



Macprudential Policy

Strategy

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Introduction

This is the Macroprudential Policy Strategy (Strategy) of the National Bank of Ukraine (NBU). It outlines in a simple yet detailed manner the general framework of macroprudential regulation and the NBU's approach to macroprudential regulation in Ukraine.

The Strategy's publication will promote the transparency, clarity, and predictability of macroprudential policy for financial market participants. Overall, the publication will boost the policy's effectiveness and help deliver the policy's key objective: financial stability in Ukraine.

Ukraine's need for a macroprudential strategy became clear years ago. Globally, macroprudential regulation has spread quickly over the last decade, propelled in particular by the global financial crisis of 2007-2009. 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. This Strategy forms the foundations for that mandate.

The first section of the document provides a brief overview of the theory, 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 the implementation of macroprudential policy in Ukraine. This section focuses on the key risks that 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, approved by the Board of the NBU, and published 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 (NBFIs). This change, and following the first phase of implementation of the NBU's macroprudential policy, prompted amendments to the Strategy.

The NBU Board approved the updated Strategy on 12 December 2020.

Fundamentals of Macroprudential Regulation

Overview and Purpose of Macroprudential Regulation

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.

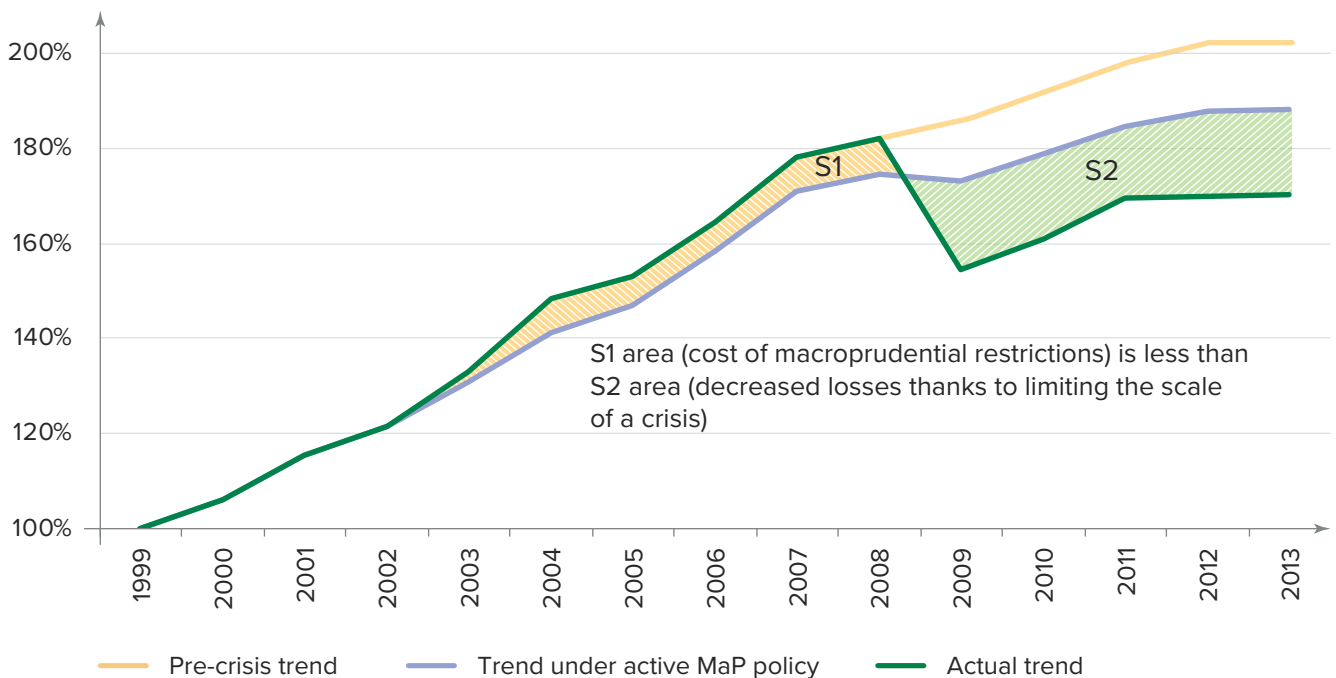
The notion of macroprudential policy emerged as policymakers reviewed the experiences of past economic crises. Since financial systems are more than the mere sum of their parts, effective supervision over individual financial institutions alone is insufficient to ensure the proper functioning of the financial system during crises. Even if every individual financial market participant is resilient in the face of crisis, 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 scale back new lending, 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 risks and limit the probability of those risks materializing. Thus, the policy promotes the resilience of the economy and reduces the volatility of GDP, as shown by numerous empirical studies¹. 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 (this is termed "inaction bias") because during an expansion of credit, it is difficult to communicate the need for restrictions to market participants, politicians, and households.

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



¹ 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 2008-2009. 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 in 2010, and the new Capital Requirement Directive and Regulation (CRR/CRD IV) was 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 establish high-level interagency councils/committees on financial stability.

A new trend is the spread of macroprudential policy to the non-bank financial sector. Currently, regulators focus primarily on insurance companies, key elements of financial market infrastructure, and setting a level regulatory playing field for all credit institutions. However, this process is still at an early stage².

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 to decrease the probability of crises and to strengthen the resilience of the financial sector.

According to recommendations by the ESRB, the strategic (ultimate) goals of macroprudential policy are achieved through tactical (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.

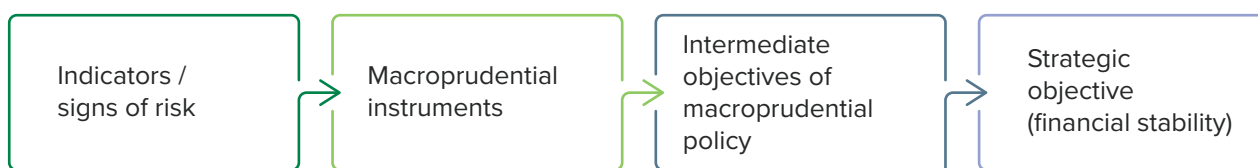
Framework of macroprudential policy objectives³



² The ESRB initiated discussions on macroprudential strategy beyond banking back in 2016. However, it has not yet produced a final document. As of now, the ESRB has addressed its recommendations beyond banking only to investment funds and central counterparties.

³ The original intermediate objectives as outlined by the ESRB.

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 of 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 public. The central bank should inform target audiences of regulatory changes in a timely manner to give them sufficient time to adjust.
- 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 in advance. Any non-adherence will only be allowed if it 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.

7. Avoiding regulatory arbitrage. Macroprudential policy is only effective if market participants cannot avoid 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. 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 divided into capital, liquidity, and other (sectoral) instruments. However, no classification is entirely definitive, as regulators are constantly introducing additional tools in response to the developing needs and specific conditions 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 based on functional approach. Therefore, tools used with credit institutions may be similar, while being 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, CCB

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 CCB aims to reduce the pro-cyclicality in the financial system. It enhances the resilience of the banking system, protects it from potential losses, and indirectly limits the expansionary stage of the credit cycle. The gap between GDP and credit growth rates 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 ratio of debt service costs to income for households and corporates, and others.

Capital buffer for systemically important financial institutions

The buffer sets additional capital requirements on 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 to level the playing field for small- and medium-sized institutions.

Systemic risk buffer, SRB

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. If a bank is required to maintain an SRB along with the capital buffer for systemically important banks, the higher of the two applies.

Capital conservation buffer

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. In doing so, the pro-cyclicality of lending is reduced. The capital conservation buffer is mostly defined as a microprudential instrument that helps to achieve macroprudential goals.

Leverage ratio

This is the ratio of tier I capital to total assets and off-balance-sheet liabilities. Maintaining the ratio at a required level serves to limit the expansion of lending. 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 for Bank Supervision sets 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)⁵. For example, regulators can lower LCR requirements during a systemic liquidity crisis to allow banks to meet obligations to depositors in full.

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)⁴.

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

Other instruments

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 debt-service-to-income ratio (DSTI) and 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 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 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 institution⁵ 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 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. The additional disclosures increase the quality of risk assessments by financial market participants, especially of risks related to the solvency and liquidity of counterparties.

⁴ https://www.esrb.europa.eu/pub/pdf/other/140303_esrb_handbook_mp.en.pdf

⁵ Normally applies to large and medium financial institutions.

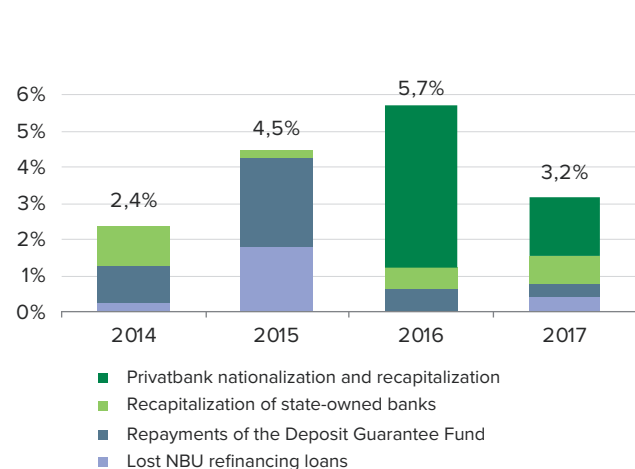
Implementation of Macroprudential Policy in Ukraine

Ukraine's Need for Macroprudential Regulation

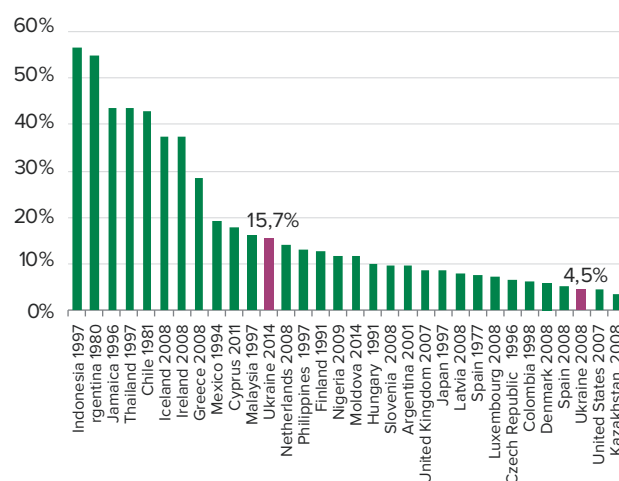
Maintaining financial stability is an urgent issue for Ukraine. The country is among the top-3 globally in terms of the frequency of crises⁶: Over the last 20 years, Ukraine has experienced three deep crises, the latest of them

being in 2014-2016. The direct fiscal costs of resolving that crisis amounted to 15.7% of GDP in the respective years⁷, which is moderate relative to other countries. However, the indirect costs to the economy in general were much higher, at 38% of GDP⁸. The consequences of that systemic crisis will limit bank lending and economic growth for a long time to come.

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



Fiscal costs of banking crisis resolution, % 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. The nationalization of Privatbank and the recapitalization of state-owned banks reflects the amount of domestic government bonds issued to increase equity capital in the respective year. Lost NBU refinancing loans include only loans to insolvent banks. Lost budget funds include the funds that budgets of all levels deposited at insolvent banks. The data for Ukraine includes refinancing loans to insolvent banks.

Sources: NBU, Deposit Guarantee Fund, IMF (Systemic Banking Crises Revisited, 2018).

The depth and frequency of the systemic crises in Ukraine have been a function of a range of fundamental problems. These include the absence of effective banking regulation at the micro-level, and the lack 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 crisis. 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.

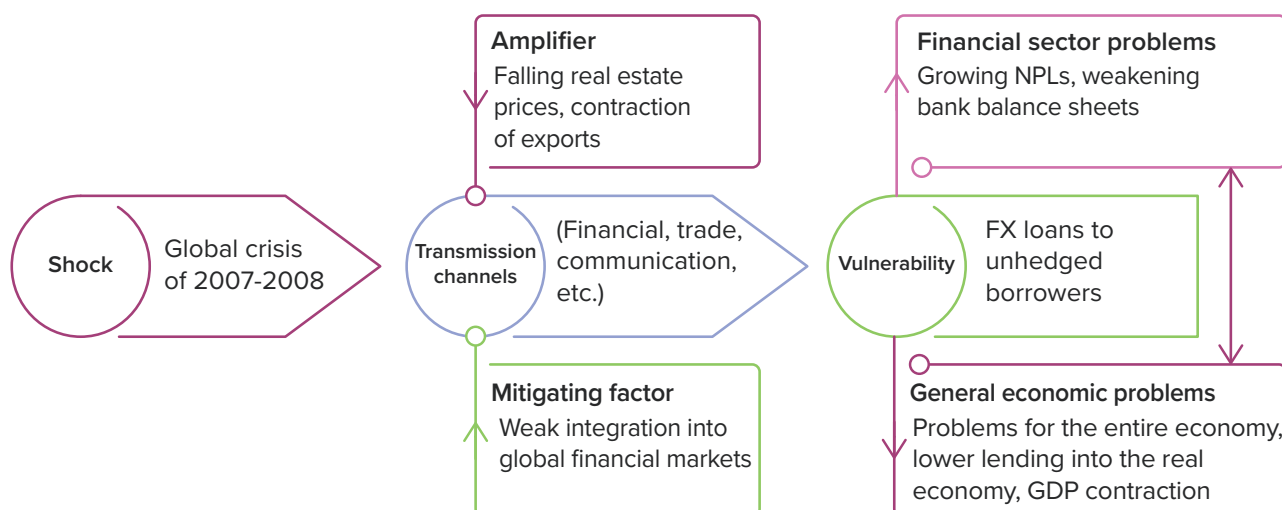
The systemic risks fully materialized after the beginning of the crisis. The sharp hryvnia depreciation rapidly increased households' debt burdens, as they had little to no foreign currency income. Prices for real estate plummeted in US dollar terms, including for assets pledged as mortgage collateral. As a result, the NPL ratio for mortgages soared.

⁶ Laeven, Valencia. Systemic Banking Crises Revisited. IMF. 2018. <https://www.imf.org/en/Publications/WP/Issues/2018/09/14/Systemic-Banking-Crises-Revisited-46232>

⁷ NBU estimates.

⁸ <https://bank.gov.ua/doccatalog/document?id=50604896>

Materialization of systemic risks during the 2008-2009 crisis



2014-2016 crisis

This crisis was in contrast 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. That 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, either before or after the crisis. The two crises show the high costs related to the absence of effective financial regulation at the level of individual financial institutions, as well as at the systemic level.

The economic crisis caused by COVID-19 pandemic in 2020 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 a deep economic downturn phase. For the first time during a crisis, the Ukrainian financial sector continuously performed its functions and facilitated the maintenance of financial stability, rather than contributing to a deeper economic downturn.

Institutional Framework

The NBU is the key policymaker of macroprudential policy

According to Article 6 of the *Law of Ukraine On the National Bank of Ukraine* (hereafter the Law), the NBU is mandated to promote financial stability, including banking system stability, provided this does not conflict with the price stability target. In practice, 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 ESRB⁹.

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

The Financial Stability Committee (FS Committee) coordinates macroprudential policy within the NBU's mandate. This is a strategic policy-making committee chaired by the Governor of the NBU. The FS Committee meets at least once a quarter, and more frequently if needed.

⁹ 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...".

The key tasks of the FS Committee 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 FS Committee makes recommendations to the NBU Board, which takes decisions on macroprudential interventions. If a risk that the FS Committee has identified is beyond the NBU's mandate, the FS Committee may recommend that the interagency Financial Stability Council step in.

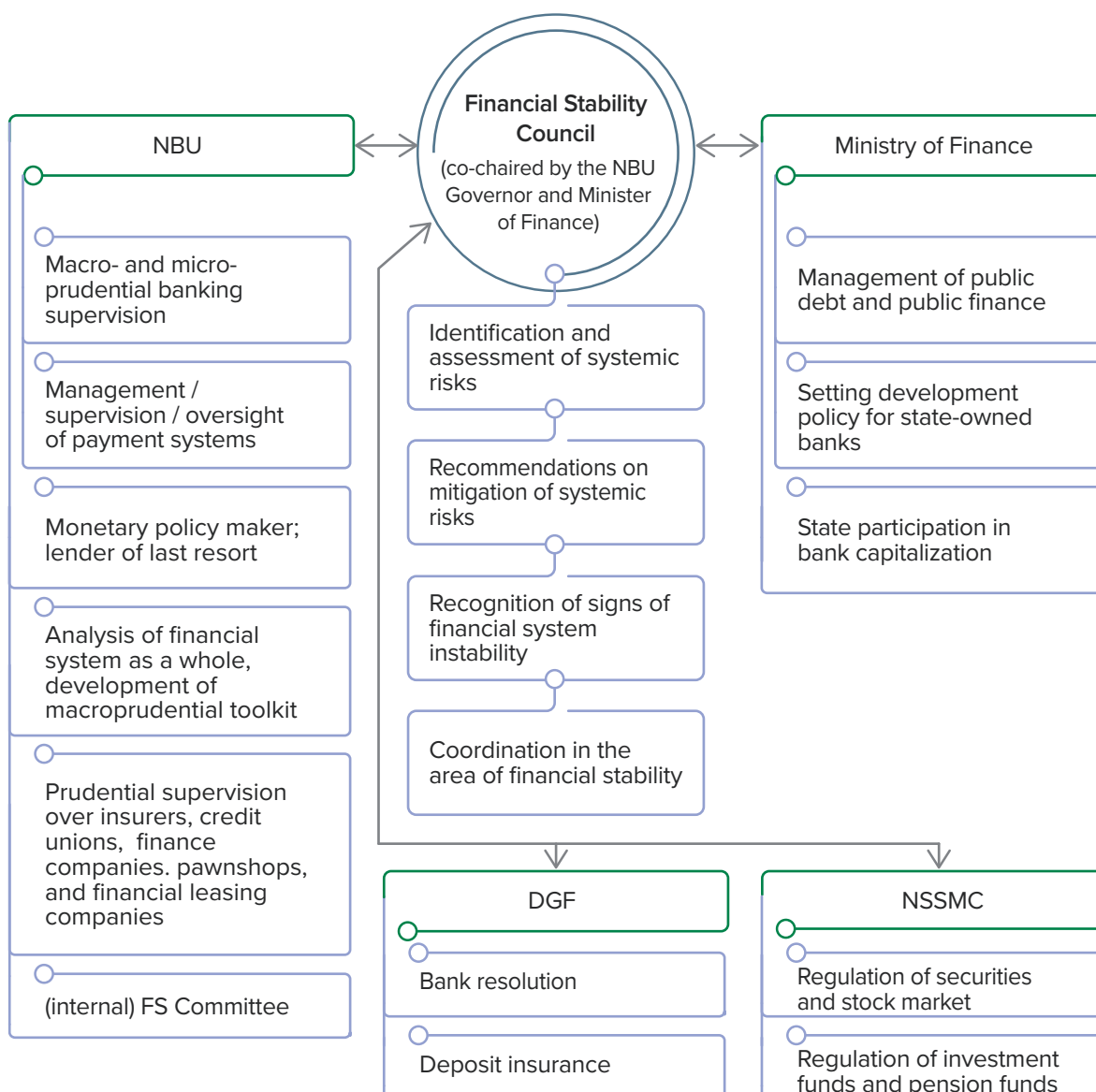
Interagency cooperation

Financial stability in a country depends on banks and non-bank financial institutions. This creates the need to ensure an 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 presidential decree in 2015. The FSC's mandate is to

identify and mitigate in a timely manner any risks that threaten the stability of the domestic banking and financial systems.

The FSC is a platform for the professional discussion of threats to financial stability between top-level officials of its member institutions. The FSC also 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 identifies signs of risks to the stability of the national banking and/or financial system. This empowers the NBU to impose temporary restrictions to regulate and supervise banks. The FSC meets at least quarterly, publishes press releases after meetings, and compiles an annual report on its activities.

Financial Stability Council and the roles of its member institutions

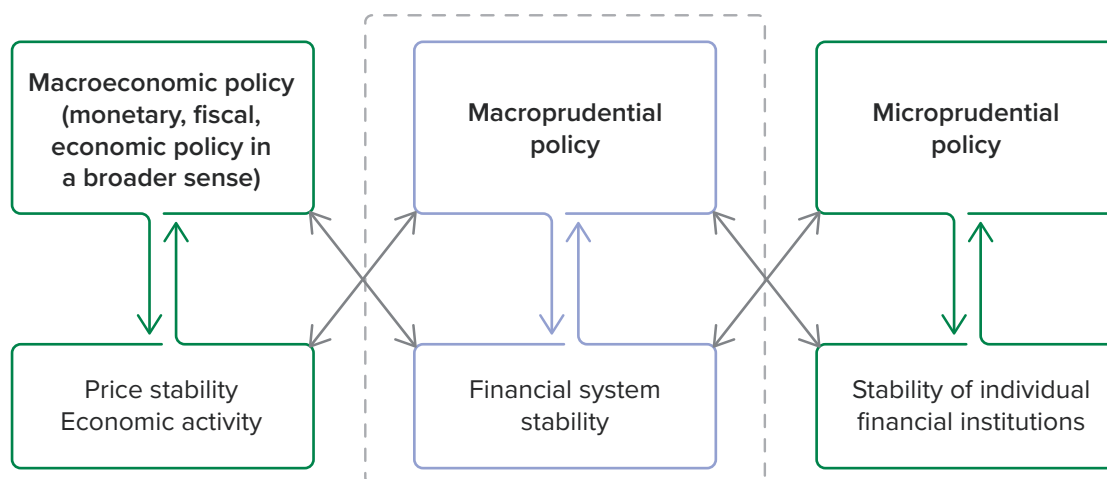


Interaction with Other Economic Policies

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.

Economic 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 applies monetary policy instruments to promote financial stability only if systemic risks or complications in the functioning of financial markets could have a serious impact on future inflation and economic activity. Normally, 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 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 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

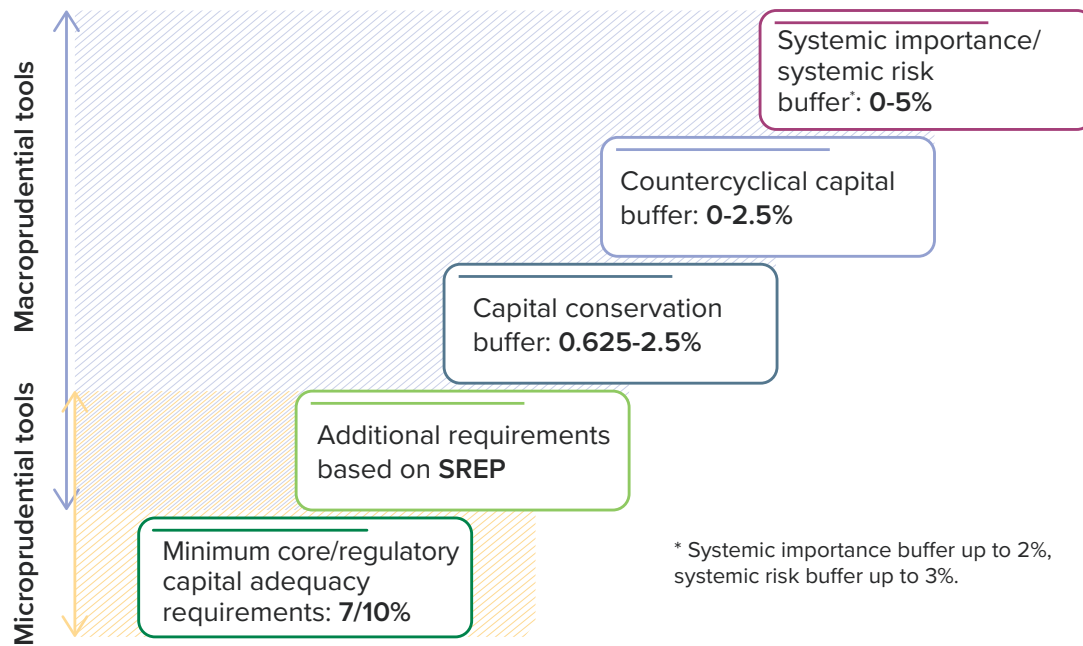
Microprudential supervision aims to ensure the stability of financial institutions and protect their depositors and creditors. The stability of individual institutions is a

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 – including through resolutions. Financial institutions that repeatedly fail to comply with minimum regulatory requirements can weaken the resilience of the financial sector.

However, separate 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 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 still pose a systemic threat to the interests of other banks exposed to that borrower, or prompt fire sales. Setting capital requirements is a key area where microprudential supervision and macroprudential policy intersect. Minimum capital requirements are a traditional microprudential instrument, while the countercyclical capital buffer, systemic importance buffer, and systemic risk buffer are typical macroprudential instruments. The capital conservation buffer and buffer resulting from bank assessments under SREP are both micro- and macroprudential instruments.

The NBU recognizes the potential for conflicts of interest between policies. The regulator's internal framework of committees works collaboratively 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

Total bank capital requirements, percentage of risk-weighted assets (RWA)



measures and instruments. The committees for financial stability (the FS Committee), monetary policy, banking and non-banking financial market supervision and regulation must ensure there is coordination between macroprudential, microprudential and monetary policy.

Foreign exchange liberalization and macroprudential policy

Ukraine is a small open economy, sensitive to volatility in the global financial markets. As a result, external factors have played a major role in the country's recent crises. They propelled outflows abroad of capital and foreign currency from the banking sector, complicated the refinancing of external debts, depleted the NBU's international reserves, and put substantial depreciation pressures on the hryvnia exchange rate. The NBU often had to react to these risks by introducing foreign currency restrictions, thus using them as a macroprudential tool.

The *Law of Ukraine On Currency and Currency Operations*, which was adopted in June 2018, introduced the free flow of capital as a key tenet. Under stable economic conditions, all restrictions on cross-border foreign exchange transactions will be lifted. However, if signs of financial instability emerge, the NBU may impose safeguard measures or special temporary banking requirements. These may include restrictions on outflows of debt raised by banks and their customers. The NBU views capital controls as a last-ditch instrument to be used when all other macroprudential instruments are insufficient. The NBU will choose other instruments if they are deemed more effective.

The NBU will prevent the build-up of systemic risks related to capital inflows by requiring provisioning

for short-term funds raised on external markets. For instance, the provisioning requirement can be used if credit expands quickly, fueled by external borrowing. However, this instrument is a supportive one, and capital and sectoral instruments that limit excessive credit are preferred. Moreover, if demand for foreign currency increases through forward contracts, the NBU may introduce special provisioning requirements for forward contracts as well.

Underlying Information

The effectiveness of macroprudential policy depends largely on the quality of the input information. Currently, not all data is available in Ukraine.

Banking sector data is the most readily available, including that of the NBU's Credit Register. The register collects data on outstanding credit exposures of 100 times the minimum wage or more. The NBU may use the register to recalibrate the PD and LGD ratios used by banks to assess credit risks. The Credit Register helps promote the effective monitoring of concentrations of credit risk in the system.

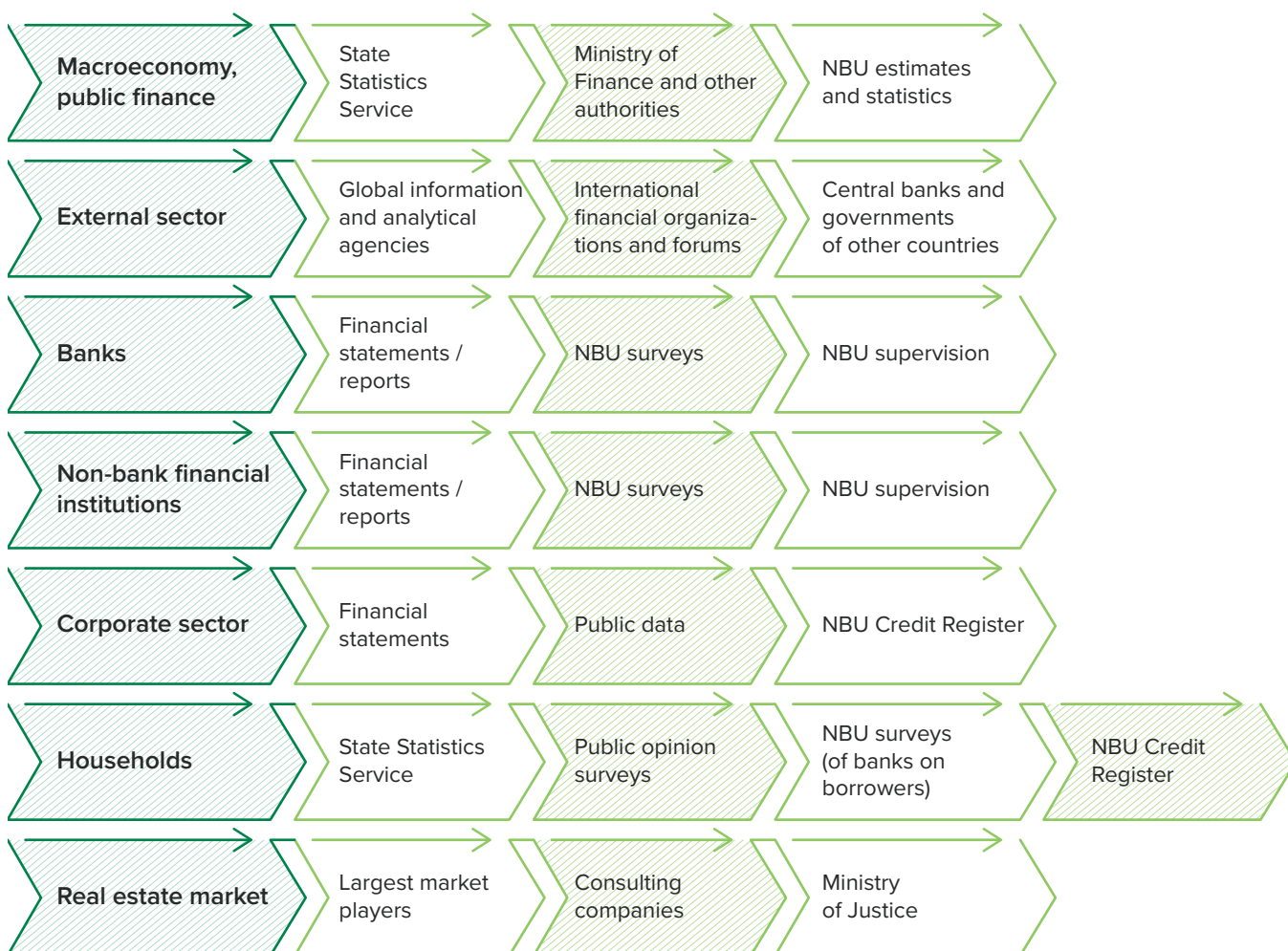
As the NBU has assumed the mandate to regulate non-bank financial institutions (NBFIs), it will promote transparency in the segment and the disclosure of the NBFIs' key performance indicators, ownership structure, and compliance information.

However, the data on other sectors is at present incomplete. The NBU lacks the data to evaluate the debt burden or market behavior for households by income

group. That data would help the NBU set appropriate limits on credit exposures (LTV, DSTI, DTI). In addition, the system of data collection on the real estate market needs to be substantially revised and improved.

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

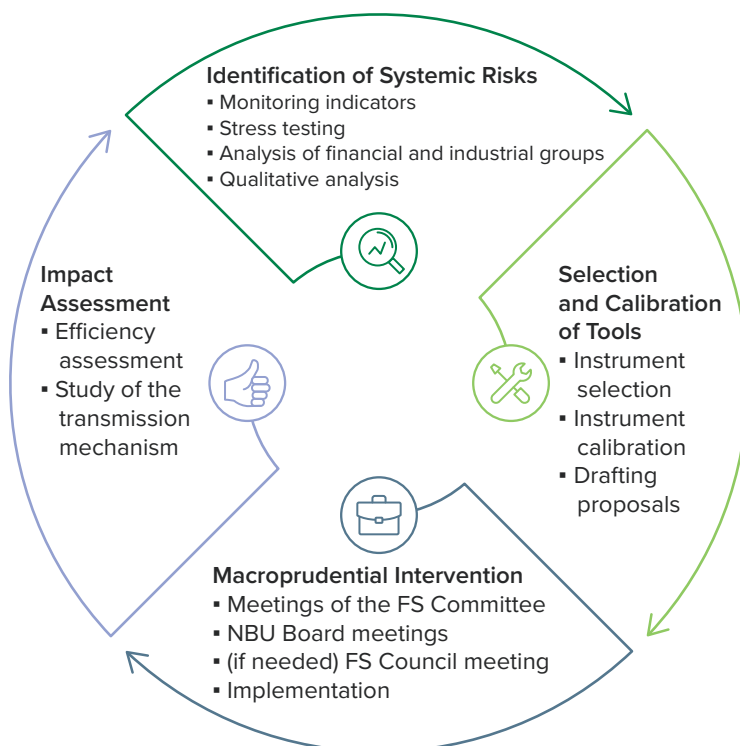


Specifics of Macroprudential Policy in Ukraine

Stages of Macroprudential Policy

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

Tentative list of indicators to monitor



1. Identification of Systemic Risks.

The NBU analyzes the conditions of major markets based on open data and information from NBU departments (banking and non-banking supervision, monetary policy, payment system oversight, open market operations, etc.), as well as information from other financial sector regulators.

To identify risks, the NBU looks at expert judgments and quantitative indicators including, but not limited to:

- Macroeconomic, monetary, and banking and non-banking statistics, and indicators in the financial and real sectors, and the real estate market;
- Solvency indicators of the financial and industrial groups (FIGs) that are the largest borrowers from Ukrainian banks, and of households;
- Surveys of banks and other financial market players.

Tentative list of indicators to monitor risks of financial institutions¹⁰

Intermediate objectives	Indicators
Mitigate and prevent excessive credit growth and leverage	<ul style="list-style-type: none"> ▪ Credit-to-GDP gap; ▪ Credit growth, total, as well as by individual economic sectors; ▪ Leverage ratio (ratio of Tier 1 capital to all on-balance and off-balance sheet items); ▪ Capital adequacy;

¹⁰ 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.

	<ul style="list-style-type: none"> ▪ Change in the NPL ratio; ▪ NPL coverage ratio; ▪ Change in housing prices and deviation from the long-term trend; ▪ Change in LTV for new mortgages; ▪ Household debt-to-income ratio; ▪ Change in housing cost over household income; ▪ Change in the buy-rent gap; ▪ Developments in rents and vacancy ratios on the commercial real estate market; ▪ Lending terms and conditions (based on a survey of credit institutions);
Mitigate and prevent market illiquidity	<ul style="list-style-type: none"> ▪ Loan-to-deposit ratio; ▪ Liquidity coverage ratio (LCR); ▪ Net stable funding ratio (NSFR); ▪ Distribution of liabilities by maturity; ▪ Limits on open foreign currency positions of banks; ▪ Ratio of external borrowing in total liabilities of banks; ▪ Change in CDS on banks' debt instruments;
Limit exposure concentration	<ul style="list-style-type: none"> ▪ Distribution of credit portfolio by sector; ▪ Regional distribution of credit portfolios; ▪ Currency distribution of credit portfolios; ▪ Exposure concentration of selected financial and industrial groups; ▪ Rate of interconnectedness of banks / financial institutions;
Limit the systemic impact of misaligned incentives	<ul style="list-style-type: none"> ▪ Banking / financial sector assets-to-GDP ratio; ▪ Share of systemically important banks in total deposits and loans; ▪ Share of systemically important payment systems in total transactions; ▪ Change in interest rates; ▪ Net interest margin; ▪ ROE of banks.

2. 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 (does it affect the entire system, or only a part?), its source (on the borrower or lender side), the impact of the instrument (does it affect the financial institution's balance sheet or its market behavior?), its impact on the financial cycle (limiting expansion or limiting downturn), and possible 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, and the conditions of and prospects for financial sector development. Instruments will 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 mitigate 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 shall apply to all financial institutions (both banks and NBFIs) performing the same function in the financial system – for instance consumer lending.

3. Macroprudential Intervention.

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 of macroprudential policy. If stricter macroprudential measures 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 introduce the macroprudential instrument, as selected on the basis of a prior analysis of its pros and cons. The FS Committee recommends the use of macroprudential instruments according to their characteristics, and the Board approves decisions. If the NBU cannot mitigate identified risks with these instruments, the NBU can initiate a discussion at the FS Council and invite other authorities to work on the solution. The NBU will inform market participants in advance of the use of most macroprudential instruments.

4. Assessment of the Impact of Macroprudential Policy.

The NBU will collect and analyze data on the impact of the macroprudential instrument in order to assess all of its effects. The regulator estimates the instrument's impact on the financial system, based on an analysis of individual financial institution reports, key indicators

of the financial system and of markets, and changes in market sentiment. This helps the NBU assess whether the risk was correctly identified, whether intermediate objectives were achieved, and whether the instrument was effective. Individual instrument evaluations combine to form an assessment of overall macroprudential policy. The NBU can also study the transmission mechanisms for instruments, ex ante and ex post, to better understand them and improve their calibration. The regulator will assess the efficacy of an instrument based on the output of models 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 deteriorating macroeconomic, sectoral, and specific financial indicators. The stress test helps the NBU evaluate the impact of economic shocks on financial institutions, and assess the related costs to the banking system. Even if the shock never materializes, the NBU obtains valuable information from the stress test. That information underpins actions that can be taken regarding a financial institution and / or recommendations for this individual institution, or regarding the use of macroprudential instruments.

The NBU holds stress tests of banks at the micro and macro levels. At the same time, due to NBFIs having a less significant volume of operations, and the absence of systemic risks from them, the NBU does not intend to stress test NBFIs at the moment. Meanwhile, insurers are increasingly stress tested in global and European practice. 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 question the stress test tries to answer is "what would happen to banks if the worst-case scenario materialized," even if the regulator is confident that such a scenario is unlikely to materialize over the forecast horizon. Stress tests do not seek to ascertain short-term impacts on banks.

Micro Stress Tests

The NBU normally holds an asset quality review at 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 the information reported by banks. The NBU makes additional requirements for banks based on the results of the test, including increasing capital buffers, or restructuring assets or business processes. Compliance with those requirements should enhance a bank's resilience in the event of a crisis.

The NBU will annually stress test the banks that account for 90% of banking sector assets. The tests will not be held at small banks, as any loss of capital at a small bank does not pose a systemic risk.

Macro Stress Tests

Macro stress tests are held for entire sectors, and mostly do not look deep into the operations of individual financial institutions. The macro stress tests are based on aggregated data. If a test identifies systemic risks that apply to many banks, the NBU may deploy macroprudential instruments.

A macro stress test can also be based on assessments of individual banks. The test would then model feedback loops between financial institutions.

Macroeconomic Scenarios for Stress Testing

Stress tests are conducted on the basis of two macroeconomic scenarios: baseline and adverse. The key risk factors are fed into the model of the adverse scenario, which helps the NBU measure the resilience of banks to crises. The baseline scenario provides a background for comparison, and helps to detect weaknesses in banks' current business models. The NBU develops scenarios with three-year horizons, which allows the model to capture all potential stages of a crisis, from its outbreak to the start of recovery.

The baseline scenario is generally in line with the NBU's macroeconomic forecast. The adverse scenario models a severe but plausible scenario. 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 GDP and output 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 will accelerate during a crisis, in particular because of currency depreciation;
- Interest rates. The model includes a sharp hike in the NBU's key interest rate, which would squeeze the interest spreads and margins of 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.

The aim of modelling indicators for individual banks or the entire banking system is not to forecast their precise change. This is impossible because of the assumption of static balance sheets. However, the baseline and adverse scenarios show how existing imbalances could materialize, and how they would affect bank profits 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.

Macprudential 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. These risks are mostly concentrated in the banking sector; systemic risks in the non-banking financial sector are currently negligible. Ukraine faces numerous protracted risks, and the NBU will monitor those and intervene with macroprudential measures as required.

Short maturity of bank funding

The structure of bank funding has changed considerably over the last decade, with the share of external debt in the liabilities of banks falling from 38% in 2009 to 8% as of mid-2020¹¹. At the same time, the share of clients' deposits in bank liabilities exceeded 85% as of mid-2020. On the bright side, the banking sector is now much less dependent on 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 generates liquidity risks. Over 55% of bank hryvnia liabilities are demand deposits. The NBU will therefore encourage 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 is to introduce the NSFR requirement, which aims to improve the maturity balance of assets and liabilities.

Possible NBU actions – Introduction of tighter requirements on internal liquidity management at banks.

Expected impact from implementation – Extension of funding maturity, mitigating maturity gap, building up liquidity buffers by holding more assets in high-quality liquid components.

High dollarization rate in the banking sector

Bank balance sheets in Ukraine remain highly dollarized for two main reasons. First, frequent spikes in inflation have deteriorated the hryvnia's purchasing power, which causes households to keep a high proportion of their savings in foreign currencies. Second, the once generous external funding of banks fueled rapid growth in the foreign currency credit portfolio. During and after the 2014-2016 crisis, the share of foreign currency assets and liabilities fell as foreign currency deposits and interbank loans flowed out, foreign currency funding was converted into equity, and many foreign currency loans were restructured and converted to hryvnias. However,

the dollarization rate has remained high because of hryvnia depreciation: foreign currency components account for over 40% of total deposits and total loans. This situation raises systemic risks, including an increase in currency risks for banks. Stress tests have shown that numerous corporate customers could stop servicing their loans if the hryvnia were to depreciate substantially. The NBU will encourage banks to decrease the dollarization of their balance sheets. In particular, the National Bank has already changed reserve requirements, bringing them to 0% for hryvnia deposits while hiking them to 10% for foreign currency deposits.

Possible NBU actions – Introducing additional risk weights for foreign currency assets, tightening requirements on the evaluation of foreign currency credit exposures, developing recommendations for banks to decrease the proportion of foreign currency loans in their portfolios.

Expected impact from implementation – Decreasing currency risk for banks and their customers.

High share of state-owned banks in the banking sector

State-owned banks have historically held a large share of the market, and that share grew further during the 2014-2016 crisis. The nationalization of Privatbank in December 2016 boosted the market share by assets of state-owned banks by 20 pp. As of mid-2020, state-owned banks accounted for 54% of the market in terms of net assets, and 61% in terms of retail deposits. Prior to 2014, state-owned banks were a common source of lending to businesses owned by politically exposed persons. Most of those loans are now classified as non-performing loans (NPLs). That practice has been checked. However, state-owned banks still generate a range of problems, such as low-quality risk management, or the dominance of state-owned banks in providing liquidity to the government. In addition, while these financial institutions are not profit-oriented, because of their size they shape trends in market pricing for assets and liabilities.

Possible NBU actions – Vigilant monitoring of the implementation of updated strategies at state-owned banks that aim to resolve existing problems, as well as 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 the state-owned banks.

High growth in unsecured consumer lending

Consumer lending is attractive to banks as it offers the diversification of risk and higher profitability. In 2019-2020, the growth rate of the net consumer loan portfolio

¹¹ Taken as a ratio of gross external debt to liabilities of other deposit-taking corporations (banks).

in hrvnias exceeded 20%. The total outstanding retail loan portfolio is still small relative to GDP and household income. However, if the growth rate remains high, credit risks will start to build at individual banks and across the entire system. The NBU believes this will remain a long-term risk.

Possible NBU actions – Introduction of higher risk weights for unsecured consumer loans, regular revision of the PD and LGD regulatory parameters, introduction of additional risk weights for consumer loans, caps on DSTI or DTI.

Expected impact from implementation – Enhanced bank resilience to crises, ensuring a conservative approach in credit risk assessment by banks, preventing a relaxation of lending conditions and an excessive debt burden on certain groups of households.

Risks of non-bank financial sector

For a long time, regulatory requirements on non-bank financial institutions – including deposit-taking ones – 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; their ownership structure was

not transparent; and some NBFs were allegedly used for financial fraud, tax evasion, and money laundering. That posed risks to the financial sector and impeded its development.

At the same time, NBFs 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 NBFs account for around 10% of total sector assets. Risks stemming from these institutions are mostly concentrated in their respective sectors. Moreover, NBF business models does 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 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	Highly interconnected with other financial institutions	Interconnectedness 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 risks correlation with financial risks is weak
Correlation of risks stemming from activity with macro-environment	Key risks and related losses considerably increase during crisis times	Claims repayments are mostly not related to 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 exposures

The banking sector's loan portfolio remains very concentrated. According to the NBU's estimates, the 20 largest groups of private companies accounted for 47% of gross and 13% of net corporate loans as of October 2020. The NPL ratio for loans to these business groups was around 89%. This level of concentration is abnormally high and poses a risk to the entire sector. The

NBU expects banks to diversify their loan portfolios and lend more proactively to SMEs.

Possible NBU actions – Informing market participants about the rate of concentration of the corporate loan portfolio to allow banks to make prudent loan decisions, tighter monitoring of standards for assessing credit risk for large exposures, additional requirements for Pillar 2 capital.

Expected impact from implementation – Diversification of the banking sector loan portfolio by economic sectors and borrower size.

High NPL ratio

Ukrainian banks had a 46.5% NPL ratio as of early October 2020. The reason behind this high rate was the expansion of credit in the past when standards for assessing borrower creditworthiness were rather low and creditor rights were not properly protected. The practice of lending to related parties, who stopped servicing their loans during the crisis, was another significant contributor. As of today, the banks have recognized all NPLs and the NPL coverage with provisions is constantly rising, exceeding 90% as of mid-2020. Thus, NPLs should not have a significant impact on the financial performance and capital of banks. However, the high NPL ratio is a heavy burden for the banking sector, especially at state-owned banks, which accumulated around 73% of all NPLs in the sector (including 46% at Privatbank). The NBU believes that banks must be more proactive in cleansing their balance sheets, and NPLs should be restructured, sold, or written off.

Possible NBU actions – Require banks to ensure the effective operation of internal systems for work out, resolution, and monitoring of NPLs, encourage banks to

implement NPL resolution plans, promote the establishment of a functioning market for non-performing assets.

Expected impact from implementation – Cleansing of banks' balance sheets of NPLs, establishment of a system for monitoring credit portfolio quality.

Objectives and Tools for Macroprudential Policy in Ukraine

The NBU has already used several macroprudential instruments or their equivalents, and over the next two years it plans to introduce several more. Over this time, the NBU will adapt these instruments to suit Ukrainian conditions, collect the necessary data, and work on models that will assess the impact of the instrument's use.

Based on the ESRB's recommendations and the conditions of the Ukrainian financial sector, the NBU has determined a sixth intermediate objective on top of the five basic objectives – to reduce the dollarization of the banking sector. The NBU will apply a range of instruments to achieve each of the objectives, as outlined in the table below. This list is not exclusive; the NBU may expand the list if necessary.

Intermediate objectives of macroprudential policy and a preliminary toolkit for Ukraine

Intermediate objectives	Possible instruments*
1. To avoid excessive credit growth	<p>Capital instruments:</p> <ul style="list-style-type: none"> ▪ Capital requirements based on stress tests; ▪ Capital conservation buffer – to be gradually increased to 2.5%; ▪ Additional risk weights for certain types of loans; ▪ Countercyclical capital buffer – activation is not planned in the next few years; ▪ Systemic risk buffer; ▪ Sectoral capital requirements; ▪ Leverage ratio. <p>Other instruments:</p> <ul style="list-style-type: none"> ▪ Regulatory requirements for calculating prudential provisions (minimal rates of PD and LGD). Banks are required to apply the single scoring model to calculate prudential (regulatory) provisions. If the total prudential provisions exceed total provisions under IFRS, the regulatory capital of banks is adjusted for this gap; ▪ Establishment of the NBU Credit Register; ▪ Loan-to-value ratio (LTV); ▪ Debt service-to-income ratio (DSTI) and loan-to-income (LTI).
2. To prevent illiquidity	<p>Liquidity instruments:</p> <ul style="list-style-type: none"> ▪ Liquidity coverage ratio (LCR). In December 2018, the LCR was introduced in a single currency (hryvnia + foreign currency) and separately for foreign currencies; ▪ Net stable funding ratio (NSFR) –introduced as a requirement in 2021; ▪ Mandatory reserve requirement for short-term external borrowing (0% as of the end of October 2018); ▪ Other stable funding requirements (e.g. loan-to-deposit ratio, LTD); ▪ Additional liquidity requirements, e.g. liquidity buffers.

3. To limit the concentration of exposures	<p>Capital instruments:</p> <ul style="list-style-type: none"> ▪ Capital requirements based on stress tests; ▪ Systemic risk buffer. <p>Other instruments:</p> <ul style="list-style-type: none"> ▪ Limits on the concentration of large exposures. Currently, the maximum loan amount a bank can extend to a single counterparty or to a group of related counterparties cannot exceed 25% of its regulatory capital; ▪ Limits on bank lending to related parties, currently at 25% of regulatory capital. The NBU plans to introduce a strict rule that a bank's regulatory capital shall be adjusted if there is an excessive amount of loans to related parties (over the set limit); ▪ Additional capital requirements in the event of significant concentrations in some sectors, or in types of loans.
4. To limit the impact of misaligned incentives (especially for state-owned banks)	<p>Capital instruments:</p> <ul style="list-style-type: none"> ▪ Capital requirements based on stress tests; ▪ Additional capital requirements for systemically important banks; ▪ Systemic risk buffer. <p>Liquidity instruments:</p> <ul style="list-style-type: none"> ▪ Additional liquidity requirements for systemically important banks. <p>Other instruments:</p> <ul style="list-style-type: none"> ▪ Promoting the implementation of strategies at state-owned banks; ▪ Recommendations on enhanced risk management practices .
5. To enhance the resilience of financial infrastructure	<p>Other instruments:</p> <ul style="list-style-type: none"> ▪ Enhanced oversight over key elements of payment infrastructure; ▪ Enhanced resilience of the central bank's payment systems (NBU's SEP, Prostir card payment system).
6. To lower dollarization rates in the sector	<p>Liquidity instruments:</p> <ul style="list-style-type: none"> ▪ Higher PD and LGD for loans in foreign currency that are assessed on a group basis; ▪ LCR requirement in foreign currency. <p>Other instruments:</p> <ul style="list-style-type: none"> ▪ Ban on lending to households in foreign currency, which was legislated for in 2009. There are currently no reasons to relax or lift the ban; ▪ Limits on open foreign currency positions. As of October 2020, limits are effective for banks' short and long foreign currency positions at 10% of regulatory capital. The NBU will adjust the limit depending on the situation in the foreign exchange market. However, the restrictions will remain; ▪ Requirements to re-balance the foreign currency composition of loan portfolios based on bank stress tests; ▪ Higher reserve requirements for foreign currency deposits; ▪ Mandatory reserve requirement for short-term external borrowing; ▪ Additional risk weights for foreign currency assets ; ▪ Setting tighter requirements for assessing credit risk on foreign currency loans.

* Tools marked blue are already in use or approved for use. The NBU could apply the other tools in future.

Later, separate instruments for non-banking financial sector may be introduced, especially for insurance companies, in line with development of the respective toolkit in the EU. The NBU will additionally look into the European experience and may implement its best practices in Ukraine, while taking into account the specifics of the domestic financial sector.

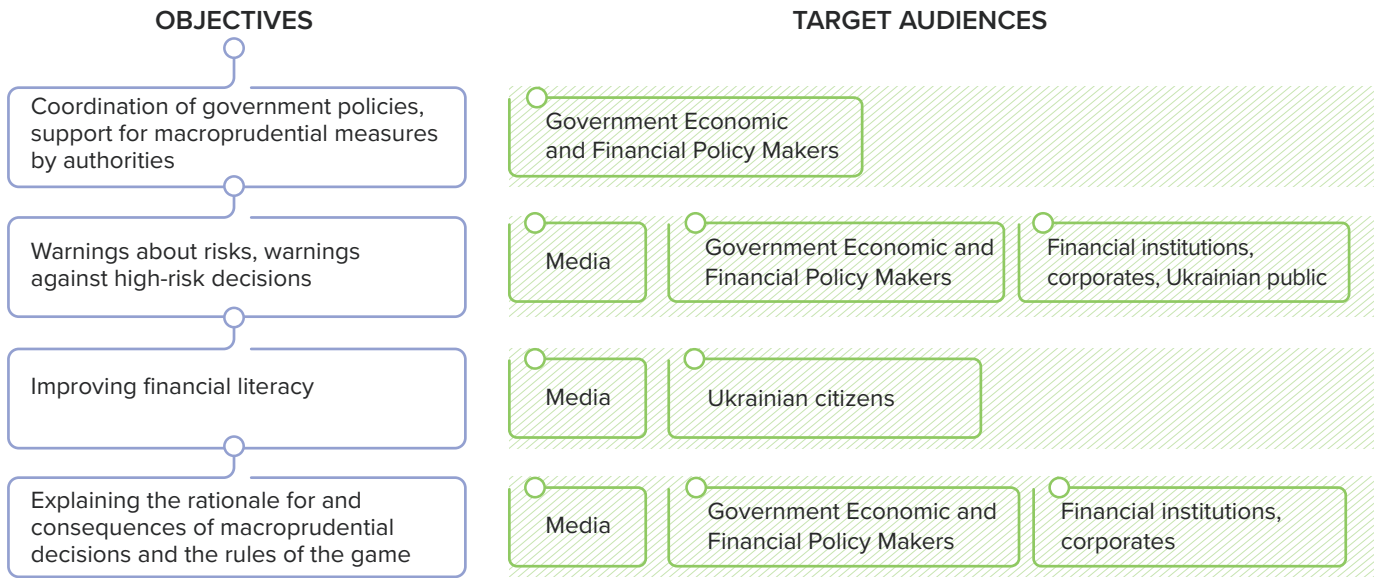
Communications Framework

Established communications are key to the effectiveness of macroprudential policy. They help to shape the expectations of target audiences, promote the comprehension of risks by the public, and facilitate awareness of macroprudential regulation.

Communications on macroprudential policy comprise three key components:

- Explaining the macroprudential framework. The NBU describes the objectives of macroprudential policy, the mandates of respective authorities, the decision-making processes, and the available instruments. This Strategy is an important contribution to this work;
- Risk warnings. After a risk assessment, the NBU communicates information about the most substantial risks, unless disclosing a risk itself constitutes a threat;
- Explaining macroprudential measures. When introducing a macroprudential instrument, the NBU explains its actions to financial institutions and provides them with templates or guidelines for calculations.

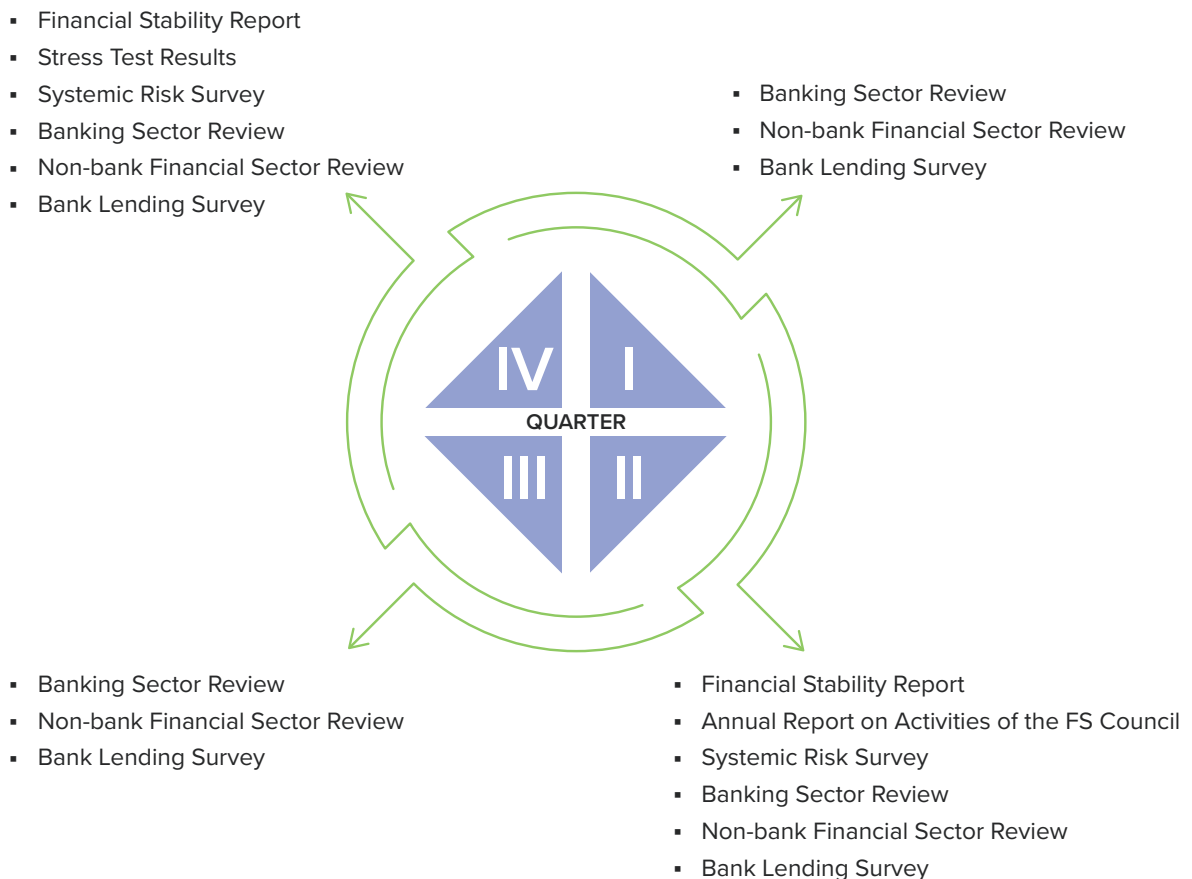
The target audiences of macroprudential policy and objectives of communications



The Financial Stability Report is the key informational and analytical product related to systemic risks. Other important regular publications include the Banking Sector Review, the Non-bank Financial Sector Review, the Systemic Risk Survey, and the Bank Lending Survey. Annually, the NBU publishes the results of stress tests,

and the FSC produces reports on its activities. The NBU also issues occasional communications, conducts research on specific events/topics, and holds seminars and lectures, including at universities. Communications are mainly disseminated through the Financial Stability section of the NBU's official website.

Cycle of communications on financial stability



Glossary

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, as well as being able to withstand crises. The financial system is considered stable if a) it effectively redistributes resources from savers to investors, b) financial risks are thoroughly evaluated and properly managed, and c) it can absorb shocks without significant negative consequences.

Systemic risk – is the possibility of a functional failure of the financial system, in whole or in part, that will 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.

Cyclical risks – are related to the tendency of economic agents to take excessive risks during economic upturns.

Structural risks – are driven by the distribution of risks and interconnectedness between participants in the financial system. Structural risks make the system vulnerable.

Macroprudential policy – encompasses a set of measures aimed at identifying, evaluating, and mitigating systemic risks.

Macroprudential policy instruments – are requirements and restrictions imposed on the financial system or on individual groups/market participants aimed at achieving the strategic and intermediate objectives of macroprudential policy.

A 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 for a bank based on an assessment of risk.

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 evaluating the resilience of financial institutions and/or the financial system to potential shocks, such as abrupt changes in the domestic or external economic environment, or in the behavior of economic agents.

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.

SREP (supervisory review and evaluation process) – is a supervisory evaluation process in which a bank's risks are assessed in terms of the bank's business model, corporate governance, capital adequacy, and liquidity. The probability of default (PD) ratio shows the likelihood that a borrower/counterparty will be unable to repay debt (default).

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

A non-performing asset / loan – is an asset past due over 90 days (30 days for banks-debtors) or where the counterparty is unable to repay without foreclosure.