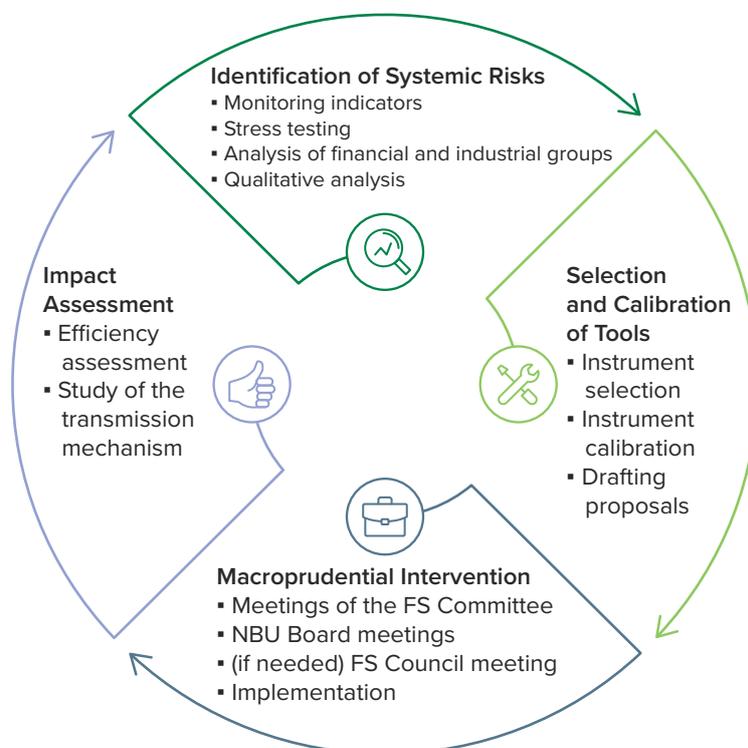
### Sources of information on financial stability by sector



# Practicalities of Macroprudential Policy in Ukraine

## Stages of Macroprudential Policy

The macroprudential policy cycle is made up of four main stages.



### Identification of Systemic Risks

At this stage, the NBU analyzes the condition of major markets based on open statistical data and information from NBU units – in particular, those responsible for the supervision of banks and non-bank financial institutions, monetary policy, payment system oversight, and open market operations. The opinions of other financial sector regulators are also taken into account.

To identify risks, as well as using expert judgments the NBU looks at quantitative and qualitative indicators, including:

- macroeconomic, monetary, and banking statistics, statistics of non-bank financial institutions, and indicators of the financial and real sectors, and those of the real estate market;
- solvency indicators of financial and industrial groups that are the largest borrowers of Ukrainian banks, and solvency indicators of the retail segment;
- surveys of banks and other financial market players.

**Table. Approximate list of indicators for monitoring the risks of financial institutions <sup>12</sup>**

Intermediate objectives	Indicators
Mitigate and prevent excessive credit growth and leverage	<ul style="list-style-type: none"> <li>▪ Deviation of the credit-to-GDP ratio from the long-term trend;</li> <li>▪ Credit growth, including for individual economic sectors;</li> <li>▪ Leverage ratio (ratio of Tier 1 capital to total assets and off-balance-sheet liabilities);</li> <li>▪ Capital adequacy;</li> <li>▪ Change in the NPL ratio;</li> <li>▪ NPL coverage ratio;</li> <li>▪ Change in housing prices and their deviation from the long-term trend;</li> <li>▪ Change in LTV for new mortgages;</li> <li>▪ Households' debt-to-income ratio;</li> <li>▪ Change in the ratio of housing prices to household incomes;</li> <li>▪ Change in the price-to-rent ratio;</li> <li>▪ Developments in rental costs and vacancy ratios on the commercial real estate market;</li> <li>▪ Lending terms and conditions (based on a survey of credit institutions);</li> <li>▪ Financial cycle index;</li> <li>▪ Financial sector risk map.</li> </ul>
The prevention of market illiquidity	<ul style="list-style-type: none"> <li>▪ Loan-to-deposit ratio;</li> <li>▪ Liquidity Coverage Ratio (LCR);</li> <li>▪ Net Stable Funding Ratio (NSFR);</li> <li>▪ Distribution of liabilities by maturity;</li> <li>▪ Limits on open foreign currency positions of the banks;</li> <li>▪ Ratio of external borrowing in total liabilities of the banks;</li> <li>▪ Change in CDS on sovereign debt instruments and debt instruments of the banks;</li> <li>▪ Financial Stress Index.</li> </ul>
Limits on exposure concentration	<ul style="list-style-type: none"> <li>▪ Distribution of credit portfolio by sector;</li> <li>▪ Regional distribution of credit portfolios;</li> <li>▪ Currency distribution of credit portfolios;</li> <li>▪ Credit exposure concentration of selected financial and industrial groups;</li> <li>▪ Rate of interconnectedness of the banks / financial institutions.</li> </ul>
Limits on the systemic impact of misaligned incentives	<ul style="list-style-type: none"> <li>▪ Banking / financial sector assets-to-GDP ratio;</li> <li>▪ Share of systemically important banks in total deposits and loans;</li> <li>▪ Share of systemically important payment systems in total transactions;</li> <li>▪ Change in interest rates;</li> <li>▪ Net interest margin;</li> <li>▪ Return on equity.</li> </ul>

### Selection and Calibration of Tools

The NBU chooses a macroprudential instrument based on the best fit for a given identified systemic risk. When choosing a macroprudential instrument, the NBU considers the following factors: the scale of the systemic risk (whether it affects the entire sector or only part of it), its source (on the borrower or lender side), the impact of the instrument (whether it affects the financial institution's balance sheet or its market behavior), its impact on the financial cycle (limiting expansion or limiting downturn), and potential / unintended side effects. Then, the NBU makes the instrument consistent with its other policies and calibrates it to the scale and potential contagion area of the risk, as well as the conditions of and prospects for financial sector development. Instruments should be pre-selected and pre-calibrated for eventual activation.

The NBU selects an appropriate instrument from among the basic list of instruments recommended by the ESRB. However, the NBU can also deploy other macroprudential tools as appropriate, especially to neutralize risks specific to Ukraine's financial sector.

The NBU's choice of a tool will be guided by the functional approach, which is becoming increasingly popular in European practice. This means that the instrument will apply to all financial institutions (both the banks and NBFIs) performing the same function in the financial system – for instance, consumer lending.

<sup>12</sup> Most of the listed indicators relate primarily to credit institutions, especially for the "Mitigate and prevent excessive credit growth and leverage" objective. However, they can partly apply to a wider range of financial institutions. Further on, the list will be expanded – in particular for the non-banking financial sector.

## Macprudential Intervention

Depending on the situation, the NBU reacts to systemic risks in the following ways:

- **risk warnings** – the NBU communicates about risks to financial stability to financial market participants, other regulators, authorities, and the public. This is a mandatory stage. If macroprudential restrictions are premature, unsuitable, or impossible, the NBU will limit its intervention to communications alone;
- **use of macroprudential instruments** – if the communication related to a risk is insufficient, the NBU will use macroprudential instruments as selected on the basis of a prior analysis of their pros and cons. The FS Committee recommends the use of macroprudential instruments and their parameters, and the NBU Board approves the relevant decisions. If identified risks cannot be eliminated through measures taken by the NBU, the NBU will initiate their consideration by the FS Council or initiate the engagement of other authorities. The NBU will inform market participants in advance of the use of the majority of macroprudential instruments.

## Assessment of the Impact of Macroprudential

**Policy.** The NBU collects information on the impact of macroprudential instruments and analyzes it in order to clearly understand all of their effects. After an instrument is implemented, the NBU studies the instrument's impact on the financial system, based on an analysis of reports submitted by individual financial institutions, key indicators of the financial system and those of the markets, and changes in financial market sentiment. This helps the NBU assess whether the risk was correctly identified, whether intermediate objectives were achieved, and whether the instrument was effective. Assessments of individual instruments combine to form an overall assessment of macroprudential policy.

The NBU also studies the instruments' transmission mechanisms *ex ante* and *ex post* in order to better understand their functioning and improve their calibration. The NBU will assess the effectiveness of implemented instruments based on modelling and feedback from market participants.

## Role of Stress Testing

Stress testing plays a major role in the identification of systemic risks. Stress test scenarios build on assumptions of the deterioration of macroeconomic, sectoral, and specific financial indicators. The stress test thus helps the NBU to evaluate the impact of an economic shock on financial institutions, and assess the related losses incurred by the system. Even if a shock assumed in a scenario never materializes, the NBU obtains a lot of information from the stress test. Such information underpins the application of response

measures to or making recommendations for a financial institution, or the implementation of macroprudential instruments.

The NBU holds stress tests of the banks at the micro and macro levels. At the same time, due to insignificant volumes of transactions and the absence of systemic risks, the NBU does not stress test NBFIs at the moment. Meanwhile, stress testing of insurers has become widespread in global and European practices. In particular, the European Insurance and Occupational Pensions Authority (EIOPA) stress tests insurers every two years. The NBU may eventually introduce such stress tests for Ukrainian insurance companies.

The important question the stress test is meant to answer is "what would happen to the banks if the worst-case scenario materialized, even if the regulator is confident that such a scenario is highly unlikely to materialize in the foreseeable future?" Stress tests do not seek to answer the question of what will happen to the banks in the coming years.

## Micro Stress Testing of the Banks

The NBU normally holds an asset quality review of the banks before conducting micro stress tests. The tests model the operations of individual financial institutions in detail. These are top-down stress tests, meaning that the NBU bases its calculations on information reported by the banks. The NBU sets additional requirements for the banks based on the results of the micro stress tests, such as to increase the capital or restructure assets or business processes. Compliance with these requirements should enhance a bank's resilience in the event of a crisis.

The NBU will annually stress test the banks that account for a large share of banking sector assets. The tests will not cover small banks, as a loss of capital at such banks does not pose a systemic risk during a crisis.

## Macro Stress Tests

Macro stress tests are held for entire sectors, and mostly do not look deeply into the operations of individual financial institutions. To develop the scenarios, the NBU uses a macro-financial model, which is a semi-structural model developed for macroprudential analysis through scenario analysis, taking into account the two-way links between the financial sector and the real economy. If a test identifies systemic risks that apply to many banks, the NBU may deploy macroprudential instruments.

A macro stress test can be based on assessments of individual banks. The test then models feedback loops between financial institutions that could trigger a chain reaction.

## Macroeconomic Scenarios for Stress Testing

In most cases, stress tests contain two macroeconomic

scenarios: baseline and adverse. The key risk factors are fed into the model of the adverse scenario, which helps the NBU to measure the resilience of the banks to crises. The baseline scenario provides a background for comparison, and helps to detect weaknesses in the banks' current business models, even in the absence of external shocks. The NBU develops scenarios with three-year horizons. Such a period allows the model to capture all stages of a crisis, from its outbreak to the start of economic recovery.

The baseline scenario is generally in line with the NBU's macroeconomic forecast. The adverse scenario models a severe but plausible scenario of a crisis. It does not necessarily reflect the experiences of past crises and does not constitute an alternative macroeconomic scenario of the NBU.

Scenario modelling builds on four key groups of indicators:

- **GDP and output volumes** – the scenario assumes that they will plummet, with varying impacts across different sectors
- **exchange rate** – the scenario projects a substantial depreciation of the hryvnia
- **inflation** – the pace of price growth is assumed to accelerate during a crisis, in particular because of currency depreciation
- **interest rates** – the model assumes a sharp hike in the NBU's key policy rate and in commercial rates, which would push down interest spreads and margins at most banks. In addition, there may be unfavorable changes in the prices of financial instruments held by banks.

The NBU adjusts the list of risk factors in the adverse scenario on the basis of the development path of the financial sector and the economy. The NBU can also conduct reverse stress tests – the test first determines the amount of losses banks must be able to absorb, and then models the projected change in key macroeconomic indicators that would generate these losses.

Modelling for individual banks or for the entire banking system is not aimed at obtaining the most precise forecast of their financial indicators. This is impossible because of the assumption of static balance sheets. However, the baseline and adverse scenarios allow to assess how existing imbalances could materialize, and how this would affect the banks' profitability and capital.

The NBU plans to annually communicate macroeconomic scenarios for stress tests to the banks and the public, explaining the rationale for their design in detail. The NBU remains committed to the principle of openness of stress test results to increase the transparency of the system and trust in the actions of the regulator and the banks.

## Macroprudential Policy Focus

Systemic risks can vary depending on the development stage of the financial sector, the stage of the financial and economic cycle, and external conditions. However, today Ukraine faces a number of long-term risks. These risks are mostly concentrated in the banking sector; systemic risks in the non-banking financial sector are currently negligible. The NBU will monitor those and intervene with macroprudential measures, if required. Macroprudential policy measures will be applied proportionally to the threat, taking into account the realities of their full-scale war.

### Short Maturity of Bank Funding

The structure of bank funding has changed considerably over the last 15 years, with the share of external debt in the liabilities of the banks falling from 38% in 2008 to 2.4% as of mid-2024.<sup>13</sup> At the same time, the share of clients' deposits in bank liabilities exceeded 92% as of mid-2024. On the bright side, the banking sector is now independent from the global debt markets, which limits Ukraine's exposure to external crises. However, a new threat has emerged – the short maturity of corporate and retail deposits, which increases liquidity risks. Over 65% of bank hryvnia liabilities are demand deposits. The NBU therefore needs to encourage the banks to keep more assets in high quality liquid components and extend the maturity of funding, for example by attracting longer-term deposits. To this end, the NBU introduced the LCR requirement in 2018, and the banks are successfully complying with this requirement. In 2021, the NBU imposed the NSFR requirement, which aims to improve the maturity matching between assets and liabilities. During the war, the NBU raised the required ratio and improved the design of the reserve requirements for banks, which helped increase the share of term deposits.

**Possible NBU actions:** introducing tighter requirements for internal liquidity management at banks; changes in reserve requirements.

**Expected impact from implementation:** extension of funding maturity; mitigating the maturity gap; building up liquidity buffers by holding more assets in high-quality liquid components.

### High Dollarization Rate in the Banking Sector

Historically, the share of the banks' FX assets and liabilities has been significant, reaching 60% in 2016. Losses incurred in the past have had a negative impact on businesses' willingness to take out FX loans, legislative bans make it impossible to lend to households in foreign currencies, and the NBU's measures further encourage the banks to make hryvnia assets more attractive to clients. Therefore, in recent years, the share of FX assets and liabilities has been gradually decreasing. However, due to the depreciation of the hryvnia, the share of FX on the balance sheets still

<sup>13</sup> Taken as a ratio of gross external debt to liabilities of other deposit-taking corporations (banks).

remains high: the FX component of deposits and gross loans is about 30%. Such levels pose systemic risks, in particular, they increase the currency risks of banks, especially in the context of significant macroeconomic imbalances due to the war. In addition, stress tests show that a significant number of corporate clients of banks may stop servicing their loans if the hryvnia depreciates significantly. The NBU will encourage the banks to further reduce the dollarization rate of their balance sheets. In particular, the NBU maintains the non-stimulatory effect of the reserve requirement ratio: a 10% spread between the hryvnia and FX reserve requirements.

**Possible NBU actions:** introducing additional risk weights for FX assets; tightening requirements for the evaluation of FX credit exposures; developing recommendations for banks to decrease the proportion of FX loans in their portfolios.

**Expected impact from implementation:** decreased currency risk for banks and their clients.

### High Share of State-Owned Banks in the Banking Sector

State-owned banks have historically held a large share of the market, which but has grown even more because of the crises. The nationalization of PrivatBank in December 2016 sharply boosted the share of state-owned banks by 20 pp in terms of assets. During the full-scale war, the state acquired three more banks and increased its share in the sector to more than 53% of assets and 64% of retail deposits. Prior to 2014, state-owned banks were a common source of lending to businesses owned by politically exposed persons. Most of these loans have become non-performing and have not yet been resolved, remaining a burden for financial institutions. Today, that practice has ceased. However, state-owned banks still generate a range of problems, such as lower capitalization and efficiency compared to most banks, as demonstrated by the stress tests. In addition, these financial institutions are not focused on maximizing their profits, but because of their size they shape trends in market pricing for assets and liabilities. In the context of the war, the role of state-owned banks in financing priority sectors of the economy and companies critical to its functioning is growing. At the same time, the dominance of state-owned banks in the sector hinders competition, and the tasks set can be accomplished even with a much smaller share of the state in the sector. Therefore, a strategy for reducing the share of state-owned banks in the sector should be pursued, and the relevant tasks should be included in the strategies of state-owned banks.

**Possible NBU actions:** facilitating the updating of the development strategies of state-owned banks and continued vigilant monitoring of the implementation of updated strategies that aim to eliminate existing problems, as well as of their NPL resolution plans;

setting systemic importance buffers and systemic risk buffers, and tightening risk management requirements.

**Expected impact from implementation:** lower share of state capital in the banking sector; stronger competition; better operational and financial performance of state-owned banks.

### Substantial Role of Subsidized Lending

To facilitate access to credit for households and businesses, the government has launched a number of lending support programs since 2020: Affordable Mortgage 7%, later eOselia for households, and Affordable Loans 5-7-9% for businesses. The programs provide clients with loans at lower than market fixed interest rates, with the difference in rates being covered by the government. The role of government programs to support lending has only increased since the full-scale russian invasion. These programs played a significant role in supporting lending during the most acute episodes of the coronavirus crisis and the first months of russia's full-scale war against Ukraine. Since mid-2022, the share of loans under the Affordable Loans 5-7-9% program in the business loan portfolio has exceeded one third, and the share of eOselia loans in June 2024 reached 70% of the mortgage loan portfolio, and is still rising. Yet, over time, macroeconomic conditions are becoming more favorable for unsubsidized lending, so government programs are beginning to compete with it unproductively, which suppresses price competition for clients, reduces incentives for proper credit risk assessment, and, consequently, weakens lending standards. To avoid the accumulation of credit risks both at individual banks and in system as a whole, government support should be focused on certain segments and categories of clients where it does not hinder the development of market lending.

**Possible NBU actions:** providing recommendations on the development of subsidy programs; evaluating the effectiveness of the programs; increasing requirements for assessing the financial condition of borrowers; limiting LTV, DSTI, and DTI for retail loans; calibrating risk weights for portfolios granted under the programs; introducing prudential standards for state-owned companies distributing funds under the relevant programs.

**Expected impact from implementation:** : preventing a decline in lending standards; increasing the share of loans issued at market rates and reducing the burden on the state budget.

### Risks of Non-bank Financial Sector

For a long time, regulatory requirements for non-bank financial institutions – including those taking household deposits – were mostly formal, and supervision was less diligent. That led to regulatory arbitrage. Most NBF financial reporting did not reflect their true financial standing, solvency, and liquidity; often their

ownership structure was opaque; and some NBFIs were allegedly used for financial fraud, tax evasion, and money laundering. The updated legal and regulatory requirements introduced after the entry into force of the split law are aimed at eliminating these problems in the sector, and accordingly, market segments were cleared of participants that did not meet the updated requirements. At the same time, the transformation of the sector is ongoing, and the war is increasing the challenges for non-bank financial services providers. Thus, risks to the financial sector remain.

The Law of Ukraine On Payment Services has opened up new opportunities for the development of the financial market, primarily for non-bank financial institutions, by allowing them to provide services that were previously limited to banks. These services include: opening and maintaining accounts, making transfers, also without opening accounts, on credit terms, crediting or withdrawing cash to and from accounts, issuing payment instruments, acquiring, issuing electronic money and performing payment transactions with it. Currently, payment service providers – non-bank financial institutions in Ukraine – have relatively small volumes of transactions and narrow specialization: primarily cash deposits and transfers without opening an account. At the same

time, an increase in the volume of transactions, and the expansion of their types and complexity may lead to a gradual accumulation of risks, especially those related to non-compliance with anti-money laundering legislation. At the same time, NBFIs currently do not pose systemic risks due to their limited interconnectedness with other financial and non-financial institutions and their relatively small size. The combined assets of NBU-supervised NBFIs account for around 10% of total sector assets. Risks stemming from these institutions are mostly concentrated in their respective sectors. Moreover, NBFI business models mostly do not promote the emergence of systemic risks. Therefore, the macroprudential measures applied to them will be proportionate.

**Possible NBU actions:** Building a system of micro- and macroprudential regulation and supervision over the non-bank financial sector, ensuring its transparency.

**Expected impact from implementation:** Decreased ability for regulatory arbitrage in the financial sector, ensuring a level playing field, better regulation and enhanced resilience of non-bank financial institutions, better consumer rights protection.

## Comparison of key risks of banks and insurance companies

Elements of systemic risks	Banks	Insurance companies
Interconnectedness	Significant interconnection with other financial institutions	Interconnection with other financial institutions is limited
Maturity mismatch	Transform short-term liabilities into long-term assets, face considerable liquidity risk	Assets and liabilities mostly correspond in terms of maturity, premiums ensure continuous liquidity inflow
Correlation of risks	Key risks (including credit and market risks) are correlated	Key risks are not correlated, underwriting risk correlation with financial risks is weak
Correlation of risks stemming from activity with the macro-environment	Key risks and related losses considerably increase during crisis times	Claims repayments are mostly not related to the macro environment, and risks are mostly well diversified
Terms for meeting obligations	Contract-based, a need for early repayment may occur	Contract-based, may be extended over time if payments are substantial
Institution size	Growth increases risks because of rising significance	Growth facilitates better risk diversification
Unique services	Hard to substitute due to a wide range of unique products and services	Services are substitutable, insurance portfolios are relatively easy to transfer from company to company

### High Concentration of Credit Risks

The banking sector's loan portfolio remains concentrated. The NBU estimates that in October 2024, the 20 largest groups of private companies controlled by the same owners accounted for 42% of gross and 17% of net corporate loans (excluding loans that PrivatBank extended to a group of companies related to former shareholders and their affiliates and that made up 21% of gross loans). The NPL ratio of these business groups was about 35%. Although the loan portfolio's overall concentration has been declining, it is still unreasonably high, posing excessive credit risks to the sector as a whole. The NBU expects the banks to diversify their loan portfolios and lend more intensively to SMEs.

**Potential action by the NBU:** keep market participants updated on the corporate loan portfolio's degree of concentration so that the banks can make informed lending decisions, perform stricter monitoring of credit risk assessment standards for large clients, impose additional Pillar 2 capital requirements, and introduce an indicator to gauge the total exposure of counterparties or groups of related counterparties (LEX).

**Effect from the use of these tools:** the banking sector's loan portfolio will be diversified by segment as well as by borrower size.

### High NPL Ratio

Ukrainian banks' portfolios have typically had a high NPL ratio for over a decade now. For the most part, this is a result of the lending expansion seen in previous years, when borrower assessment standards were low, and creditor rights were not properly safeguarded. Another major reason was the practice of related-party lending. Related parties stopped servicing their loans during the 2014–2016 crisis. The full-scale Russian invasion of Ukraine has made the elevated-NPL-ratio problem worse. The banks have as of now recognized all of their impaired loans, and the NPL coverage ratio is consistently high at over 85%. Going forward, NPLs will therefore have no significant effect on the banks' financial performance and capital. However, the high NPL ratio is a burden on the banking sector, especially for state-owned banks, which hold some 84% of the sector's NPLs (about half of them are at PrivatBank). The NBU believes that the banks should more actively clean up their balance sheets: NPLs must be restructured, sold, or written off. The anticipated improvement in NPL market infrastructure envisaged by the Lending Development Strategy will also help reduce the NPL ratio.

**Potential action by the NBU:** oblige the banks to operate effective internal systems for NPL resolution, encourage state-owned banks to implement action plans to cut back NPL volumes, and promote the development of an active NPL market.

**Effects of using the tools:** the banks' balance sheets will be cleared of problem loans; systems will be put in place to monitor loan portfolio status.

### New Challenges

Given the global financial market's shifting landscape and transformation as technology progresses, the NBU and financial institutions are facing new challenges. With time, some of these may morph into systemic risks that will call for an appropriate macroprudential response. These new challenges are only starting to take shape.

Specifically, domestic financial institutions, primarily banks, are feeling the impact of environmental, social, and governance (ESG) risks on their business, and some are actively tackling them. According to a mid-2024 survey by the NBU, one-third of large banks have set up units to deal with these risks. However, transition risks associated with climate risks are increasingly on the radar, as is the risk of society taking stronger "soft power" action, all of which can blunt the competitive edge of banks and clients that do not care about the environment and their employees. For example, access to state-funded lending support programs is only granted to banks that meet ESG criteria. The banks should therefore make it their near-term goal to develop ESG policies and strategies, and fully assess their customers' ESG risks. The NBU's task on this track is to monitor the state of affairs, develop recommendations and requirements for banks to implement state-of-the-art practices in this field, and prevent negative externalities from impeding this process.

With the full-scale war continuing, financial institutions have increasingly centered on maintaining their business continuity, while operational risks may morph into systemic ones. In recent years, the banks have significantly enhanced their capacity to perform their core functions regardless of external threats and operational risks. However, the banks continue to identify cybersecurity risks as a systemic problem that threatens to render them unable to do business. Together with deploying microprudential tools to mitigate the risks faced by specific institutions, regulators are also analyzing and verbalizing the level of threats to financial stability. The NBU intends to pursue this practice as well, and to support active interagency collaboration between financial institutions so that they can exchange experience and counter cyber threats.

**Potential action by the NBU:** in-depth analysis, monitoring, communicating new risks to financial stability, and making recommendations on how to address these risks.

## Macroprudential Policy Objectives and Instruments in Ukraine

The NBU has already used a number of macroprudential tools and similar measures. In the coming years, the regulator expects to introduce another set of instruments – the capital buffers. During this time, the NBU will tailor them to Ukrainian conditions, collect necessary data, and build models to assess the effects of using these tools.

Considering the ESRB’s guidelines and the condition of the Ukrainian financial sector, in addition to the five core intermediate objectives of macroprudential policy, the NBU has identified a sixth one – lowering the sector’s level of FX-denominated loans and deposits. To meet each of these objectives, the NBU will use a number of instruments listed in the table below.

At the same time, because of the war and its consequences, the intermediate goals of macroprudential policy have their own specific features.

The growth in financial intermediation has decelerated as security risks exact their toll. Under such conditions, the priority is to resume lending in a coherent way that does not lead to more imbalances. To ensure progress in this area, the Financial Stability Council (FSC) approved a Lending Development Strategy in June 2024. Thanks to measures taken under the strategy, headway has already been made in lending to various sectors of the economy. Therefore, within the framework of achieving the first intermediate goal of macroprudential policy, the NBU will next focus on supporting the balanced development of lending.

Given the significant liquidity cushion at the banking sector’s disposal, if the second intermediate objective of macroprudential policy is achieved, the main focus will shift to more effective liquidity management of the financial sector to enable it to perform its key functions.

This list is not exhaustive and will be expanded as necessary.

### Objectives and a tentative set of macroprudential tools<sup>14</sup> for Ukraine

Intermediate objectives	Possible instruments*
1. Preventing excessive lending growth	<p>Capital instruments:</p> <ul style="list-style-type: none"> <li>▪ capital requirements based on the results of stress tests;</li> <li>▪ capital conservation buffer;</li> <li>▪ additional risk weights for certain types of loans<sup>15</sup>;</li> <li>▪ countercyclical capital buffer – activation is not planned for the next few years;</li> <li>▪ systemic risk buffer;</li> <li>▪ sectoral capital requirements;</li> <li>▪ leverage ratio.</li> </ul> <p>Other tools:</p> <ul style="list-style-type: none"> <li>▪ regulatory requirements for calculating prudential reserves (minimum levels of PD and LGD parameters);</li> <li>▪ The banks are required to use a single scoring model to calculate prudential (regulatory) provisions (credit risk). If the total amount of prudential provisions exceeds the level required by IFRS, the banks’ regulatory capital is reduced by this excess sum;</li> <li>▪ requirement to provide and use Credit Register data;</li> <li>▪ restrictions on the loan-to-value (LTV) ratio;</li> <li>▪ restrictions on the debt service-to-income (DSTI) ratio and the debt-to-income (DTI) ratio.</li> </ul>
2. Avoiding liquidity shortages	<p>Liquidity instruments:</p> <ul style="list-style-type: none"> <li>▪ liquidity coverage ratio (LCR). Effective December 2018, there is a ratio for all currencies and separate ones for groups of foreign currencies;</li> <li>▪ Net Stable Funding Ratio (NSFR) – introduced in 2021;</li> <li>▪ reserve requirement ratio for short-term external borrowing;</li> <li>▪ other funding requirements, such as the loan-to-deposit (LTD) ratio;</li> <li>▪ additional liquidity requirements, such as liquidity buffers;</li> <li>▪ macroprudential (differentiated) required reserve ratios.</li> </ul>

<sup>14</sup> For banks and payment systems.

<sup>15</sup> The NBU has previously applied this tool to unsecured consumer loans.

3. Limiting risk concentration	<p>Capital instruments:</p> <ul style="list-style-type: none"> <li>▪ capital requirements based on stress-testing results;</li> <li>▪ systemic risk buffer.</li> </ul> <p>Segment-specific and other tools:</p> <ul style="list-style-type: none"> <li>▪ capping the concentration of large exposures. The maximum amount of a loan that a bank can issue to one counterparty or group of related parties is currently 25% of regulatory capital;</li> <li>▪ restrictions on loans to parties related to the bank (currently 25% of regulatory capital). The NBU has set a strict rule that a bank's regulatory capital is adjusted by the amount by which loans made to related parties exceed the established cap; while under martial law, such loans are prohibited;</li> <li>▪ additional capital requirements in the event of significant concentrations in certain sectors or types of loans.</li> </ul>
4. Limiting the impact of distorted incentives (including those of state-owned banks)	<p>Capital instruments:</p> <ul style="list-style-type: none"> <li>▪ capital requirements based on stress test results;</li> <li>▪ the systemic importance buffer and other additional capital requirements for systemically important banks;</li> <li>▪ the systemic risk buffer.</li> </ul> <p>Other tools:</p> <ul style="list-style-type: none"> <li>▪ promoting the renewal and implementation of the development strategy of state-owned banks;</li> <li>▪ providing recommendations to strengthen risk management practices.</li> </ul>
5. Increasing the resilience of financial infrastructure	<p>Other tools:</p> <ul style="list-style-type: none"> <li>▪ *enhanced oversight of key elements of payment infrastructure ;</li> <li>▪ *increasing the resilience of the central bank's payment systems (NBU SEP, PROSTIR).</li> </ul>
6. Lowering the level of the banking sector's FX-denominated assets and liabilities	<p>Liquidity instruments:</p> <ul style="list-style-type: none"> <li>▪ *liquidity coverage ratio (LCR) in FX.</li> </ul> <p>Other tools:</p> <ul style="list-style-type: none"> <li>▪ *prohibition of making FX loans to households;</li> <li>▪ This was enshrined into law in 2009 for an indefinite period. No prerequisites currently exist for easing this restriction;</li> <li>▪ *cap on open FX positions. As of August 2024, the banks' short and long FX positions are limited to 5% of regulatory capital. The NBU will change this limit depending on how the FX market situation evolves, but the restriction will remain in place;</li> <li>▪ *requirements for rebalancing the currency structure of the loan portfolio based on the results of bank stress test;</li> <li>▪ *increased reserve ratio for FX deposits;</li> <li>▪ *increased PD and LGD values for FX loans assessed on a group basis;</li> <li>▪ *reserve requirement for short-term external borrowing;</li> <li>▪ introducing additional risk weights for FX assets;</li> <li>▪ establishing stricter requirements for assessing the credit risk of FX loans.</li> </ul>

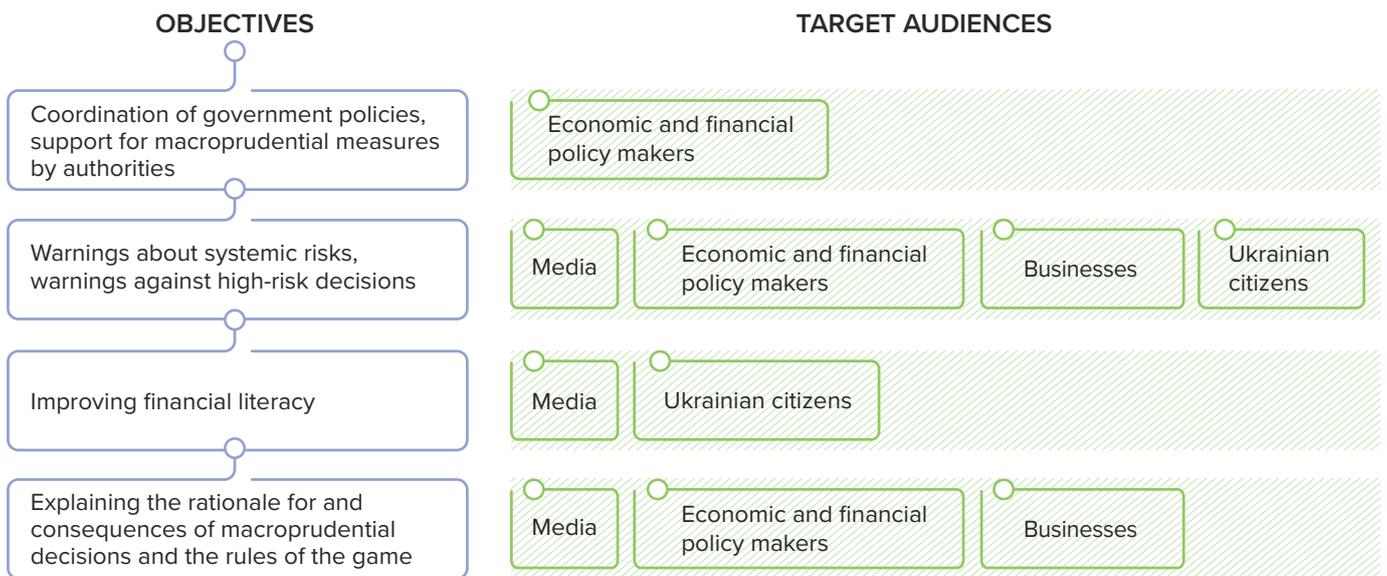
\*Tools already in use. The NBU may introduce other tools going forward.

Over time, we can expect the emergence of separate instruments for the non-bank financial sector, primarily for insurance companies, as relevant tools are developed in the EU. The NBU will further study European practices and may introduce best practices in Ukraine based on the domestic financial sector's level of development.

### Communication System

Well-established communications are a significant factor in the effectiveness of macroprudential policy. They help shape the expectations of target audiences and promote public awareness of risks and macroprudential regulation.

## Target audiences and objectives of macroprudential policy communications



Macroprudential policy communication has three components:

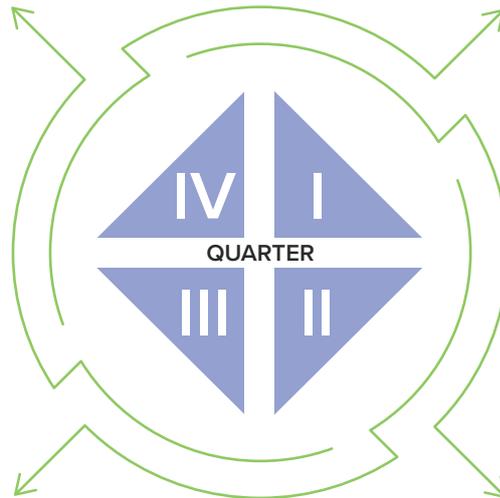
- explanation of the macroprudential regulation system. The NBU elucidates the goals of macroprudential policy, the powers of the relevant bodies, the decision-making system, and available tools. The Strategy is part of this effort
- warning about risks. Having analyzed systemic risks, the NBU communicates the most significant of them to the public, provided that the publication of such information does not pose a threat
- communications about macroprudential measures. When introducing a macroprudential instrument, the NBU explains its actions to financial institutions and provides them with templates or instructions for calculations.

The Financial Stability Report is the main point of reference for all information and analysis purposes concerning systemic risks. The NBU's other important regular publications: Banking Sector Review, Non-Bank Financial Sector Review, Systemic Risk Survey, and Bank Lending Survey. The results of stress testing (which is part of the resilience assessment of the banks and the banking system) and a report on FSC activities are published annually. In addition, the NBU holds regular seminars for higher-education institutions on current issues in financial sector regulation, and ad hoc communications and training events.

The core communication channel is the Financial Stability section of the NBU's official website. In addition to key publications, the section contains thematic materials, such as those on NPLs and mortgage lending.

## Financial stability communications cycle

- Financial Stability Report
  - Stress test results
  - Systemic Risk Survey
  - Banking Sector Review
  - Non-bank Financial Sector Review
  - Bank Lending Survey
  - Bank Funding Survey
- Banking Sector Review
  - Non-bank Financial Sector Review
  - Bank Lending Survey
  - Bank Funding Survey



- Banking Sector Review
  - Non-bank Financial Sector Review
  - Bank Lending Survey
  - Bank Funding Survey
  - Annual Report on Activities of the FS Council
- Financial Stability Report
  - Systemic Risk Survey
  - Banking Sector Review
  - Non-bank Financial Sector Review
  - Bank Lending Survey
  - Bank Funding Survey

# Glossary

**Capital buffer** is the amount of capital a financial institution must hold above the required regulatory minimum. It either can be set as a single rate for all financial institutions (or groups of financial institutions) or individually based on risk assessment results.

**Loss given default (LGD)** is a ratio reflecting the size of losses if a borrower/counterparty defaults.

**Environmental, social, and governance (ESG) risks** are the risks of any adverse financial impact on a financial institution arising from the current or potential impact of ESG factors on its counterparties or invested assets. ESG risks materialize through the traditional categories of financial risks (credit risk, market risk, operational risk, reputational risk, liquidity risk, and funding risk).

**Environmental, social, and governance (ESG) factors** in the financial sector are factors used to assess a financial institution's performance or investment in terms of their environmental, social, and governance impacts.

**Probability of Default (PD)** is a ratio that reflects the probability of the debtor/counterparty ceasing to fulfill its obligations (default).

**Macroprudential policy instruments** are requirements and restrictions imposed on the financial system as a whole or on individual groups of its participants in order to achieve intermediate and strategic objectives of macroprudential policy.

**Macroprudential policy** encompasses a set of measures aimed at identifying and assessing systemic risks to financial stability and at mitigating these risks. Non-performing asset / loan is an asset past due for over 90 days (30 days for debtor banks) or where a counterparty is unable to meet its liabilities without foreclosure.

**Regulatory arbitrage** is a practice by which financial institutions take advantage of softer regulations to boost profits, which can result in a build-up of systemic risks.

**Systemic risk is the possibility** of a functional failure of the financial system, in whole or in part, that would disrupt the proper redistribution of financial resources and potentially produce adverse effects for the entire economy. Systemic risk has a cyclical and a structural component.

**Systemically important** financial institutions are those financial institutions whose failure could lead to material imbalances in the financial system and the economy, due to their size, complexity, indispensability, and interconnectedness with other institutions.

**Stress testing is a diagnostic instrument for assessing the resilience of financial institutions and / or the financial system to potential shocks, such as abrupt changes in the domestic and / or external economic environment or in the behavior of economic agents.**

**Structural risk** is driven by the distribution of risks and interconnectedness between the system's participants, which make the system vulnerable.

Financial stability refers to the state of the financial system in which it can properly perform its main functions, such as financial intermediation and making payments, while also being able to withstand crises.

The financial system is considered stable if:

- 1) It effectively redistributes funds from depositors to investors;
- 2) Financial risks are being thoroughly assessed and properly managed;
- 3) It is able to absorb shocks without significant negative consequences.

**Cyclical risk** is related to the tendency of economic agents to take excessive risks during economic upturns.

**SREP (Supervisory Review and Evaluation Process)** is a supervisory review and evaluation process in which each bank's risks are assessed in terms of such elements as business model, corporate governance, capital adequacy, and liquidity.

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<sup>16</sup> Regulation (EU) 2024/1623 of the European Parliament and of the Council of 31 May 2024 amending Regulation (EU) No. 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor.

